3onedata
Reliable Connections

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3onedata
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2022 PRODUCT SELECTION GUIDE

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VERTICAL MARKET SOLUTION

FOCUS ON INDUSTRIAL COMMUNICATION FOR 22 YEARS

SAILING
2001~2005

- Formally founded in Sept. 2001
- The Three Gorge Project

- Launched the first industrial converter
  Launched the first self-developed serial device server

PIONEERING
2006~2010

- Launched the first embedded industrial Ethernet module

- The first bullet train project

- Certified as a National Key High-tech Enterprise

PENETRATION
2011~2015

- Shenzhen Bao'an International Airport project

- Xi'an-Chengdu High-Speed Railway

- Market share ranked first in domestic market in rail, mine, solar and ITS industries

INNOVATION
2016~2020

- Facility System of Airbus

- Hong Kong-Zhuhai-Macao Bridge

- Factory of BMW in Munich

- Ngari Prefecture Grid in Tibet

- Beijing Daxing International Airport Express

WENT PUBLIC
2020~2021

- IIoT R&D Center in Shanghai has been built

- Be rated Industrial Design Center of Guangdong Province

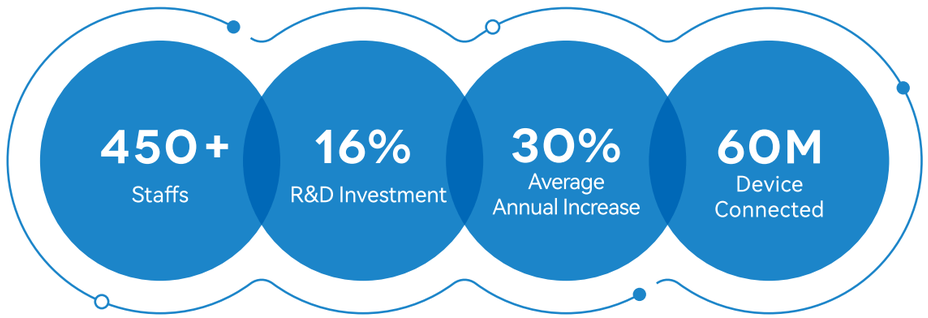
- World's speediest 600 km/h maglev project

- Production Line Machine Vision System of Porsche

2022~FUTURE

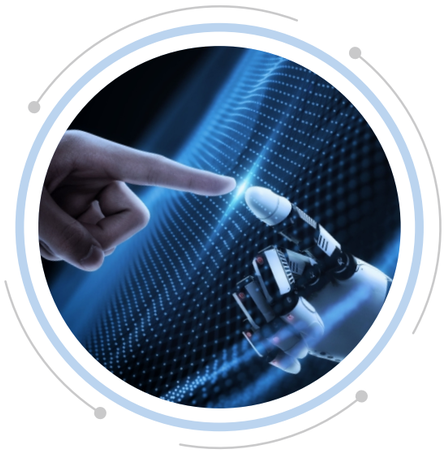
ABOUT 3ONEDATA

Based in Shenzhen and founded in 2001, 3onedata has been dedicated in IIoT industry for 22 years and has accumulated rich and professional experience of providing industrial communication solution and service for worldwide partners and customers. In 2020 3onedata successfully became the 1st public company in IIoT of SSE STAR Market of China, which has a significant meaning for company's sustainable growth and development. Innovation, Value and Honor are 3onedata's core values, which guide our business strategy and operation actions. 3onedata attaches much importance to company's comprehensive development by stable annual investment so as to assure the innovation of production, R&D and marketing so as to provide more market competitive products and support our customers' success. Total Service System(TSS) is one unique operation model of 3onedata for spreading customers a total service feeling and experience, which will finally bring 3onedata's long-term effective development. Facing to the uncertain future, we are full of confidence according to the practices of our stable core values and high-performance execution strengths. 3onedata expects to build up the cooperation with your company for mutual benefits and move forward together, on the way.



VISION

Committed to be a leading brand in IIoT



MISSION

Focus on IIoT, continuously provide competitive solution and service, and create ever-increasing values and development opportunities for customers employees and business partners

CORPORATE PHILOSOPHY

Innovation • Value • Honor

TOTAL SERVICE SYSTEM

Based on the tenet of customer-centric we establish 3onedata TSS-Total Service System and continuously improve customer satisfaction.

SALES SUPPORT

Active response to customer's inquiry within 8 working hours plus weekend.

MARKETING PROMOTION

Comprehensive marketing supports on promotion documents, materials, exhibition and training.

TECHNICAL ASSISTANCE

Professional technical team will bring you the one-stop pre-sales product and solution consultant experience.

JOINT-DEVELOPMENT CUSTOMIZATION

Strong R&D team could fulfill tailored and cutting-edge customized demands.

COMMERCIAL COOPERATION

Professional business modes bring more effective and easier mutual agreement.

SERVICE IMPROVEMENT MANAGEMENT

Continuously improve the service level based on effective feedback from market and partners.

AFTER-SALES GUARANTEE

We are a manufacturer with 22 years' history as well as standard RMA/FOC process.

DELIVERY ASSURANCE

Effective supply chain management and skilled manufacturing workers.

INDUSTRIAL ETHERNET SWITCH

IEC62443 IEC61850 EN 50155 EN 50121 EN 45545

SECURITY RELIABILITY COMPATIBILITY

L3 SWITCH

ICS5556 Series

Interface	
SFP+ Slot, 1G/10GBASE-FX	8
SFP Slot, 100/1000Base-FX	0, 12, 24, 36, 48 optional (Max. number of copper ports and SFPs can't exceed 48)
Gigabit Copper Port, 10/100/1000Base-T(X)	0, 12, 24, 36, 48 optional (Max. number of copper ports and SFPs can't exceed 48)
MGMT Port, 10/100/1000Base-T(X)	1, support ping, telnet, SSH and web management
Console Port	1, RS-232 (TxD, RxD, GND), 8-pin RJ45 (115200, n, 8, 1)
Alarm Contact Channels	2 (Port alarm, Power supply alarm) Relay output with current carrying capacity of 5A@30VDC or 10A@125VAC
Switch Property	
10000M Forwarding Rate	14881000pps
1000M Forwarding Rate	1488100pps
Throughput	190.46Mpps@64 bytes
Transmit Mode	Store and Forward
DRAM	512MB
Flash	64MB
Buffer	32Mbits
Switching Fabric Capacity	256G
MAC Address Table	96K
Jumbo Frame Size	16K
Layer3 Feature	
Routing Protocols	Satic routing, RIPv1/v2, OSPFv1/v2/v3, BGP, ECMP (Max. 1024 entries)
Multicast Routing	PIM-DM、PIM-SM
Routing Redundancy	VRRP
IP Interfaces	Max. 512 VLAN interfaces
Routing Entries	1024
ARP Entries	2048
NAT	NAPT
Layer2 Features	
Unicast / Multicast	Static Multicast, Multicast Passthrough, GMRP, IGMPv1/v2/v3
Redundancy Protocols	SW-Ring (Recovery Time ≤ 20ms), STP/RSTP/MSTP, ERPSv1/v2 (G. 8032 with OAM standard), Loopback
LACP	Max. 12 groups, Max. 8 ports within one group Load Balance: Dst-ip, Dst-mac, Src-dst-ip, Src-dst-mac
VLAN	Port-based, MAC-based, Protocol-based, Subnet-based Maximum active VLANs: 4094, VLAN IDs available: 1-4094
Management & Security	
IP Address	IPv4/IPv6
Device Management	Web, Console, Telnet, SSH, SNMPv1/v2c/v3, ROMN
Time Management	NTP Client
ACL	IP-based ACL, MAC-based ACL, Max. 1024 ACL entries
QoS	Best-Effort, Int-Serv, Diff-Serv CoS: 8 ToS: 8 DSCP: 64
DDM	Temperature, Voltage, Bias current, Receiving power, Transmission power
Port Mirror	Max. 4 groups, TX/ RX/ Both, many-to-1 monitor

Power Supply	
Input Voltage	HV: 220VAC(100~240VAC)
Power Redundancy	Dual power supply
Power Connector	Single-phase socket
Environmental Limit	
Operating Temperature	-40~60℃(-40~140℉)
Storage Temperature	-40~60℃(-40~140℉)
Relative Humidity	5% ~ 95% (no condensation)
Cooling Method	Shell heat dissipation (fanless)
Physical Characteristic	
Housing	Metal, IP40
Installation	2U, Rack mounting
Dimension	
Size(W*H*D)	482.6mm×88.3mm×374.3mm
Warranty	5 years

Certification in Details	
Certification Item	Standard
CE-LVD	EN 61010-1: 2010
CE-EMC-EMI-RE	EN 55032: 2015
CE-EMC-EMI-CE	EN 55032: 2015
CE-EMC-EMI-Harmonic	EN 61000-3-2: 2019
CE-EMC-EMI-Flicker	EN 61000-3-3: 2013+ A1:2019
CE-EMC-EMS-ESD	IEC 61000-4-2
CE-EMC-EMS-RS	IEC 61000-4-3
CE-EMC-EMS-EFT	IEC 61000-4-4
CE-EMC-EMS-Surge	IEC 61000-4-5
CE-EMC-EMS-CS	IEC 61000-4-6
CE-EMC-EMS-DIPs	IEC 61000-4-11
CE-EMC-EMS-PFMF	IEC 61000-4-8
FCC	FCC 47 CFR Part 15
RoHS-Pb	IEC 62321-5:2013
RoHS-Cd	IEC 62321-5:2013
RoHS-Hg	IEC 62321-4:2013+AMDI1:2017 CSV
RoHS-Cr6+	IEC 62321-7-1:2015 or IEC 62321-7-2:2017
RoHS-PBBs	IEC 62321-6:2015
RoHS-PBDEs	IEC 62321-6:2015
RoHS-BBP/DBP/DEHP/DIBP	IEC 62321-8:2017
Safety	UL 60950-1, UL 62368-1
Vibration	IEC60068-2-6
Shock	IEC60068-2-27
Free Fall	IEC60068-2-32

ICS5428-4XS Series

Interface	
SFP+ Slot, 1G/10GBASE-FX	6 (10GBASE-X SFP+)
SFP Slot, 100/1000Base-FX	16 + 8 Combo
Gigabit Copper Port, 10/100/1000Base-T(X)	8 Combo
MGMT Port, 10/100/1000Base-T(X)	/
Console Port	1, RS-232 (TxD, RxD, GND), 8-pin RJ45 (115200, n, 8, 1)
Alarm Contact Channels	2 (Port alarm, Power supply alarm) Relay output with current carrying capacity of 5A@30VDC or 10A@125VAC
Switch Property	
10000M Forwarding Rate	14881000pps
1000M Forwarding Rate	1488100pps
Throughput	124.99Mpps@64 bytes
Transmit Mode	Store and Forward
DRAM	256MB
Flash	64MB
Buffer	16Mbits
Switching Fabric Capacity	168G
MAC Address Table	16K
Jumbo Frame Size	16K
Layer3 Feature	
Routing Protocols	Satic routing, RIPv1/v2, OSPFv1/v2/v3, BGP, ECMP (Max. 128 entries)
Multicast Routing	PIM-DM、PIM-SM
Routing Redundancy	VRRP
IP Interfaces	Max. 512 VLAN interfaces
Routing Entries	1024
ARP Entries	1024
NAT	NAPT
Layer2 Feature	
Unicast / Multicast	Static Multicast, Multicast Passthrough, GMRP, IGMPv1/v2/v3
Redundancy Protocols	SW-Ring (Recovery Time ≤ 20ms), STP/RSTP/MSTP, ERPSv1/v2 (G. 8032 with OAM standard), Loopback
LACP	Max. 12 groups, Max. 8 ports within one group Load Balance: Dst-ip, Dst-mac, Src-dst-ip, Src-dst-mac
VLAN	Port-based, MAC-based, Protocol-based, Subnet-based Maximum active VLANs: 4094, VLAN IDs available: 1-4094
Management & Security	
IP Address	IPv4/IPv6
Device Management	Web, Console, Telnet, SSH, SNMPv1/v2c/v3, ROMN
Time Management	NTP Client
ACL	IP-based ACL, MAC-based ACL, Max. 1024 ACL entries
QoS	Best-Effort, Int-Serv, Diff-Serv CoS: 8 ToS: 8 DSCP: 64
DDM	Temperature, Voltage, Bias current, Receiving power, Transmission power
Port Mirror	Max. 4 groups, TX/ RX/ Both, many-to-1 monitor

Power Supply	
Input Voltage	HV: 220VAC/DC(100~240VAC/DC)
Power Redundancy	Dual power supply
Power Connector	HV: Single-phase socket, LV: Terminal Block
Environmental Limit	
Operating Temperature	-40~75℃(-40~167℉)
Storage Temperature	-40~85℃ (-40~185℉)
Relative Humidity	5% ~ 95% (no condensation)
Cooling Method	Shell heat dissipation (fanless)
Physical Characteristic	
Housing	Metal, IP40
Installation	1U, Rack mounting
Dimension	
Size(W*H*D)	441.6mm×44.45mm×290mm
Certification	
Certification	CE, FCC, RoHS
Warranty	5 years

Certification in Details

Certification Item	Standard
CE-LVD	EN 61010-1: 2010
CE-EMC-EMI-RE	EN 55032: 2015
CE-EMC-EMI-CE	EN 55032: 2015
CE-EMC-EMI-Harmonic	EN 61000-3-2: 2019
CE-EMC-EMI-Flicker	EN 61000-3-3: 2013+ A1:2019
CE-EMC-EMS-ESD	IEC 61000-4-2
CE-EMC-EMS-RS	IEC 61000-4-3
CE-EMC-EMS-EFT	IEC 61000-4-4
CE-EMC-EMS-Surge	IEC 61000-4-5
CE-EMC-EMS-CS	IEC 61000-4-6
CE-EMC-EMS-DIPs	IEC 61000-4-11
CE-EMC-EMS-PFMF	IEC 61000-4-8
FCC	FCC 47 CFR Part 15
RoHS-Pb	IEC 62321-5:2013
RoHS-Cd	IEC 62321-5:2013
RoHS-Hg	IEC 62321-4:2013+AMDI1:2017 CSV
RoHS-Cr6+	IEC 62321-7-1:2015 or IEC 62321-7-2:2017
RoHS-PBBs	IEC 62321-6:2015
RoHS-PBDEs	IEC 62321-6:2015
RoHS-BBP/DBP/DEHP/DIBP	IEC 62321-8:2017
Safety	UL 60950-1, UL 62368-1
Vibration	IEC60068-2-6
Shock	IEC60068-2-27
Free Fall	IEC60068-2-32

ICS5428-4XS Series

Interface	
SFP+ Slot, 1G/10GBASE-FX	4
SFP Slot, 100/1000Base-FX	8 Combo
Gigabit Copper Port, 10/100/1000Base-T(X)	16 + 8 Combo, 16 PoE optional
MGMT Port, 10/100/1000Base-T(X)	/
Console Port	1, RS-232 (TxD, RxD, GND), 8-pin RJ45 (115200, n, 8, 1)
Alarm Contact Channels	2 (Port alarm, Power supply alarm) Relay output with current carrying capacity of 5A@30VDC or 10A@125VAC
Switch Property	
10000M Forwarding Rate	14881000pps
1000M Forwarding Rate	1488100pps
Throughput	95.23Mpps@64 bytes
Transmit Mode	Store and Forward
DRAM	256MB
Flash	64MB
Buffer	16Mbits
Switching Fabric Capacity	128G
MAC Address Table	16K
Jumbo Frame Size	16K
Layer3 Feature	
Routing Protocols	Satic routing, RIPv1/v2, OSPFv1/v2/v3, BGP, ECMP (Max. 128 entries)
Multicast Routing	PIM-DM、PIM-SM
Routing Redundancy	VRRP
IP Interfaces	Max. 512 VLAN interfaces
Routing Entries	1024
ARP Entries	1024
NAT	NAPT
Layer2 Feature	
Unicast / Multicast	Static Multicast, IGMPv1/v2/v3
Redundancy Protocols	SW-Ring (Recovery Time ≤ 20ms), STP/RSTP/MSTP, ERPSv1/v2 (G. 8032 with OAM standard), Loopback
LACP	Max. 12 groups, Max. 8 ports within one group Load Balance: Dst-ip, Dst-mac, Src-dst-ip, Src-dst-mac"
VLAN	Port-based, MAC-based, Protocol-based, Subnet-based Maximum active VLANs: 4094, VLAN IDs available: 1-4094"
Management & Security	
IP Address	IPv4/IPv6
Device Management	Web, Console, Telnet, SSH, SNMPv1/v2c/v3, ROMN
Time Management	NTP Client
ACL	IP-based ACL, MAC-based ACL, Max. 1024 ACL entries
QoS	Best-Effort, Int-Serv, Diff-Serv CoS: 8 ToS: 8 DSCP: 64
DDM	Temperature, Voltage, Bias current, Receiving power, Transmission power
Port Mirror	Max. 4 groups, TX/ RX/ Both, many-to-1 monitor

Power Supply	
Input Voltage	HV: 220VAC/DC(100~240VAC/DC) LV: 48VDC(36~72VDC), 24VDC(18~72VDC), 48VDC (PoE Model)
Power Redundancy	Dual power supply
Power Connector	HV: Single-phase socket, LV: Terminal Block
Environmental Limit	
Operating Temperature	-40~75℃(-40~167℉)
Storage Temperature	-40~85℃ (-40~185℉)
Relative Humidity	5% ~ 95% (no condensation)
Cooling Method	Shell heat dissipation (fanless)
Physical Characteristic	
Housing	Metal, IP30
Installation	1U, Rack mounting
Dimension	
Size(W*H*D)	440.4mm×44mm×304.8mm
Certification	
Certification	CE, FCC, RoHS
Warranty	5 years

Certification in Details	
Certification Item	Standard
CE-LVD	EN 61010-1: 2010
CE-EMC-EMI-RE	EN 55032: 2015
CE-EMC-EMI-CE	EN 55032: 2015
CE-EMC-EMI-Harmonic	EN 61000-3-2: 2019
CE-EMC-EMI-Flicker	EN 61000-3-3: 2013+ A1:2019
CE-EMC-EMS-ESD	IEC 61000-4-2
CE-EMC-EMS-RS	IEC 61000-4-3
CE-EMC-EMS-EFT	IEC 61000-4-4
CE-EMC-EMS-Surge	IEC 61000-4-5
CE-EMC-EMS-CS	IEC 61000-4-6
CE-EMC-EMS-DIPs	IEC 61000-4-11
CE-EMC-EMS-PFMF	IEC 61000-4-8
FCC	FCC 47 CFR Part 15
RoHS-Pb	IEC 62321-5:2013
RoHS-Cd	IEC 62321-5:2013
RoHS-Hg	IEC 62321-4:2013+AMDI1:2017 CSV
RoHS-Cr6+	IEC 62321-7-1:2015 or IEC 62321-7-2:2017
RoHS-PBBs	IEC 62321-6:2015
RoHS-PBDEs	IEC 62321-6:2015
RoHS-BBP/DBP/DEHP/DIBP	IEC 62321-8:2017
Safety	UL 60950-1, UL 62368-1
Vibration	IEC60068-2-6
Shock	IEC60068-2-27
Free Fall	IEC60068-2-32

ICS6420 Series

Interface	
SFP+ Slot, 1G/10GBASE-FX	4
SFP Slot, 100/1000Base-FX	4, 8 optional (4 SFPs + 12 Copper Ports, 8 SFPs + 8 Copper Ports)
Gigabit Copper Port, 10/100/1000Base-T(X)	8, 12 optional (4 SFPs + 12 Copper Ports, 8 SFPs + 8 Copper Ports)
MGMT Port, 10/100/1000Base-T(X)	/
Console Port	1, RS-232 (TxD, RxD, GND), 8-pin RJ45 (115200, n, 8, 1)
Alarm Contact Channels	2 (Port alarm, Power supply alarm) Relay output with current carrying capacity of 5A@30VDC or 10A@125VAC
Switch Property	
10000M Forwarding Rate	14881000pps
1000M Forwarding Rate	1488100pps
Throughput	83.33Mpps@64 bytes
Transmit Mode	Store and Forward
DRAM	256MB
Flash	64MB
Buffer	16Mbits
Switching Fabric Capacity	128G
MAC Address Table	16K
Jumbo Frame Size	16K
Layer3 Feature	
Routing Protocols	Satic routing, RIPv1/v2, OSPFv1/v2/v3, BGP, ECMP (Max. 128 entries)
Multicast Routing	PIM-DM、PIM-SM
Routing Redundancy	VRRP
IP Interfaces	Max. 512 VLAN interfaces
Routing Entries	1024
ARP Entries	1024
NAT	NAPT
Layer2 Feature	
Unicast / Multicast	Static Multicast, IGMPv1/v2/v3
Redundancy Protocols	SW-Ring (Recovery Time ≤ 20ms), STP/RSTP/MSTP, ERPSv1/v2 (G. 8032 with OAM standard), Loopback
LACP	Max. 12 groups, Max. 8 ports within one group Load Balance: Dst-ip, Dst-mac, Src-dst-ip, Src-dst-mac
VLAN	Port-based, MAC-based, Protocol-based, Subnet-based Maximum active VLANs: 4094, VLAN IDs available: 1-4094
Management & Security	
IP Address	IPv4/IPv6
Device Management	Web, Console, Telnet, SSH, SNMPv1/v2c/v3, ROMN
Time Management	NTP Client
ACL	IP-based ACL, MAC-based ACL, Max. 1024 ACL entries
QoS	Best-Effort, Int-Serv, Diff-Serv CoS: 8 ToS: 8 DSCP: 64
DDM	Temperature, Voltage, Bias current, Receiving power, Transmission power
Port Mirror	Max. 4 groups, TX/ RX/ Both, many-to-1 monitor

Power Supply	
Input Voltage	12~48VDC
Power Redundancy	Dual power supply
Power Connector	Terminal Block
Environmental Limit	
Operating Temperature	-40~75℃(-40~167℉)
Storage Temperature	-40~85℃ (-40~185℉)
Relative Humidity	5% ~ 95% (no condensation)
Cooling Method	Shell heat dissipation (fanless)
Physical Characteristic	
Housing	Metal, IP40
Installation	DIN-Rail mounting
Dimension	
Size(W*H*D)	86.1mm×160mm×130mm
Certification	
Certification	CE, FCC, RoHS
Warranty	5 years

Certification in Details	
Certification Item	Standard
CE-LVD	EN 61010-1: 2010
CE-EMC-EMI-RE	EN 55032: 2015
CE-EMC-EMI-CE	EN 55032: 2015
CE-EMC-EMI-Harmonic	EN 61000-3-2: 2019
CE-EMC-EMI-Flicker	EN 61000-3-3: 2013+ A1:2019
CE-EMC-EMS-ESD	IEC 61000-4-2
CE-EMC-EMS-RS	IEC 61000-4-3
CE-EMC-EMS-EFT	IEC 61000-4-4
CE-EMC-EMS-Surge	IEC 61000-4-5
CE-EMC-EMS-CS	IEC 61000-4-6
CE-EMC-EMS-DIPs	IEC 61000-4-11
CE-EMC-EMS-PFMF	IEC 61000-4-8
FCC	FCC 47 CFR Part 15
RoHS-Pb	IEC 62321-5:2013
RoHS-Cd	IEC 62321-5:2013
RoHS-Hg	IEC 62321-4:2013+AMDI1:2017 CSV
RoHS-Cr6+	IEC 62321-7-1:2015 or IEC 62321-7-2:2017
RoHS-PBBs	IEC 62321-6:2015
RoHS-PBDEs	IEC 62321-6:2015
RoHS-BBP/DBP/DEHP/DIBP	IEC 62321-8:2017
Safety	UL 60950-1, UL 62368-1
Vibration	IEC60068-2-6
Shock	IEC60068-2-27
Free Fall	IEC60068-2-32

L2 MANAGED SWITCH

IES5328 Series

IES3000-8GT2GS2HS-2BP

Interface		
SFP Slot, 1G/2.5GBase-FX	/	2
SFP Slot, 100/1000Base-FX	4+8 Combo	2
Gigabit Optic Port, SC/FC/ST, 100/1000Base-FX	/	/
Gigabit Copper Port, 10/100/1000Base-T(X)	16+8 Combo	8
Fast Optic Port, SC/FC/ST, 10/100Base-FX	/	/
Fast Copper Port, 10/100Base-T(X)	/	/
Fiber Bypass Port	/	2 (2*2), 4 (1*1)
Serial Port	/	/
IO Port	1, RS-232 (TxD, RxD, GND), 8-pin RJ45 (115200, n, 8, 1)	/
Console Port	2 (Port alarm, Power supply alarm)	1, RS-232 (TxD, RxD, GND), 8-pin RJ45 (115200, n, 8, 1)
Alarm Contact Channels	Relay output with current carrying capacity of 5A@30VDC or 10A@125VAC	1 (Port alarm, Power supply alarm) Relay output with current carrying capacity of 1A@30VDC or 0.3A@125VAC
Switch Property		
2.5G Forwarding Rate	/	3720250pps
1000M Forwarding Rate	1488100pps	1488100pps
100M Forwarding Rate	148810pps	/
Throughput	41.66Mpps@64 bytes	22.32Mpps@64 bytes
Transmit Mode	Store and Forward	Store and Forward
DRAM	256MB	1Gb
Flash	64MB	256MB
Buffer	12Mbits	4Mbits
Switching Fabric Capacity	56G	30G
MAC Address Table	16K	8K
Jumbo Frame Size	16K	10K
Layer2 Feature		
Unicast / Multicast	Static Multicast, Multicast Passthrough, IGMPv1/v2/v3	Static Multicast, IGMPv1/v2/v3
Redundancy Protocols	SW-Ring (Recovery Time ≤ 20ms), STP/RSTP/MSTP, ERPSv1/v2 (G. 8032 with OAM standard)	
LACP	Max. 12 groups, Max. 8 ports within one group Load Balance: Dst-ip, Dst-mac, Src-dst-ip, Src-dst-mac	Max. 6 groups, Max. 8 ports within one group Load Balance: Src-mac, Dst-mac, Src-dst-ip, TCP/UDP port
VLAN	Port-based, MAC-based, Protocol-based, Subnet-based Maximum active VLANs: 4094, VLAN IDs available: 1-4094	Port-based, MAC-based, Protocol-based, Subnet-based Maximum active VLANs: 4094, VLAN IDs available: 1-4094
Management & Security		
Device Management	Web, Console, Telnet, SSH, SNMPv1/v2c/v3, ROMN	
Time Management	NTP Client	
ACL	IP-based ACL, MAC-based ACL, Max. 1024 ACL entries	IP-based ACL, MAC-based ACL, Max. 256 ACL entries
QoS	Best-Effort, Int-Serv, Diff-Serv CoS: 8 ToS: 8 DSCP: 64	
DDM	Temperature, Voltage, Bias current, Receiving power, Transmission power	
Port Mirror	Max. 4 groups, TX/ RX/ Both, many-to-1 monitor	Max. 1 group, TX/ RX/ Both, many-to-1 monitor

Power Supply		
Input Voltage	HV: 220VAC/DC(100~240VAC/DC) LV: 48VDC(36~72VDC), 24VDC(18~72VDC)	HV: 220VAC(100~240VAC)
Power Redundancy	Dual power supply	Built-in dual power supply
Power Connector	HV: Single phase socket	HV: Single phase socket
Environmental Limit		
Operating Temperature	-40~75℃(-40~167℉)	-40~75℃(-40~167℉)
Storage Temperature	-40~85℃ (-40~185℉)	-40~85℃ (-40~185℉)
Relative Humidity	5% ~ 95% (no condensation)	5% ~ 95% (no condensation)
Cooling Method	Shell heat dissipation (fanless)	Shell heat dissipation (fanless)
Physical Characteristic		
Housing	Metal, IP30	Metal, IP40
Installation	1U, Rack mounting	Desktop or Rack mounting
Dimension		
Size(W*H*D)	440.4mm×44mm×304.8mm	290mm×44mm×174.8mm
Certification		
Certification	CE, FCC, RoHS	
Warranty	5 years	5 years

Certification in Details	
Certification Item	Standard
CE-LVD	EN 61010-1: 2010
CE-EMC-EMI-RE	EN 55032: 2015
CE-EMC-EMI-CE	EN 55032: 2015
CE-EMC-EMI-Harmonic	EN 61000-3-2: 2019
CE-EMC-EMI-Flicker	EN 61000-3-3: 2013+ A1:2019
CE-EMC-EMS-ESD	IEC 61000-4-2
CE-EMC-EMS-RS	IEC 61000-4-3
CE-EMC-EMS-EFT	IEC 61000-4-4
CE-EMC-EMS-Surge	IEC 61000-4-5
CE-EMC-EMS-CS	IEC 61000-4-6
CE-EMC-EMS-DIPs	IEC 61000-4-11
CE-EMC-EMS-PFMF	IEC 61000-4-8
FCC	FCC 47 CFR Part 15
RoHS-Pb	IEC 62321-5:2013
RoHS-Cd	IEC 62321-5:2013
RoHS-Hg	IEC 62321-4:2013+AMDI1:2017 CSV
RoHS-Cr6+	IEC 62321-7-1:2015 or IEC 62321-7-2:2017
RoHS-PBBs	IEC 62321-6:2015
RoHS-PBDEs	IEC 62321-6:2015
RoHS-BBP/DBP/DEHP/DIBP	IEC 62321-8:2017
Safety	UL 60950-1, UL 62368-1
Vibration	IEC60068-2-6
Shock	IEC60068-2-27
Free Fall	IEC60068-2-32

IES6300 Series

IES6306 Series

Interface		
SFP Slot, 1G/2.5GBase-FX	2	2
SFP Slot, 100/1000Base-FX	2	/
Gigabit Optic Port, SC/FC/ST, 100/1000Base-FX	/	/
Gigabit Copper Port, 10/100/1000Base-T(X)	8, PoE optional	4, PoE optional
Fast Optic Port, SC/FC/ST, 10/100Base-FX	/	/
Fast Copper Port, 10/100Base-T(X)	/	/
Fiber Bypass Port	/	/
Serial Port	/	/
IO Port	2 DI (dry contact input), 2 DO (relay-type output)	/
Console Port	1, RS-232 (TxD, RxD, GND), 8-pin RJ45 (115200, n, 8, 1)	1, RS-232 (TxD, RxD, GND), 8-pin RJ45 (115200, n, 8, 1)
Alarm Contact Channels	1 (Port alarm, Power supply alarm) Relay output with current carrying capacity of 1A@30VDC or 0.3A@125VAC	1 (Port alarm, Power supply alarm) Relay output with current carrying capacity of 1A@30VDC or 0.3A@125VAC
Switch Property		
2.5G Forwarding Rate	3720250pps	3720250pps
1000M Forwarding Rate	1488100pps	1488100pps
100M Forwarding Rate	/	/
Throughput	22.32Mpps@64 bytes	13.39Mpps@64 bytes
Transmit Mode	Store and Forward	Store and Forward
DRAM	1Gb	1Gb
Flash	256MB	256MB
Buffer	4Mbits	4Mbits
Switching Fabric Capacity	30G	30G
MAC Address Table	8K	8K
Jumbo Frame Size	10K	10K
Layer2 Feature		
IP Addres	IPv4/IPv6	
Unicast / Multicast	Static Multicast, IGMPv1/v2/v3	
Redundancy Protocols	SW-Ring (Recovery Time ≤ 20ms), STP/RSTP/MSTP, ERPSv1/v2 (G. 8032 with OAM standard)	
LACP	Max. 6 groups, Max. 8 ports within one group Load Balance: Src-mac, Dst-mac, Src-dst-ip, TCP/UDP port	
VLAN	Port-based, MAC-based, Protocol-based, Subnet-based Maximum active VLANs: 4094, VLAN IDs available: 1-4094	
Management & Security		
Device Management	Web, Console, Telnet, SSH, SNMPv1/v2c/v3, ROMN	Web, Console, Telnet, SSH, SNMPv1/v2c/v3, ROMN
Time Management	NTP Client, NTP Server, PTP (BC/TC mode, 100ns) optional	NTP Client, NTP Server
ACL	IP-based ACL, MAC-based ACL, Max. 256 ACL entries	IP-based ACL, MAC-based ACL, Max. 256 ACL entries
QoS	Best-Effort, Int-Serv, Diff-Serv CoS: 8 ToS: 8 DSCP: 64	Best-Effort, Int-Serv, Diff-Serv CoS: 8 ToS: 8 DSCP: 64
DDM	Temperature, Voltage, Bias current, Receiving power, Transmission power	Temperature, Voltage, Bias current, Receiving power, Transmission power
Port Mirror	Max. 1 group, TX/RX/Both, many-to-1 monitor	Max. 1 group, TX/RX/Both, many-to-1 monitor

Power Supply		
Input Voltage	HV: 220VAC/DC(100~240VAC/DC) LV: 12~48VDC(non-PoE Model), 24VDC(PoE Model), 48VDC (PoE Model)	LV: 12~48VDC, 48VDC (PoE Model)
Power Redundancy	HV: Single power supply, LV: Dual power supply	LV: Dual power supply
Power Connector	HV/LV: Terminal Block	LV: Terminal Block
Environmental Limit		
Operating Temperature	-40~75℃(-40~167℉)	-40~75℃(-40~167℉)
Storage Temperature	-40~85℃ (-40~185℉)	-40~85℃ (-40~185℉)
Relative Humidity	5% ~ 95% (no condensation)	5% ~ 95% (no condensation)
Cooling Method	Shell heat dissipation (fanless)	Shell heat dissipation (fanless)
Physical Characteristic		
Housing	Metal, IP40	Metal, IP40
Installation	DIN-Rail mounting	DIN-Rail mounting
Dimension		
Size(W*H*D)	53mm×138mm×110mm	44mm×150mm×120mm
Certification		
Certification	CE, FCC, RoHS	
Warranty	5 years	5 years

Certification in Details	
Certification Item	Standard
CE-LVD	EN 61010-1: 2010
CE-EMC-EMI-RE	EN 55032: 2015
CE-EMC-EMI-CE	EN 55032: 2015
CE-EMC-EMI-Harmonic	EN 61000-3-2: 2019
CE-EMC-EMI-Flicker	EN 61000-3-3: 2013+ A1:2019
CE-EMC-EMS-ESD	IEC 61000-4-2
CE-EMC-EMS-RS	IEC 61000-4-3
CE-EMC-EMS-EFT	IEC 61000-4-4
CE-EMC-EMS-Surge	IEC 61000-4-5
CE-EMC-EMS-CS	IEC 61000-4-6
CE-EMC-EMS-DIPs	IEC 61000-4-11
CE-EMC-EMS-PFMF	IEC 61000-4-8
FCC	FCC 47 CFR Part 15
RoHS-Pb	IEC 62321-5:2013
RoHS-Cd	IEC 62321-5:2013
RoHS-Hg	IEC 62321-4:2013+AMDI1:2017 CSV
RoHS-Cr6+	IEC 62321-7-1:2015 or IEC 62321-7-2:2017
RoHS-PBBs	IEC 62321-6:2015
RoHS-PBDEs	IEC 62321-6:2015
RoHS-BBP/DBP/DEHP/DIBP	IEC 62321-8:2017
Safety	UL 60950-1, UL 62368-1
Vibration	IEC60068-2-6
Shock	IEC60068-2-27
Free Fall	IEC60068-2-32
Grid Standard	IEC 61850-3, IEEE 1613

IES6220 Series

IES6210 Series

Interface		
SFP Slot, 1G/2.5GBase-FX	/	/
SFP Slot, 100/1000Base-FX	4 (1000Base-X SFP)	2 Combo (1000Base-X SFP)
Gigabit Optic Port, SC/FC/ST, 100/1000Base-FX	/	/
Gigabit Copper Port, 10/100/1000Base-T(X)	/	2 Combo
Fast Optic Port, SC/FC/ST, 10/100Base-FX	/	/
Fast Copper Port, 10/100Base-T(X)	8, 16, PoE optional	4, 8, PoE optional
Fiber Bypass Port	/	/
Serial Port	/	/
IO Port	/	/
Console Port	1, RS-232 (TxD, RxD, GND), 8-pin RJ45 (115200, n, 8, 1)	1, RS-232 (TxD, RxD, GND), 8-pin RJ45 (115200, n, 8, 1)
Alarm Contact Channels	1 (Port alarm, Power supply alarm) Relay output with current carrying capacity of 1A@30VDC or 0.3A@125VAC	1 (Port alarm, Power supply alarm) Relay output with current carrying capacity of 1A@30VDC or 0.3A@125VAC
Switch Property		
2.5G Forwarding Rate	/	/
1000M Forwarding Rate	1488100pps	1488100pps
100M Forwarding Rate	148810pps	148810pps
Throughput	8.33Mpps@64 bytes	4.16Mpps@64 bytes
Transmit Mode	Store and Forward	Store and Forward
DRAM	512K	512K
Flash	2M	2M
Buffer	3Mbits	1Mbits
Switching Fabric Capacity	12.8G	7.6G
MAC Address Table	8K	8K
Jumbo Frame Size	/	/
Layer2 Feature		
Unicast / Multicast	Static Multicast, IGMPv1/v2	Static Multicast, IGMPv1/v2
Redundancy Protocols	SW-Ring (Recovery Time ≤ 20ms), STP/RSTP	SW-Ring (Recovery Time ≤ 20ms), STP/RSTP
LACP	Max. 2 groups, Max. 20 ports within one group	Max. 2 groups, Max. 10 ports within one group
VLAN	Port-based Maximum active VLANs: 64, VLAN IDs available: 1-4094	Port-based Maximum active VLANs: 64, VLAN IDs available: 1-4094
Management & Security		
Device Management	Web, Console, Telnet, SNMPv1/v2c	Web, Console, Telnet, SNMPv1/v2c
Time Management	SNTP	SNTP
ACL	/	/
QoS	Strict, Weighted Fair (8:4:2:1) CoS: 8 ToS: 8 DSCP: 64	Strict, Weighted Fair (8:4:2:1) CoS: 8 ToS: 8 DSCP: 64
DDM	TX/ RX/ Both, many-to-1 monitor	TX/ RX/ Both, many-to-1 monitor
Port Mirror	Max. 1 group, TX/RX/Both, many-to-1 monitor	Max. 1 group, TX/RX/Both, many-to-1 monitor

Power Supply		
Input Voltage	HV: 220VAC(85~264VAC) LV: 12~48VDC(non-PoE Model), 24VDC(PoE Model), 48VDC (PoE Model)	HV: 220VAC(85~264VAC) LV: 12~48VDC(non-PoE Model), 24VDC(PoE Model), 48VDC (PoE Model)
Power Redundancy	HV: Single power supply, LV: Dual power supply	HV: Single power supply, LV: Dual power supply
Power Connector	HV/LV: Terminal Block	HV/LV: Terminal Block
Environmental Limit		
Operating Temperature	-40~75℃(-40~167℉)	-40~75℃(-40~167℉)
Storage Temperature	-40~85℃ (-40~185℉)	-40~85℃ (-40~185℉)
Relative Humidity	5% ~ 95% (no condensation)	5% ~ 95% (no condensation)
Cooling Method	Shell heat dissipation (fanless)	Shell heat dissipation (fanless)
Physical Characteristic		
Housing	Metal, IP40	Metal, IP40
Installation	DIN-Rail mounting	DIN-Rail mounting
Dimension		
Size(W*H*D)	70mm×160mm×130mm	53mm×138mm×110mm
Certification		
Certification	CE, FCC, RoHS	
Warranty	5 years	5 years

Certification in Details	
Certification Item	Standard
CE-LVD	EN 61010-1: 2010
CE-EMC-EMI-RE	EN 55032: 2015
CE-EMC-EMI-CE	EN 55032: 2015
CE-EMC-EMI-Harmonic	EN 61000-3-2: 2019
CE-EMC-EMI-Flicker	EN 61000-3-3: 2013+ A1:2019
CE-EMC-EMS-ESD	IEC 61000-4-2
CE-EMC-EMS-RS	IEC 61000-4-3
CE-EMC-EMS-EFT	IEC 61000-4-4
CE-EMC-EMS-Surge	IEC 61000-4-5
CE-EMC-EMS-CS	IEC 61000-4-6
CE-EMC-EMS-DIPs	IEC 61000-4-11
CE-EMC-EMS-PFMF	IEC 61000-4-8
FCC	FCC 47 CFR Part 15
RoHS-Pb	IEC 62321-5:2013
RoHS-Cd	IEC 62321-5:2013
RoHS-Hg	IEC 62321-4:2013+AMDI1:2017 CSV
RoHS-Cr6+	IEC 62321-7-1:2015 or IEC 62321-7-2:2017
RoHS-PBBs	IEC 62321-6:2015
RoHS-PBDEs	IEC 62321-6:2015
RoHS-BBP/DBP/DEHP/DIBP	IEC 62321-8:2017
Safety	UL 60950-1, UL 62368-1
Vibration	IEC60068-2-6
Shock	IEC60068-2-27
Free Fall	IEC60068-2-32

IES618-4D Series

IES618 Series

Interface		
SFP Slot, 1G/2.5GBase-FX	/	/
SFP Slot, 100/1000Base-FX	/	/
Gigabit Optic Port, SC/FC/ST, 100/1000Base-FX	/	/
Gigabit Copper Port, 10/100/1000Base-T(X)	/	/
Fast Optic Port, SC/FC/ST, 10/100Base-FX	2, 4 (2F + 6T, 4F + 4T, 8T)	2, 4 (2F + 6T, 4F + 4T, 8T)
Fast Copper Port, 10/100Base-T(X)	4, 6, 8 (2F + 6T, 4F + 4T, 8T)	4, 6, 8 (2F + 6T, 4F + 4T, 8T)
Fiber Bypass Port	/	/
Serial Port	4, RS-232 or RS485	/
IO Port	/	/
Console Port	1, RS-232 (TxD, RxD, GND), 8-pin RJ45 (115200, n, 8, 1)	1, RS-232 (TxD, RxD, GND), 8-pin RJ45 (115200, n, 8, 1)
Alarm Contact Channels	1 (Port alarm, Power supply alarm) Relay output with current carrying capacity of 1A@30VDC or 0.3A@125VAC	1 (Port alarm, Power supply alarm) Relay output with current carrying capacity of 1A@30VDC or 0.3A@125VAC
Switch Property		
2.5G Forwarding Rate	/	/
1000M Forwarding Rate	/	/
100M Forwarding Rate	148810pps	148810pps
Throughput	1.19Mpps@64 bytes	1.19Mpps@64 bytes
Transmit Mode	Store and Forward	Store and Forward
DRAM	512K	512K
Flash	2M	2M
Buffer	1Mbits	1Mbits
Switching Fabric Capacity	2G	2G
MAC Address Table	2K	2K
Jumbo Frame Size	/	/
Layer2 Feature		
Unicast / Multicast	Static Multicast, IGMPv1/v2	Static Multicast, IGMPv1/v2
Redundancy Protocols	SW-Ring (Recovery Time ≤ 20ms), STP/RSTP	SW-Ring (Recovery Time ≤ 20ms), STP/RSTP
LACP	Max. 2 groups, Max. 8 ports within one group	Max. 2 groups, Max. 8 ports within one group
VLAN	Port-based Maximum active VLANs: 64, VLAN IDs available: 1-4094	Port-based Maximum active VLANs: 64, VLAN IDs available: 1-4094
Management & Security		
Device Management	Web, Console, Telnet, SNMPv1/v2c	Web, Console, Telnet, SNMPv1/v2c
Time Management	SNTP	SNTP
ACL	/	/
QoS	Strict, Weighted Fair (8:4:2:1) CoS: 8 ToS: 8 DSCP: 64	Strict, Weighted Fair (8:4:2:1) CoS: 8 ToS: 8 DSCP: 64
DDM	/	/
Port Mirror	Max. 1 group, TX/ RX/ Both, many-to-1 monitor	Max. 1 group, TX/ RX/ Both, many-to-1 monitor

Power Supply		
Input Voltage	LV: 12~48VDC(non-PoE Model)	LV: 12~48VDC(non-PoE Model)
Power Redundancy	LV: Dual power supply	LV: Dual power supply
Power Connector	LV: Terminal Block	LV: Terminal Block
Environmental Limit		
Operating Temperature	-40~75℃(-40~167℉)	-40~75℃(-40~167℉)
Storage Temperature	-40~85℃ (-40~185℉)	-40~85℃ (-40~185℉)
Relative Humidity	5% ~ 95% (no condensation)	5% ~ 95% (no condensation)
Cooling Method	Shell heat dissipation (fanless)	Shell heat dissipation (fanless)
Physical Characteristic		
Housing	Metal, IP40	Metal, IP40
Installation	DIN-Rail mounting	DIN-Rail mounting
Dimension		
Size(W*H*D)	70mm×160mm×130mm	53mm×138mm×110mm
Certification		
Certification	CE, FCC, RoHS	
Warranty	5 years	5 years

Certification in Details

Certification Item	Standard
CE-LVD	EN 61010-1: 2010
CE-EMC-EMI-RE	EN 55032: 2015
CE-EMC-EMI-CE	EN 55032: 2015
CE-EMC-EMI-Harmonic	EN 61000-3-2: 2019
CE-EMC-EMI-Flicker	EN 61000-3-3: 2013+ A1:2019
CE-EMC-EMS-ESD	IEC 61000-4-2
CE-EMC-EMS-RS	IEC 61000-4-3
CE-EMC-EMS-EFT	IEC 61000-4-4
CE-EMC-EMS-Surge	IEC 61000-4-5
CE-EMC-EMS-CS	IEC 61000-4-6
CE-EMC-EMS-DIPs	IEC 61000-4-11
CE-EMC-EMS-PFMF	IEC 61000-4-8
FCC	FCC 47 CFR Part 15
RoHS-Pb	IEC 62321-5:2013
RoHS-Cd	IEC 62321-5:2013
RoHS-Hg	IEC 62321-4:2013+AMDI1:2017 CSV
RoHS-Cr6+	IEC 62321-7-1:2015 or IEC 62321-7-2:2017
RoHS-PBBs	IEC 62321-6:2015
RoHS-PBDEs	IEC 62321-6:2015
RoHS-BBP/DBP/DEHP/DIBP	IEC 62321-8:2017
Safety	UL 60950-1, UL 62368-1
Vibration	IEC60068-2-6
Shock	IEC60068-2-27
Free Fall	IEC60068-2-32

IES615-2DI Series

Interface	
SFP Slot, 1G/2.5GBase-FX	/
SFP Slot, 100/1000Base-FX	/
Gigabit Optic Port, SC/FC/ST, 100/1000Base-FX	/
Gigabit Copper Port, 10/100/1000Base-T(X)	/
Fast Optic Port, SC/FC/ST, 10/100Base-FX	1, 2
Fast Copper Port, 10/100Base-T(X)	3, 4, 5 (1F + 4T, 2F + 3T, 5T)
Fiber Bypass Port	/
Serial Port	2, 3IN1 (RS-232/422/485 web optional)
IO Port	/
Console Port	1, RS-232 (TxD, RxD, GND), 8-pin RJ45 (115200, n, 8, 1)
Alarm Contact Channels	1 (Port alarm, Power supply alarm)
	Relay output with current carrying capacity of 1A@30VDC or 0.3A@125VAC
Switch Property	
2.5G Forwarding Rate	/
1000M Forwarding Rate	/
100M Forwarding Rate	148810pps
Throughput	0.74Mpps@64 bytes
Transmit Mode	Store and Forward
DRAM	512K
Flash	2M
Buffer	0.5Mbits
Switching Fabric Capacity	1.2G
MAC Address Table	2K
Jumbo Frame Size	/
Layer2 Feature	
Unicast / Multicast	Static Multicast, IGMPv1/v2
Redundancy Protocols	SW-Ring (Recovery Time ≤ 20ms), STP/RSTP
LACP	Max. 2 groups, Max. 5 ports within one group
VLAN	Port-based
	Maximum active VLANs: 64, VLAN IDs available: 1-4094
Management & Security	
Device Management	Web, Console, Telnet, SNMPv1/v2c
Time Management	SNTP
ACL	/
QoS	Strict, Weighted Fair (8:4:2:1)
	CoS: 8
	ToS: 8
	DSCP: 64
DDM	/
Port Mirror	Max. 1 group, TX/ RX/ Both, many-to-1 monitor
Power Supply	
Input Voltage	LV: 12~48VDC(non-PoE Model)
Power Redundancy	LV: Dual power supply
Power Connector	LV: Terminal Block

Environmental Limit	
Operating Temperature	-40~75℃(-40~167℉)
Storage Temperature	-40~85℃ (-40~185℉)
Relative Humidity	5% ~ 95% (no condensation)
Cooling Method	Shell heat dissipation (fanless)
Physical Characteristic	
Housing	Metal, IP40
Installation	DIN-Rail mounting
Dimension	
Size(W*H*D)	53mm×138mm×110mm
Certification	
Certification	CE, FCC, RoHS
Warranty	5 years

Certification in Details	
Certification Item	Standard
CE-LVD	EN 61010-1: 2010
CE-EMC-EMI-RE	EN 55032: 2015
CE-EMC-EMI-CE	EN 55032: 2015
CE-EMC-EMI-Harmonic	EN 61000-3-2: 2019
CE-EMC-EMI-Flicker	EN 61000-3-3: 2013+ A1:2019
CE-EMC-EMS-ESD	IEC 61000-4-2
CE-EMC-EMS-RS	IEC 61000-4-3
CE-EMC-EMS-EFT	IEC 61000-4-4
CE-EMC-EMS-Surge	IEC 61000-4-5
CE-EMC-EMS-CS	IEC 61000-4-6
CE-EMC-EMS-DIPs	IEC 61000-4-11
CE-EMC-EMS-PFMF	IEC 61000-4-8
FCC	FCC 47 CFR Part 15
RoHS-Pb	IEC 62321-5:2013
RoHS-Cd	IEC 62321-5:2013
RoHS-Hg	IEC 62321-4:2013+AMDI1:2017 CSV
RoHS-Cr6+	IEC 62321-7-1:2015 or IEC 62321-7-2:2017
RoHS-PBBs	IEC 62321-6:2015
RoHS-PBDEs	IEC 62321-6:2015
RoHS-BBP/DBP/DEHP/DIBP	IEC 62321-8:2017
Safety	UL 60950-1, UL 62368-1
Vibration	IEC60068-2-6
Shock	IEC60068-2-27
Free Fall	IEC60068-2-32

UNMANAGED SWITCH

IES2312-8GT2GS2HS

IES2305 Series

IES2210 Series

Interface			
SFP Slot, 1G/2.5GBase-FX	2	/	/
SFP Slot, 100M/1000MBase-FX	2	0, 1	2 Combo (1000Base-X SFP)
Gigabit Optic Port, SC/FC/ST, 10/100/1000Base-FX	/	0, 1	/
Gigabit Copper Port, 10/100/1000Base-T(X)	8, PoE optional	4, 5 (4 PoE optional)	2 Combo
Fast Optic Port, SC/FC/ST, 10/100Base-FX	/	/	/
Fast Copper Port, 10/100Base-T(X)	/	/	4, 8, PoE optional
Serial Port	/	/	/
IO Port	/	/	/
Console Port	/	/	/
Alarm Contact Channels	1 (Port alarm, Power supply alarm) Relay output with current carrying capacity of 5A@30VDC or 10A@125VAC	/	1 (Port alarm, Power supply alarm) Relay output with current carrying capacity of 5A@30VDC or 10A@125VAC
Switch Property			
2.5G Forwarding Rate	3720250pps	/	/
1000M Forward Speed	1488100pps	1488100pps	1488100pps
100M Forward Speed	/	/	148810pps
Throughput	22.32Mpps@64 bytes	7.44Mpps@64 bytes	4.16Mpps@64 bytes
Transmit Mode	Store and Forward	Store and Forward	Store and Forward
DRAM	/	/	/
Flash	/	/	/
Buffer	4Mbits	1.75Mbits	1Mbits
Switching Fabric Capacity	30G	9.125G	7.6G
MAC Address Table	8K	2K	8K
Jumbo Frame Size	9.6K	9K	/
DIP Buttons			
Loop Detection	/	/	/
Storm Suppression	√	/	/
Port Isolation	/	/	/
Flow Control	/	√	√
Relay Alarm	√	/	√
Jumbo Frame	√	√	/
Energy-Efficient Ethernet (IEEE 802.3az)	√	/	/
Port Isolation	/	√	/
100M Forced	/	√	/
10M Forced	/	/	√

Power Supply			
Input Voltage	LV: 12~48VDC(non-PoE Model)	HV: 220VAC(100~240VAC) LV: 12~48VDC(non-PoE Model) 48VDC(PoE Model)	HV: 85~264VAC LV: 12~48VDC(non-PoE Model), 24VDC(PoE Model), 48VDC(PoE Model)
Power Redundancy	LV: Dual power supply	HV/LV: Single power supply	HV: Single power supply, LV: Dual power supply
Power Connector	LV: Terminal Block	HV/LV: Terminal Block	HV/LV: Terminal Block
Environmental Limit			
Operating Temperature	-40~75℃(-40~167℉)		
Storage Temperature	-40~85℃ (-40~185℉)		
Relative Humidity	5% ~ 95% (no condensation)		
Cooling Method	Shell Heat Dissipation (Fanless)		
Physical Characteristic			
Housing	Metal, IP40		
Installation	DIN-Rail mounting		
Dimension			
Size(W*H*D)	53mm×138mm×110mm	35mm×110mm×95mm	53mm×138mm×110mm
Certification			
Certification	CE, FCC, RoHS		
Warranty	5 years		

Certification in Details	
Certification Item	Standard
CE-LVD	EN 61010-1: 2010
CE-EMC-EMI-RE	EN 55032: 2015
CE-EMC-EMI-CE	EN 55032: 2015
CE-EMC-EMI-Harmonic	EN 61000-3-2: 2019
CE-EMC-EMI-Flicker	EN 61000-3-3: 2013+ A1:2019
CE-EMC-EMS-ESD	IEC 61000-4-2
CE-EMC-EMS-RS	IEC 61000-4-3
CE-EMC-EMS-EFT	IEC 61000-4-4
CE-EMC-EMS-Surge	IEC 61000-4-5
CE-EMC-EMS-CS	IEC 61000-4-6
CE-EMC-EMS-DIPs	IEC 61000-4-11
CE-EMC-EMS-PFMF	IEC 61000-4-8
FCC	FCC 47 CFR Part 15
RoHS-Pb	IEC 62321-5:2013
RoHS-Cd	IEC 62321-5:2013
RoHS-Hg	IEC 62321-4:2013+AMDI1:2017 CSV
RoHS-Cr6+	IEC 62321-7-1:2015 or IEC 62321-7-2:2017
RoHS-PBBs	IEC 62321-6:2015
RoHS-PBDEs	IEC 62321-6:2015
RoHS-BBP/DBP/DEHP/DIBP	IEC 62321-8:2017
Safety	UL 60950-1, UL 62368-1
Vibration	IEC60068-2-6
Shock	IEC60068-2-27
Free Fall	IEC60068-2-32

IES2105 Series

IES3016 Series

IES318 Series

Interface			
SFP Slot, 1G/2.5GBase-FX	/	/	/
SFP Slot, 100M/1000MBase-FX	/	/	/
Gigabit Optic Port, SC/FC/ST, 10/100/1000Base-FX	/	/	/
Gigabit Copper Port, 10/100/1000Base-T(X)	/	/	/
Fast Optic Port, SC/FC/ST, 10/100Base-FX	0, 1, 2	0, 2, 4, 6, 8	0, 1, 2
Fast Copper Port, 10/100Base-T(X)	3, 4, 5 (4 PoE optional)	8, 10, 12, 14, 16	6, 7, 8
Serial Port	/	/	/
IO Port	/	/	/
Console Port	/	/	/
Alarm Contact Channels	/	1 (Port alarm, Power supply alarm) Relay output with current carrying capacity of 1A@24VDC or 0.5A@120VAC	2 (Port alarm, Power supply alarm) Relay output with current carrying capacity of 1A@24VDC or 0.5A@120VAC
Switch Property			
2.5G Forwarding Rate	/	/	/
1000M Forward Speed	/	/	/
100M Forward Speed	148810pps	148810pps	148810pps
Throughput	0.74Mpps@64 bytes	2.38Mpps@64 bytes	1.19Mpps@64 bytes
Transmit Mode	Store and Forward	Store and Forward	Store and Forward
DRAM	/	/	/
Flash	/	/	/
Buffer	1Mbits	3Mbits	1Mbits
Switching Fabric Capacity	1G	12.8G	1.6G
MAC Address Table	2K	8K	2K
Jumbo Frame Size	2K	/	9.6K
DIP Buttons			
Loop Detection	/	√	/
Storm Suppression	/	√	/
Port Isolation	√	√	/
Flow Control	√	√	√
Relay Alarm	/	√	√
Jumbo Frame	√	√	/
Energy-Efficient Ethernet (IEEE 802.3az)	/	√	/
Port Isolation	/	√	/
100M Forced	/	√	/
10M Forced	/	√	√
Power Supply			
Input Voltage	HV: 220VAC(100~240VAC) LV: 12~48VDC(non-PoE Model), 48VDC(PoE Model)	LV: 12~48VDC(non-PoE Model)	LV: 12~48VDC(non-PoE Model)
Power Redundancy	HV/LV: Single power supply	LV: Dual power supply	LV: Dual power supply
Power Connector	HV/LV: Terminal Block	LV: Terminal Block	LV: Terminal Block

Environmental Limit			
Operating Temperature	-40~75℃(-40~167℉)		
Storage Temperature	-40~85℃ (-40~185℉)		
Relative Humidity	5% ~ 95% (no condensation)		
Cooling Method	Shell Heat Dissipation (Fanless)		
Physical Characteristic			
Housing	Metal, IP40		
Installation	DIN-Rail mounting		
Dimension			
Size(W*H*D)	35mm×110mm×95mm	70mm×160mm×130mm	53mm×136mm×105mm
Certification			
Certification	CE, FCC, RoHS		
Warranty	5 years		

Certification in Details	
Certification Item	Standard
CE-LVD	EN 61010-1: 2010
CE-EMC-EMI-RE	EN 55032: 2015
CE-EMC-EMI-CE	EN 55032: 2015
CE-EMC-EMI-Harmonic	EN 61000-3-2: 2019
CE-EMC-EMI-Flicker	EN 61000-3-3: 2013+ A1:2019
CE-EMC-EMS-ESD	IEC 61000-4-2
CE-EMC-EMS-RS	IEC 61000-4-3
CE-EMC-EMS-EFT	IEC 61000-4-4
CE-EMC-EMS-Surge	IEC 61000-4-5
CE-EMC-EMS-CS	IEC 61000-4-6
CE-EMC-EMS-DIPs	IEC 61000-4-11
CE-EMC-EMS-PFMF	IEC 61000-4-8
FCC	FCC 47 CFR Part 15
RoHS-Pb	IEC 62321-5:2013
RoHS-Cd	IEC 62321-5:2013
RoHS-Hg	IEC 62321-4:2013+AMDI1:2017 CSV
RoHS-Cr6+	IEC 62321-7-1:2015 or IEC 62321-7-2:2017
RoHS-PBBs	IEC 62321-6:2015
RoHS-PBDEs	IEC 62321-6:2015
RoHS-BBP/DBP/DEHP/DIBP	IEC 62321-8:2017
Safety	UL 60950-1, UL 62368-1
Vibration	IEC60068-2-6
Shock	IEC60068-2-27
Free Fall	IEC60068-2-32

IES2008 Series

IES2005 Series

Interface		
SFP Slot, 1G/2.5GBase-FX	/	/
SFP Slot, 100M/1000MBase-FX	/	/
Gigabit Optic Port, SC/FC/ST, 10/100/1000Base-FX	/	/
Gigabit Copper Port, 10/100/1000Base-T(X)	/	/
Fast Optic Port, SC/FC/ST, 10/100Base-FX	/	/
Fast Copper Port, 10/100Base-T(X)	8	5
Serial Port	/	/
IO Port	/	/
Console Port	/	/
Alarm Contact Channels	/	/
Switch Property		
2.5G Forwarding Rate	/	/
1000M Forward Speed	/	/
100M Forward Speed	148810pps	148810pps
Throughput	1.19Mpps@64 bytes	0.74Mpps@64 bytes
Transmit Mode	Store and Forward	Store and Forward
DRAM	/	/
Flash	/	/
Buffer	0.75Mbits	0.75Mbits
Switching Fabric Capacity	1.6G	1G
MAC Address Table	2K	2K
Jumbo Frame Size	/	/
DIP Buttons		
Loop Detection	√	√
Storm Suppression	√	√
Port Isolation	√	√
Flow Control	√	√
Relay Alarm	/	/
Jumbo Frame	/	/
Energy-Efficient Ethernet (IEEE 802.3az)	/	/
Port Isolation	/	/
100M Forced	/	/
10M Forced	/	/
Power Supply		
Input Voltage	LV: 12~48VDC(non-PoE Model)	LV: 12~48VDC(non-PoE Model)
Power Redundancy	LV: Single power supply	LV: Single power supply
Power Connector	LV: Terminal Block	LV: Terminal Block
Environmental Limit		
Operating Temperature	-40~75℃(-40~167℉)	
Storage Temperature	-40~85℃ (-40~185℉)	
Relative Humidity	5% ~ 95% (no condensation)	
Cooling Method	Shell Heat Dissipation (Fanless)	

Physical Characteristic		
Housing	Aluminum , IP40	
Installation	DIN-Rail mounting	
Dimension		
Size(W*H*D)	40.6mm×103mm×78mm	28mm×103mm×78mm
Certification		
Certification	CE, FCC, RoHS	
Warranty	5 years	

Certification in Details	
Certification Item	Standard
CE-LVD	EN 61010-1: 2010
CE-EMC-EMI-RE	EN 55032: 2015
CE-EMC-EMI-CE	EN 55032: 2015
CE-EMC-EMI-Harmonic	EN 61000-3-2: 2019
CE-EMC-EMI-Flicker	EN 61000-3-3: 2013+ A1:2019
CE-EMC-EMS-ESD	IEC 61000-4-2
CE-EMC-EMS-RS	IEC 61000-4-3
CE-EMC-EMS-EFT	IEC 61000-4-4
CE-EMC-EMS-Surge	IEC 61000-4-5
CE-EMC-EMS-CS	IEC 61000-4-6
CE-EMC-EMS-DIPs	IEC 61000-4-11
CE-EMC-EMS-PFMF	IEC 61000-4-8
FCC	FCC 47 CFR Part 15
RoHS-Pb	IEC 62321-5:2013
RoHS-Cd	IEC 62321-5:2013
RoHS-Hg	IEC 62321-4:2013+AMDI1:2017 CSV
RoHS-Cr6+	IEC 62321-7-1:2015 or IEC 62321-7-2:2017
RoHS-PBBs	IEC 62321-6:2015
RoHS-PBDEs	IEC 62321-6:2015
RoHS-BBP/DBP/DEHP/DIBP	IEC 62321-8:2017
Safety	UL 60950-1, UL 62368-1
Vibration	IEC60068-2-6
Shock	IEC60068-2-27
Free Fall	IEC60068-2-32

POE SWITCH

ICS5428-16GP8GC4XS

IES6400-8GP2XC

Interface		
SFP+ Slot, 1G/10GBase-FX (Non-PoE)	4	2 Combo
SFP Slot, 1G/2.5GBase-FX (Non-PoE)	/	/
SFP Slot, 100/1000Base-FX (Non-PoE)	8 Combo	/
10G Copper Port, 10/100/1000/10000Base-T(X) (Non-PoE)	/	2 Combo
Gigabit Optic Port, SC/FC/ST, 10/100/1000Base-FX (Non-PoE)	/	/
Gigabit Copper Port, 10/100/1000Base-T(X) (PoE)	16 (PoE) + 8 Combo	8
Fast Optic Port, SC/FC/ST, 10/100Base-FX (Non-PoE)	/	/
Fast Copper Port, 10/100Base-T(X) (PoE)	/	/
Serial Port	/	/
IO Port	/	/
Console	1, RS-232 (TxD, RxD, GND), 8-pin RJ45 (115200, n, 8, 1)	1, RS-232 (TxD, RxD, GND), 8-pin RJ45 (115200, n, 8, 1)
Alarm Contact Channels	2 (Port alarm, Power supply alarm) Relay output with current carrying capacity of 5A@30VDC or 10A@125VAC	2 (Port alarm, Power supply alarm) Relay output with current carrying capacity of 5A@30VDC or 10A@125VAC
PoE Feature		
PoE Standards	IEEE 802.3af: Class0 (0.44W–12.94W), Class1 (0.44W–3.84W), Class2 (3.84W–6.49W), Class3 (6.49W–12.95W) IEEE 802.3at: Class4 (12.95W–25.50W)	IEEE 802.3af: Class0 (0.44W–12.94W), Class1 (0.44W–3.84W), Class2 (3.84W–6.49W), Class3 (6.49W–12.95W) IEEE 802.3at: Class4 (12.95W–25.50W)
Power Budget	Max. 240W for total PD consumption Max. 30W for single PoE port	Max. 240W for total PD consumption Max. 30W for single PoE port
Pins of PoE	IEEE 802.3af/at: 1/2+, 3/6-	IEEE 802.3af/at: 1/2+, 3/6-
Switch Property		
10G Forwarding Rate	14881000pps	14881000pps
2.5G Forwarding Rate	/	/
1000M Forwarding Rate	1488100pps	1488100pps
100M Forwarding Rate	/	/
Throughput	95.23Mpps@64 bytes	41.66Mpps@64 bytes
Transmit Mode	Store and Forward	Store and Forward
DRAM	256MB	256MB
Flash	64MB	64MB
Buffer	16Mbits	8K
Switching Fabric Capacity	128G	56G
MAC Address Table	16K	8K
Jumbo Frame Size	16K	/
Layer3 Feature		
Routing Protocols	Satic routing, RIPv1/v2, OSPFv1/v2/v3, BGP, ECMP (Max. 128 entries)	/
Multicast Routing	PIM-DM、PIM-SM	/
Routing Redundancy	VRRP	/
IP Interfaces	Max. 512 VLAN interfaces	/
Routing Entries	1024	/
ARP Entries	1024	/
NAT	NAPT	/

Layer2 Feature		
Unicast / Multicast	Static Multicast, IGMPv1/v2/v3	Static Multicast, IGMPv1/v2
Redundancy Protocols	SW-Ring (Recovery Time ≤ 20ms), STP/RSTP/MSTP, ERPSv1/v2 (G. 8032 with OAM standard)	SW-Ring (Recovery Time ≤ 20ms), STP/RSTP
LACP	Max. 12 groups, Max. 8 ports within one group	Max. 2 groups, Max. 10 ports within one group
VLAN	Port-based, MAC-based, Protocol-based, Subnet-based Maximum active VLANs: 4094, VLAN IDs available: 1-4094	Port-based Maximum active VLANs: 64, VLAN IDs available: 1-4094
Management & Security		
IP Address	IPv4/IPv6	IPv4/IPv6
Device Management	Web, Console, Telnet, SSH, SNMPv1/v2c/v3, ROMN	Web, Console, Telnet, SNMPv1/v2c/v3
Time Management	NTP Client	SNTP
ACL	IP-based ACL, MAC-based ACL, Max. 1024 ACL entries	/
QoS	Best-Effort, Int-Serv, Diff-Serv CoS: 8 ToS: 8 DSCP: 64	Strict, Weighted Fair (8:4:2:1) CoS: 8 ToS: 8 DSCP: 64
DDM	Temperature, Voltage, Bias current, Receiving power, Transmission power	Temperature, Voltage, Bias current, Receiving power, Transmission power
Port Mirror	Max. 4 groups, TX/ RX/ Both, many-to-1 monitor	Max. 1 group, TX/ RX/ Both, many-to-1 monitor
Power Supply		
Input Voltage	48VDC (44VDC–55VDC)	48VDC (44VDC–55VDC) 24VDC
Power Redundancy	Dual power supply	Dual power supply
Power Connector	Terminal Block	Terminal Block
Environmental Limit		
Operating Temperature	-40~75℃(-40~167℉)	-40~75℃(-40~167℉)
Storage Temperature	-40~85℃ (-40~185℉)	-40~85℃ (-40~185℉)
Relative Humidity	5% ~ 95% (no condensation)	5% ~ 95% (no condensation)
Cooling Method	Shell Heat Dissipation (Fanless)	Shell Heat Dissipation (Fanless)
Physical Characteristic		
Housing	Metal, IP30	Metal, IP40
Installation	1U, Rack mounting	DIN-Rail mounting
Dimension		
Size(W*H*D)	440.4mm×44mm×304.8mm	53mm×138mm×110mm
Warranty	5 years	5 years

Certification in Details

Certification Item	Standard
CE-LVD	EN 61010-1: 2010
CE-EMC-EMI-RE	EN 55032: 2015
CE-EMC-EMI-CE	EN 55032: 2015
CE-EMC-EMI-Harmonic	EN 61000-3-2: 2019
CE-EMC-EMI-Flicker	EN 61000-3-3: 2013+ A1:2019
CE-EMC-EMS-ESD	IEC 61000-4-2
CE-EMC-EMS-RS	IEC 61000-4-3
CE-EMC-EMS-EFT	IEC 61000-4-4
CE-EMC-EMS-Surge	IEC 61000-4-5
CE-EMC-EMS-CS	IEC 61000-4-6
CE-EMC-EMS-DIPs	IEC 61000-4-11
CE-EMC-EMS-PFMF	IEC 61000-4-8
FCC	FCC 47 CFR Part 15
RoHS-Pb	IEC 62321-5:2013
RoHS-Cd	IEC 62321-5:2013
RoHS-Hg	IEC 62321-4:2013+AMDI1:2017 CSV
RoHS-Cr6+	IEC 62321-7-1:2015 or IEC 62321-7-2:2017
RoHS-PBBs	IEC 62321-6:2015
RoHS-PBDEs	IEC 62321-6:2015
RoHS-BBP/DBP/DEHP/DIBP	IEC 62321-8:2017
Safety	UL 60950-1, UL 62368-1
Vibration	IEC60068-2-6
Shock	IEC60068-2-27
Free Fall	IEC60068-2-32

IES6300-8GHP2GS2HS

IES6300 Series

Interface		
SFP+ Slot, 1G/10GBase-X (Non-PoE)	/	/
SFP Slot, 1G/2.5GBase-X (Non-PoE)	2	2
SFP Slot, 100/1000Base-X (Non-PoE)	2	2
Gigabit Optic Port, SC/FC/ST, 10/100/1000Base-FX (Non-PoE)	/	/
Gigabit Copper Port, 10/100/1000Base-T(X) (PoE)	8	8
Fast Optic Port, SC/FC/ST, 10/100Base-FX (Non-PoE)	/	/
Fast Copper Port, 10/100Base-T(X) (PoE)	/	/
Serial Port	/	/
IO Port	/	/
Console	1, RS-232 (TxD, RxD, GND), 8-pin RJ45 (115200, n, 8, 1)	1, RS-232 (TxD, RxD, GND), 8-pin RJ45 (115200, n, 8, 1)
Alarm Contact Channels	1 (Port alarm, Power supply alarm) Relay output with current carrying capacity of 1A@30VDC or 0 3A@125VAC	1 (Port alarm, Power supply alarm) Relay output with current carrying capacity of 1A@30VDC or 0 3A@125VAC
PoE Feature		
PoE Standards	IEEE 802.3af: Class0 (0.44W-12.94W), Class1 (0.44W-3.84W), Class2 (3.84W-6.49W), Class3 (6.49W-12.95W) IEEE 802.3at: Class4 (12.95W-25.50W) IEEE 802.3bt: Class5 (25.5W-40W), Class6 (40W-51W), Class7 (51W-62W), Class8 (62W-71W)	IEEE 802.3af: Class0 (0.44W-12.94W), Class1 (0.44W-3.84W), Class2 (3.84W-6.49W), Class3 (6.49W-12.95W) IEEE 802.3at: Class4 (12.95W-25.50W)
Power Budget	Max. 360W for total PD consumption Max. 90W for single PoE port	Max. 120W/240W for total PD consumption Max. 30W for single PoE port
Pins of PoE	IEEE 802.3af/at: 1/2-, 3/6+ IEEE 802.3bt: 1/2-, 3/6+, 4/5-, 7/8+	IEEE 802.3af/at: 1/2+, 3/6-
Switch Property		
2.5G Forwarding Rate	3720250pps	3720250pps
1000M Forwarding Rate	1488100pps	1488100pps
100M Forwarding Rate	/	/
Throughput	22.32Mpps@64 bytes	22.32Mpps@64 bytes
Transmit Mode	Store and Forward	Store and Forward
DRAM	1Gb	1Gb
Flash	256MB	256MB
Buffer	4Mbits	4Mbits
Switching Fabric Capacity	30G	30G
MAC Address Table	8K	8K
Jumbo Frame Size	10K	10K

Management & Security		
IP Address	IPv4/IPv6	IPv4/IPv6
Device Management	Web, Console, Telnet, SSH, SNMPv1/v2c/v3, ROMN	Web, Console, Telnet, SSH, SNMPv1/v2c/v3, ROMN
Time Management	NTP Client, NTP Server	NTP Client, NTP Server, PTP (BC/TC mode, 100ns) optional
ACL	IP-based ACL, MAC-based ACL, Max. 256 ACL entries	IP-based ACL, MAC-based ACL, Max. 256 ACL entries
QoS	Best-Effort, Int-Serv, Diff-Serv CoS: 8 ToS: 8 DSCP: 64	Best-Effort, Int-Serv, Diff-Serv CoS: 8 ToS: 8 DSCP: 64
DDM	Temperature, Voltage, Bias current, Receiving power, Transmission power	Temperature, Voltage, Bias current, Receiving power, Transmission power
Port Mirror	Max. 1 group, TX/ RX/ Both, many-to-1 monitor	Max. 1 group, TX/ RX/ Both, many-to-1 monitor
Power Supply		
Input Voltage	52VDC (50~55VDC)	48VDC (44VDC~55VDC), 24VDC
Power Redundancy	Dual power supply	Dual power supply
Power Connector	Terminal Block	Terminal Block
Environmental Limit		
Operating Temperature	-40~75℃(-40~167°F)	-40~75℃(-40~167°F)
Storage Temperature	-40~85℃ (-40~185°F)	-40~85℃ (-40~185°F)
Relative Humidity	5% ~ 95% (no condensation)	5% ~ 95% (no condensation)
Cooling Method	Shell Heat Dissipation (Fanless)	Shell Heat Dissipation (Fanless)
Physical Characteristic		
Housing	Metal, IP40	Metal, IP40
Installation	DIN-Rail mounting	DIN-Rail mounting
Dimension		
Size(W*H*D)	62mm×150mm×135mm	53mm×138mm×110mm
Certification		
Certification	CE, FCC, RoHS	
Warranty	5 years	5 years

Certification in Details

Certification Item	Standard	Certification Item	Standard
CE-LVD	EN 61010-1: 2010	RoHS-Pb	IEC 62321-5:2013
CE-EMC-EMI-RE	EN 55032: 2015	RoHS-Cd	IEC 62321-5:2013
CE-EMC-EMI-CE	EN 55032: 2015	RoHS-Hg	IEC 62321-4:2013+AMDI1:2017 CSV
CE-EMC-EMI-Harmonic	EN 61000-3-2: 2019	RoHS-Cr6+	IEC 62321-7-1:2015 or IEC 62321-7-2:2017
CE-EMC-EMI-Flicker	EN 61000-3-3: 2013+ A1:2019	RoHS-PBBs	IEC 62321-6:2015
CE-EMC-EMS-ESD	IEC 61000-4-2	RoHS-PBDEs	IEC 62321-6:2015
CE-EMC-EMS-RS	IEC 61000-4-3	RoHS-BBP/DBP/DEHP/DIBP	IEC 62321-8:2017
CE-EMC-EMS-EFT	IEC 61000-4-4	Safety	UL 60950-1, UL 62368-1
CE-EMC-EMS-Surge	IEC 61000-4-5	Vibration	IEC60068-2-6
CE-EMC-EMS-CS	IEC 61000-4-6	Shock	IEC60068-2-27
CE-EMC-EMS-DIPs	IEC 61000-4-11	Free Fall	IEC60068-2-32
CE-EMC-EMS-PFMF	IEC 61000-4-8	Grid Standard	IEC 61850-3, IEEE 1613
FCC	FCC 47 CFR Part 15		

IES6306 Series

IES6220 Series

Interface		
SFP+ Slot, 1G/10GBase-FX (Non-PoE)	/	/
SFP Slot, 1G/2.5GBase-FX (Non-PoE)	2	/
SFP Slot, 100/1000Base-FX (Non-PoE)	/	4 (1000Base-X SFP)
Gigabit Optic Port, SC/FC/ST, 10/100/1000Base-FX (Non-PoE)	/	/
Gigabit Copper Port, 10/100/1000Base-T(X) (PoE)	4	/
Fast Optic Port, SC/FC/ST, 10/100Base-FX (Non-PoE)	/	/
Fast Copper Port, 10/100Base-T(X) (PoE)	/	8, 16
Serial Port	/	/
IO Port	/	/
Console	1, RS-232 (TxD, RxD, GND), 8-pin RJ45 (115200, n, 8, 1)	1, RS-232 (TxD, RxD, GND), 8-pin RJ45 (115200, n, 8, 1)
Alarm Contact Channels	1 (Port alarm, Power supply alarm) Relay output with current carrying capacity of 5A@30VDC or 10A@125VAC	1 (Port alarm, Power supply alarm) Relay output with current carrying capacity of 1A@30VDC or 0.3A@125VAC
PoE Feature		
PoE Standards	IEEE 802.3af: Class0 (0.44W~12.94W), Class1 (0.44W~3.84W), Class2 (3.84W~6.49W), Class3 (6.49W~12.95W) IEEE 802.3at: Class4 (12.95W~25.50W)	IEEE 802.3af: Class0 (0.44W~12.94W), Class1 (0.44W~3.84W), Class2 (3.84W~6.49W), Class3 (6.49W~12.95W) IEEE 802.3at: Class4 (12.95W~25.50W)
Power Budget	Max. 120W for total PD consumption Max. 30W for single PoE port	Max. 120/200W for total PD consumption Max. 30W for single PoE port
Pins of PoE	IEEE 802.3af/at: 1/2+, 3/6-	IEEE 802.3af/at: 1/2+, 3/6-
Switch Property		
2.5G Forwarding Rate	3720250pps	/
1000M Forwarding Rate	1488100pps	1488100pps
100M Forwarding Rate	/	148810pps
Throughput	13.39Mpps@64 bytes	8.33Mpps@64 bytes
Transmit Mode	Store and Forward	Store and Forward
DRAM	1Gb	512K
Flash	256MB	2M
Buffer	4Mbits	3Mbits
Switching Fabric Capacity	30G	12.8G
MAC Address Table	8K	8K
Jumbo Frame Size	10K	/
Layer2 Feature		
Unicast / Multicast	Static Multicast, IGMPv1/v2/v3	Static Multicast, IGMPv1/v2
Redundancy Protocols	SW-Ring (Recovery Time ≤ 20ms), STP/RSTP/MSTP, ERPSv1/v2 (G. 8032 with OAM standard)	SW-Ring (Recovery Time ≤ 20ms), STP/RSTP
LACP	Max. 4 groups, Max. 6 ports within one group	Max. 2 groups, Max. 20 ports within one group
VLAN	Port-based, MAC-based, Protocol-based, Subnet-based Maximum active VLANs: 4094, VLAN IDs available: 1-4094	Port-based Maximum active VLANs: 64, VLAN IDs available: 1-4094
Management & Security		
IP Address	IPv4/IPv6	/
Device Management	Web, Console, Telnet, SSH, SNMPv1/v2c/v3, ROMN	Web, Console, Telnet, SNMPv1/v2c
Time Management	NTP Client, NTP Server	SNTP

ACL	IP-based ACL, MAC-based ACL, Max. 256 ACL entries	/
QoS	Best-Effort, Int-Serv, Diff-Serv CoS: 8 ToS: 8 DSCP: 64	Strict, Weighted Fair (8:4:2:1) CoS: 8 ToS: 8 DSCP: 64
DDM	Temperature, Voltage, Bias current, Receiving power, Transmission power	Temperature, Voltage, Bias current, Receiving power, Transmission power
Port Mirror	Max. 1 group, TX/ RX/ Both, many-to-1 monitor	Max. 1 group, TX/ RX/ Both, many-to-1 monitor
Power Supply		
Input Voltage	48VDC (44VDC~55VDC)	48VDC (44VDC~55VDC)
Power Redundancy	Dual power supply	Dual power supply
Power Connector	Terminal Block	Terminal Block
Environmental Limit		
Operating Temperature	-40~75℃(-40~167℉)	-40~75℃(-40~167℉)
Storage Temperature	-40~85℃ (-40~185℉)	-40~85℃ (-40~185℉)
Relative Humidity	5% ~ 95% (no condensation)	5% ~ 95% (no condensation)
Cooling Method	Shell Heat Dissipation (Fanless)	Shell Heat Dissipation (Fanless)
Physical Characteristic		
Housing	Metal, IP40	Metal, IP40
Installation	DIN-Rail mounting	DIN-Rail mounting
Dimension		
Size(W*H*D)	44mm×150mm×120mm	70mm×160mm×130mm
Certification		
Certification	CE, FCC, RoHS	
Warranty	5 years	5 years

Certification in Details	
Certification Item	Standard
CE-LVD	EN 61010-1: 2010
CE-EMC-EMI-RE	EN 55032: 2015
CE-EMC-EMI-CE	EN 55032: 2015
CE-EMC-EMI-Harmonic	EN 61000-3-2: 2019
CE-EMC-EMI-Flicker	EN 61000-3-3: 2013+ A1:2019
CE-EMC-EMS-ESD	IEC 61000-4-2
CE-EMC-EMS-RS	IEC 61000-4-3
CE-EMC-EMS-EFT	IEC 61000-4-4
CE-EMC-EMS-Surge	IEC 61000-4-5
CE-EMC-EMS-CS	IEC 61000-4-6
CE-EMC-EMS-DIPs	IEC 61000-4-11
CE-EMC-EMS-PFMF	IEC 61000-4-8
FCC	FCC 47 CFR Part 15
RoHS-Pb	IEC 62321-5:2013
RoHS-Cd	IEC 62321-5:2013
RoHS-Hg	IEC 62321-4:2013+AMDI1:2017 CSV
RoHS-Cr6+	IEC 62321-7-1:2015 or IEC 62321-7-2:2017
RoHS-PBBs	IEC 62321-6:2015
RoHS-PBDEs	IEC 62321-6:2015
RoHS-BBP/DBP/DEHP/DIBP	IEC 62321-8:2017
Safety	UL 60950-1, UL 62368-1
Vibration	IEC60068-2-6
Shock	IEC60068-2-27
Free Fall	IEC60068-2-32
Grid Standard	IEC 61850-3, IEEE 1613

IES6210 Series

IES2310 Series

Interface		
SFP+ Slot, 1G/10GBase-FX (Non-PoE)	/	/
SFP Slot, 1G/2.5GBase-FX (Non-PoE)	/	2
SFP Slot, 100/1000Base-FX (Non-PoE)	2 Combo (1000Base-X SFP)	/
Gigabit Optic Port, SC/FC/ST, 10/100/1000Base-FX (Non-PoE)	/	/
Gigabit Copper Port, 10/100/1000Base-T(X) (PoE)	2 Combo	4, 8
Fast Optic Port, SC/FC/ST, 10/100Base-FX (Non-PoE)	/	/
Fast Copper Port, 10/100Base-T(X) (PoE)	4, 8	/
Serial Port	/	/
IO Port	/	/
Console	1, RS-232 (TxD, RxD, GND), 8-pin RJ45 (115200, n, 8, 1)	/
Alarm Contact Channels	1 (Port alarm, Power supply alarm) Relay output with current carrying capacity of 1A@30VDC or 0.3A@125VAC	/
PoE Feature		
PoE Standards	IEEE 802.3af: Class0 (0.44W~12.94W), Class1 (0.44W~3.84W), Class2 (3.84W~6.49W), Class3 (6.49W~12.95W) IEEE 802.3at: Class4 (12.95W~25.50W)	IEEE 802.3af: Class0 (0.44W~12.94W), Class1 (0.44W~3.84W), Class2 (3.84W~6.49W), Class3 (6.49W~12.95W) IEEE 802.3at: Class4 (12.95W~25.50W)
Power Budget	Max. 60/120/240W for total PD consumption Max. 30W for single PoE port	Max. 60/120/240W for total PD consumption Max. 15/30W for single PoE port
Pins of PoE	IEEE 802.3af/at: 1/2+, 3/6-	IEEE 802.3af/at: 1/2+, 3/6-
Switch Property		
10G Forwarding Rate	/	/
2.5G Forwarding Rate	/	/
1000M Forwarding Rate	1488100pps	1488100pps
100M Forwarding Rate	148810pps	1488100pps
Throughput	4.16Mpps@64 bytes	4.16Mpps@64 bytes
Transmit Mode	Store and Forward	Store and Forward
DRAM	512K	/
Flash	2M	/
Buffer	1Mbits	4Mbits
Switching Fabric Capacity	7.6G	26G
MAC Address Table	8K	8K
Jumbo Frame Size	/	/
Layer2 Feature		
Unicast / Multicast	Static Multicast, IGMPv1/v2	/
Redundancy Protocols	SW-Ring (Recovery Time ≤ 20ms), STP/RSTP	/
LACP	Max. 2 groups, Max. 10 ports within one group	/
VLAN	Port-based Maximum active VLANs: 64, VLAN IDs available: 1-4094	/
Management & Security		
IP Address	/	/
Device Management	Web, Console, Telnet, SNMPv1/v2c	/
Time Management	SNTP	/
ACL	/	/

QoS	Strict, Weighted Fair (8:4:2:1) CoS: 8 ToS: 8 DSCP: 64	/
DDM	Temperature, Voltage, Bias current, Receiving power, Transmission power	/
Port Mirror	Max. 1 groups, TX/ RX/ Both, many-to-1 monitor	/
Power Supply		
Input Voltage	48VDC (44VDC~55VDC), 24VDC	48VDC (44VDC~55VDC), 24VDC
Power Redundancy	Dual power supply	Dual power supply
Power Connector	Terminal Block	Terminal Block
Environmental Limit		
Operating Temperature	-40~75℃(-40~167℉)	-40~75℃(-40~167℉)
Storage Temperature	-40~85℃ (-40~185℉)	-40~85℃ (-40~185℉)
Relative Humidity	5% ~ 95% (no condensation)	5% ~ 95% (no condensation)
Cooling Method	Shell Heat Dissipation (Fanless)	Shell Heat Dissipation (Fanless)
Physical Characteristic		
Housing	Metal, IP40	Metal, IP40
Installation	DIN-Rail mounting	DIN-Rail mounting
Dimension		
Size(W*H*D)	53mm×138mm×110mm	53mm×138mm×110mm
Certification		
Certification	CE, FCC, RoHS	
Warranty	5 years	5 years

Certification in Details	
Certification Item	Standard
CE-LVD	EN 61010-1: 2010
CE-EMC-EMI-RE	EN 55032: 2015
CE-EMC-EMI-CE	EN 55032: 2015
CE-EMC-EMI-Harmonic	EN 61000-3-2: 2019
CE-EMC-EMI-Flicker	EN 61000-3-3: 2013+ A1:2019
CE-EMC-EMS-ESD	IEC 61000-4-2
CE-EMC-EMS-RS	IEC 61000-4-3
CE-EMC-EMS-EFT	IEC 61000-4-4
CE-EMC-EMS-Surge	IEC 61000-4-5
CE-EMC-EMS-CS	IEC 61000-4-6
CE-EMC-EMS-DIPs	IEC 61000-4-11
CE-EMC-EMS-PFMF	IEC 61000-4-8
FCC	FCC 47 CFR Part 15
RoHS-Pb	IEC 62321-5:2013
RoHS-Cd	IEC 62321-5:2013
RoHS-Hg	IEC 62321-4:2013+AMDI1:2017 CSV
RoHS-Cr6+	IEC 62321-7-1:2015 or IEC 62321-7-2:2017
RoHS-PBBs	IEC 62321-6:2015
RoHS-PBDEs	IEC 62321-6:2015
RoHS-BBP/DBP/DEHP/DIBP	IEC 62321-8:2017
Safety	UL 60950-1, UL 62368-1
Vibration	IEC60068-2-6
Shock	IEC60068-2-27
Free Fall	IEC60068-2-32

IES2305 Series

IES2105 Series

IES2210 Series

Interface			
SFP+ Slot, 1G/10GBase-FX (Non-PoE)	/	/	/
SFP Slot, 1G/2.5GBase-FX (Non-PoE)	/	/	/
SFP Slot, 100/1000Base-FX (Non-PoE)	0, 1	/	2 Combo (1000Base-X SFP)
Gigabit Optic Port, SC/FC/ST, 10/100/1000Base-FX (Non-PoE)	0, 1	/	/
Gigabit Copper Port, 10/100/1000Base-T(X) (PoE)	4, 5 (4 PoE)	/	2 Combo
Fast Optic Port, SC/FC/ST, 10/100Base-FX (Non-PoE)	/	0, 1	/
Fast Copper Port, 10/100Base-T(X) (PoE)	/	4, 5 (4 PoE)	4, 8
Serial Port	/	/	/
IO Port	/	/	/
Console	/	/	/
Alarm Contact Channels	/	/	/
PoE Feature			
PoE Standards	IEEE 802.3af: Class0 (0.44W–12.94W), Class1 (0.44W–3.84W), Class2 (3.84W–6.49W), Class3 (6.49W–12.95W) IEEE 802.3at: Class4 (12.95W–25.50W)		IEEE 802.3af: Class0 (0.44W–12.94W), Class1 (0.44W–3.84W), Class2 (3.84W–6.49W), Class3 (6.49W–12.95W) IEEE 802.3at: Class4 (12.95W–25.50W)
Power Budget	Max. 100W for total PD consumption Max. 30W for single PoE port		Max. 60/120/240W for total PD consumption Max. 15/30W for single PoE port
Pins of PoE	IEEE 802.3af/at: 1/2+, 3/6-		IEEE 802.3af/at: 1/2+, 3/6-
Switch Property			
10G Forwarding Rate	/	/	/
2.5G Forwarding Rate	/	/	/
1000M Forwarding Rate	1488100pps	/	1488100pps
100M Forwarding Rate	/	148810pps	148810pps
Throughput	7.44Mpps@64 bytes	0.74Mpps@64 bytes	4.16Mpps@64 bytes
Transmit Mode	Store and Forward	Store and Forward	Store and Forward
DRAM	/	/	/
Flash	/	/	/
Buffer	1Mbits	1Mbits	1Mbits
Switching Fabric Capacity	9.125G	1G	7.6G
MAC Address Table	2K	2K	8K
Jumbo Frame Size	9K	2K	/
Power Supply			
Input Voltage	48VDC (44VDC–55VDC)		
Power Redundancy	Single power supply		
Power Connector	Terminal Block		
Environmental Limit			
Operating Temperature	-40~75℃(-40~167℉)		
Storage Temperature	-40~85℃ (-40~185℉)		
Relative Humidity	5% ~ 95% (no condensation)		
Cooling Method	Shell Heat Dissipation (Fanless)		

Physical Characteristic		
Housing	Metal, IP40	
Installation	DIN-Rail mounting	
Dimension		
Size(W*H*D)	35mm×110mm×95mm	53mm×138mm×110mm
Certification		
Certification	CE, FCC, RoHS	
Warranty	5 years	

Certification in Details	
Certification Item	Standard
CE-LVD	EN 61010-1: 2010
CE-EMC-EMI-RE	EN 55032: 2015
CE-EMC-EMI-CE	EN 55032: 2015
CE-EMC-EMI-Harmonic	EN 61000-3-2: 2019
CE-EMC-EMI-Flicker	EN 61000-3-3: 2013+ A1:2019
CE-EMC-EMS-ESD	IEC 61000-4-2
CE-EMC-EMS-RS	IEC 61000-4-3
CE-EMC-EMS-EFT	IEC 61000-4-4
CE-EMC-EMS-Surge	IEC 61000-4-5
CE-EMC-EMS-CS	IEC 61000-4-6
CE-EMC-EMS-DIPs	IEC 61000-4-11
CE-EMC-EMS-PFMF	IEC 61000-4-8
FCC	FCC 47 CFR Part 15
RoHS-Pb	IEC 62321-5:2013
RoHS-Cd	IEC 62321-5:2013
RoHS-Hg	IEC 62321-4:2013+AMDI1:2017 CSV
RoHS-Cr6+	IEC 62321-7-1:2015 or IEC 62321-7-2:2017
RoHS-PBBs	IEC 62321-6:2015
RoHS-PBDEs	IEC 62321-6:2015
RoHS-BBP/DBP/DEHP/DIBP	IEC 62321-8:2017
Safety	UL 60950-1, UL 62368-1
Vibration	IEC60068-2-6
Shock	IEC60068-2-27
Free Fall	IEC60068-2-32

MEDIA CONVERTER

IMC100 Fast rate series

IMC100 Gigabit rate series

Interface		
Gigabit Copper Port, 10/100/1000Base-T(X)	/	1, 2
Fast Copper Port, 10/100Base-T(X)	1, 2	/
Gigabit Optic Port, SC/FC/ST/SFP, 1000BaseFX	/	1
Fast Optic Port, SC/FC/ST, 100BaseFX	1	/
Transmission Distance		
Twisted Pairs Cable	100 M	100 M
Single-mode Fiber (8.3/125μm, 8.7/125μm, 9/125μm or 10/125μm)	1310NM/1550NM: 20/40/60/80/100/120km	1310NM/1550NM: 20/40/60/80/100/120km
multi-mode Fiber (50/125μm or 62.5/125μm)	850NM/1310NM: 2KM	850NM/1310NM: 2KM
Switch Property		
1000M Forward Speed	/	1488100pps
100M Forward Speed	148810pps	/
Buffer	1 Mbits	1 Mbits
Switching Fabric Capacity	1G	18.2G
MAC Address Table	2K	2K
Jumbo Frame Size	2K	2K
DIP Buttons		
Loop detection	/	/
Storm suppression	/	/
Port Isolation	√ (2 Copper ports model)	√ (2 Copper ports model)
Flow control	√ (2 Copper ports model)	√ (2 Copper ports model)
LFP	√ (1 Copper port model)	√ (1 Copper port model)
10M Forced	/	/
100M Forced	/	/
Jumbo Frame	√	√
Remote/ Local Mode	/	/
Power Supply		
Input Voltage	HV: 100~240VAC/DC LV: 12~48VDC	
Power Redundancy	HV: Single power supply, LV: Single/ Dual power supply	
Power Connector	HV/LV: Terminal Block	
Environmental Limit		
Operating Temperature	-40~75℃(-40~167℉)	
Storage Temperature	-40~85℃ (-40~185℉)	
Relative Humidity	5% ~ 95% (no condensation)	
Cooling Method	Shell Heat Dissipation (Fanless)	
Physical Characteristic		
Housing	Metal, IP40	
Installation	DIN-Rail mounting	
Dimension		
Size(W*H*D)	35mm×110mm×95mm	35mm×110mm×95mm
Certification		
Certification	CE, FCC, RoHS	
Warranty	5 years	

IMC100M Fast rate series

IMC100M Gigabit rate series

Interface		
Gigabit Copper Port, 10/100/1000Base-T(X)	/	1, 2
Fast Copper Port, 10/100Base-T(X)	1, 2	/
Gigabit Optic Port, SC/FC/ST/SFP, 1000BaseFX	/	1
Fast Optic Port, SC/FC/ST, 100BaseFX	1	/
Fiber Bypass Port	/	/
Transmission Distance		
Twisted Pairs Cable	100 M	100 M
Single-mode Fiber (8.3/125μm, 8.7/125μm, 9/125μm or 10/125μm)	1310NM/1550NM: 20/40/60/80/100/120km	1310NM/1550NM: 20/40/60/80/100/120km
multi-mode Fiber (50/125μm or 62.5/125μm)	850NM/1310NM: 2KM	850NM/1310NM: 2KM
Switch Property		
1000M Forward Speed	/	1488100pps
100M Forward Speed	148810pps	/
Buffer	0.75Mbits	1Mbits
Switching Fabric Capacity	0.8G	14G
MAC Address Table	2K	8K
Jumbo Frame Size	/	/
DIP Buttons		
Loop detection	/	/
Storm suppression	/	/
Port Isolation	/	/
Flow control	√	√
LFP	/	/
10M Forced	/	/
100M Forced	/	/
Jumbo Frame	/	/
Remote/ Local Mode	√	√
Power Supply		
Input Voltage	HV: 100~240VAC LV: 12~48VDC	
Power Redundancy	HV/LV: Single power supply	
Power Connector	HV/LV: Terminal Block	
Environmental Limit		
Operating Temperature	-40~75℃(-40~167℉)	
Storage Temperature	-40~85℃ (-40~185℉)	
Relative Humidity	5% ~ 95% (no condensation)	
Cooling Method	Shell Heat Dissipation (Fanless)	
Physical Characteristic		
Housing	Metal, IP40	
Installation	DIN-Rail mounting	
Dimension		
Size(W*H*D)	35mm×110mm×95mm	35mm×110mm×95mm
Certification		
Certification	CE, FCC, RoHS	
Warranty	5 years	

IPMC101 Series

IPMC100 Series

Interface		
Gigabit Copper Port, 10/100/1000Base-T(X)	/	1, 2
Fast Copper Port, 10/100Base-T(X)	1	/
Gigabit Optic Port, SC/FC/ST/SFP, 1000BaseFX	/	1
Fast Optic Port, SC/FC/ST, 100BaseFX	1	/
Fiber Bypass Port	/	/
Transmission Distance		
Twisted Pairs Cable	100 M	100 M
Single-mode Fiber (8.3/125μm, 8.7/125μm, 9/125μm or 10/125μm)	1310NM/1550NM: 20/40/60/80/100/120km	1310NM/1550NM: 20/40/60/80/100/120km
multi-mode Fiber (50/125μm or 62.5/125μm)	850NM/1310NM: 2KM	850NM/1310NM: 2KM
Switch Property		
1000M Forward Speed	/	1488100pps
100M Forward Speed	148810pps	/
Buffer	1Mbits	1Mbits
Switching Fabric Capacity	1.6G	1.6G
MAC Address Table	2K	2K
Jumbo Frame Size	/	/
DIP Buttons		
Loop detection	/	/
Storm suppression	/	/
Port Isolation	/	/
Flow control	√	√
LFP	√	/
10M Forced	/	/
100M Forced	/	/
Jumbo Frame	√	/
Remote/ Local Mode	/	√
PoE Specifications		
PoE Protocol	IEEE 802.3af: Class0 (0.44W–12.94W), Class1 (0.44W–3.84W), Class2 (3.84W–6.49W), Class3 (6.49W–12.95W) IEEE 802.3at: Class4 (12.95W–25.50W)	IEEE 802.3af: Class0 (0.44W–12.94W), Class1 (0.44W–3.84W), Class2 (3.84W–6.49W), Class3 (6.49W–12.95W) IEEE 802.3at: Class4 (12.95W–25.50W)
Power Budget	Max. 30W for single PoE port	Max. 30W for single PoE port
Pin of PoE	IEEE 802.3af/at: 1/2+, 3/6-	IEEE 802.3af/at: 1/2+, 3/6-
Power Supply		
Input Voltage	LV: 48VDC (44~55VDC)	LV: 48VDC (44~55VDC)
Power Redundancy	LV: Single power supply	LV: Single power supply
Power Connector	LV: Terminal Block	LV: Terminal Block
Environmental Limit		
Operating Temperature	-40~75℃(-40~167℉)	
Storage Temperature	-40~85℃ (-40~185℉)	
Relative Humidity	5% ~ 95% (no condensation)	
Cooling Method	Shell Heat Dissipation (Fanless)	
Physical Characteristic		
Housing	Metal, IP40	
Installation	DIN-Rail mounting	
Dimension		
Size(W*H*D)	36mm×110mm×97mm	36mm×110mm×97mm
Certification		
Certification	CE, FCC, RoHS	
Warranty	5 years	

MODEL1100 Series

MODEL1200 Series

MODEL3012 Series

Interface			
Gigabit Copper Port, 10/100/1000Base-T(X)	/	/	1
Fast Copper Port, 10/100Base-T(X)	1	2	/
Gigabit Optic Port, SC/FC/ST/SFP, 1000BaseFX	/	/	1
Fast Optic Port, SC/FC/ST, 100BaseFX	1	1	/
Fiber Bypass Port	/	/	/
Transmission Distance			
Twisted Pairs Cable	100 M	100 M	100 M
Single-mode Fiber (8.3/125μm, 8.7/125μm, 9/125μm or 10/125μm)	1310NM/1550NM: 20/40/60/80/100/120km	1310NM/1550NM: 20/40/60/80/100/120KM	1310NM/1550NM: 20/40/60/80KM
multi-mode Fiber (50/125μm or 62.5/125μm)	1310NM: 2KM	1310NM: 2KM	850NM/1310NM: 500M/2KM
Switch Property			
1000M Forward Speed	/	/	1488100pps
100M Forward Speed	148810pps	148810pps	/
Buffer	1 Mbits	1 Mbits	1 Mbits
Switching Fabric Capacity	0.4G	0.4G	1.2G
MAC Address Table	1K	1K	1K
Jumbo Frame Size	/	/	/
Power Supply			
Input Voltage	HV: Built-in 220VAC/DC LV: Built-in -48VDC, External 5VDC	HV: Built-in 220VAC/DC LV: Built-in -48VDC, External 5VDC	HV: Built-in 220VAC/DC LV: Built-in -48VDC, External 5VDC
Power Redundancy	HV/LV: Single power supply	HV/LV: Single power supply	HV/LV: Single power supply
Power Connector	HV: Single-phase socket, LV: Terminal Block, DC Round Connector	HV: Single-phase socket, LV: Terminal Block, DC Round Connector	HV: AC Outlet, LV: Terminal Block, DC Round Connector
Environmental Limit			
Operating Temperature	-10~60℃(14~140℉)		
Storage Temperature	-20~70℃ (-4~158℉)		
Relative Humidity	5% ~ 95% (no condensation)		
Cooling Method	Shell Heat Dissipation (Fanless)		
Physical Characteristic			
Housing	Metal, IP20		
Installation	Wall/ DIN-Rail mounting		
Dimension			
Size(W*H*D)	70.6mm×26mm×94mm (external power supply) 115mm×30mm×173.2mm (built-in power supply)	70.6mm×26mm×94mm (external power supply) 115mm×30mm×173.2mm (built-in power supply)	
Certification			
Certification	CE, FCC, RoHS		
Warranty	5 years		



	MODEL1100-C	MODEL1200-C	MODEL3012-C
Interface			
Gigabit Copper Port, 10/100/1000Base-T(X)	/	/	1
Fast Copper Port, 10/100Base-T(X)	1	2	/
Gigabit Optic Port, SC/FC/ST/SFP, 1000BaseFX	/	/	1
Fast Optic Port, SC/FC/ST, 100BaseFX	1	1	/
Fiber Bypass Port	/	/	/
Transmission Distance			
Twisted Pairs Cable	100 M	100 M	100 M
Single-mode Fiber (8.3/125μm, 8.7/125μm, 9/125μm or 10/125μm)	1310/1550NM: 20/40/60/80KM	1310/1550NM: 20/40/60/80KM	1310/1550NM: 20/40/60/80KM
multi-mode Fiber (50/125μm or 62.5/125μm)	1310NM: 2KM	1310NM: 2KM	1310NM: 2KM
Switch Property			
1000M Forward Speed	/	/	1488100pps
100M Forward Speed	148810pps	148810pps	/
Buffer	1Mbits	1Mbits	1Mbits
Switching Fabric Capacity	0.4G	0.4G	1.2G
MAC Address Table	1K	1K	1K
Jumbo Frame Size	/	/	/
Power Supply			
Input Voltage	LV: 5VDC	LV: 5VDC	LV: 5VDC
Power Redundancy	LV: Single power supply	LV: Single power supply	LV: Single power supply
Power Connector	LV: DC Round Connector	LV: DC Round Connector	LV: DC Round Connector
Environmental Limit			
Operating Temperature	-10~60℃(14~140℉)		
Storage Temperature	-20~70℃ (-4~158℉)		
Relative Humidity	5% ~ 95% (no condensation)		
Cooling Method	Shell Heat Dissipation (Fanless)		
Physical Characteristic			
Installation	Slide-in mounting	Slide-in mounting	Slide-in mounting
Dimension			
Size(W*H*D)	114.7mm×77.4mm×26mm	114.7mm×77.4mm×26mm	114.7mm×77.4mm×26mm
Certification			
Certification	CE, FCC, RoHS		
Warranty	5 years		


	ECU100 Fast rate series	ECU100 Gigabit rate series
Interface		
Gigabit Copper Port, 10/100/1000Base-T(X)	/	1, 2
Fast Copper Port, 10/100Base-T(X)	1, 2	/
Gigabit Optic Port, SC/FC/ST/SFP, 1000BaseFX	/	1
Fast Optic Port, SC/FC/ST, 100BaseFX	1	/
Fiber Bypass Port	/	/
Transmission Distance		
Twisted Pairs Cable	100 M	100 M
Single-mode Fiber (8.3/125μm, 8.7/125μm, 9/125μm or 10/125μm)	1310NM/1550NM: 20/40/60/80/100/120km	1310NM/1550NM: 20/40/60/80/100/120km
multi-mode Fiber (50/125μm or 62.5/125μm)	850NM/1310NM: 2KM	850NM/1310NM: 2KM
Switch Property		
1000M Forward Speed	/	1488100pps
100M Forward Speed	148810pps	/
Buffer	0.75Mbits	0.75Mbits
Switching Fabric Capacity	0.8G	0.8G
MAC Address Table	2K	2K
Jumbo Frame Size	/	/
Power Supply		
Input Voltage	LV: 5VDC	LV: 5VDC
Power Redundancy	LV: Single power supply	LV: Single power supply
Power Connector	LV: DC Round Connector	LV: DC Round Connector
Environmental Limit		
Operating Temperature	-40~75℃(-40~167℉)	
Storage Temperature	-40~85℃ (-40~185℉)	
Relative Humidity	5% ~ 95% (no condensation)	
Cooling Method	Shell Heat Dissipation (Fanless)	
Physical Characteristic		
Installation	Slide-in mounting	Slide-in mounting
Dimension		
Size(W*H*D)	84.5mm×20.0mm×122.5mm	84.5mm×20.0mm×122.5mm
Certification		
Certification	CE, FCC, RoHS	
Warranty	5 years	

IES2000-2BP-SS-LC

Interface	
Fiber Bypass Port	4, 1*1
Optical Switching Time	
Optical Switching Time	10ms
Power Supply	
Input Voltage	LV: 12~48VDC
Power Redundancy	LV: Dual power supply
Power Connector	LV: Terminal Block
Environmental Limit	
Operating Temperature	-40~75℃(-40~167℉)
Storage Temperature	-40~85℃ (-40~185℉)
Relative Humidity	5% ~ 95% (no condensation)
Cooling Method	Shell Heat Dissipation (Fanless)
Physical Characteristic	
Housing	Metal, IP40
Installation	DIN-Rail mounting
Dimension	
Size(W*H*D)	35mm×110mm×95mm
Certification	
Certification	CE, FCC, RoHS
Warranty	5 years

RACK2100

RACK2000A

RACK2000B

Ethernet Interface			
Business Slots	18	14	16
Management Slot	1	0	0
Adapted Converters	ECU100 Series, ECU100M Series	MODEL1100/MODEL3012/ MODEL277A/MODEL277B	MODEL1100-C/MODEL1200-C/ MODEL3012-C
Management			
Device Management	SNMP v1/v2c, Console, DHCP Client, SNTP, mail alarm, port alarm, power alarm	/	/
Switch Property			
Switching Fabric Capacity	14G/ 0.8G	0.8G	0.8G
MAC Address Table	8K/ 2K	2K	2K
Buffer	1Mbit/ 0.75Mbit	0.75Mbit	0.75Mbit
Power Supply			
Input Voltage	85~264VAC/DC	100-260VAC	85~265VAC
Output Voltage	5VDC	5VDC	5VDC
Power Redundancy	Dual power supply	Single power supply	Dual power supply
Power Connector	Single-phase socket	Single-phase socket	Single-phase socket
Environmental Limit			
Operating Temperature	-40~75℃(-40~167℉)	0~50℃(32~122℉)	-20~70℃(-4~158℉)
Storage Temperature	-40~85℃ (-40~185℉)	-10~70℃ (14~158℉)	-40~70℃ (-40~158℉)
Relative Humidity	5% ~ 95% (no condensation)	5% ~ 95% (no condensation)	5% ~ 95% (no condensation)
Cooling method	Shell heat dissipation (fanless)	Fan Cooling	Fan Cooling
Physical Characteristic			
Housing	Metal	Metal	Metal
Installation	2U, RACK mounting	2U, RACK mounting	2U, RACK mounting
Dimension			
Size(W*H*D)	432.04mm×88.1mm×278mm	488mm×90mm×231mm	425mm×90mm×290mm (lugs are not included)
Certification			
Certification		CE, FCC, RoHS	
Warranty	5 years	3 years	3 years

EN 50155 SWITCH

TNS5800D-16GP4GT Series

TNS5800D-16P4GT Series

Interface		
10G Copper Port, 10000Base-T(X)	/	/
Gigabit Copper Port, 10/100/1000Base-T(X)	4 (Bypass) + 16 PoE, 8-Pin X-Coded	4 (Bypass), 8-Pin X-Coded
Fast Copper Port, 10/100Base-T(X)	/	16 PoE, 4-Pin D-Coded
Console Port	1, RS-232 (TxD, RxD, GND), 4-pin M12 D-Coded (115200, n, 8, 1)	1, RS-232 (TxD, RxD, GND), 4-pin M12 D-Coded (115200, n, 8, 1)
Alarm Contact Channels	2, 4-Pin D-Coded (Port alarm, Power supply alarm) Relay output with current carrying capacity of 1A@30VDC or 0.3A@125VAC	2, 4-Pin D-Coded (Port alarm, Power supply alarm) Relay output with current carrying capacity of 1A@30VDC or 0.3A@125VAC
PoE Features		
PoE Standards	IEEE 802.3af: Class0 (0.44W~12.94W), Class1 (0.44W~3.84W), Class2 (3.84W~6.49W), Class3 (6.49W~12.95W) IEEE 802.3at: Class4 (12.95W~25.50W)	IEEE 802.3af: Class0 (0.44W~12.94W), Class1 (0.44W~3.84W), Class2 (3.84W~6.49W), Class3 (6.49W~12.95W) IEEE 802.3at: Class4 (12.95W~25.50W)
Power Budget	Max. 100W for total PD consumption Max. 30W for single PoE port	Max. 100W for total PD consumption Max. 30W for single PoE port
Pins of PoE	IEEE 802.3af/at: 1/2+, 3/4-	IEEE 802.3af/at: 1/3+, 2/4-
Switch Properties		
10000M Forwarding Rate	/	/
1000M Forwarding Rate	1488100pps	1488100pps
100M Forwarding Rate	/	148810pps
Throughput	29.76Mpps@64 bytes	8.33Mpps@64 bytes
Transmit Mode	Store and Forward	Store and Forward
DRAM	256MB	256MB
Flash	64MB	64MB
Buffer	12Mbits	12Mbits
Switching Fabric Capacity	128G	128G
MAC Address Table	16K	16K
Jumbo Frame Size	16K	16K
Layer3 Feature		
Routing Protocols	Satic routing, RIPv1/v2, OSPFv1/v2/v3	Satic routing, RIPv1/v2, OSPFv1/v2/v3
Multicast Routing	PIM-DM、PIM-SM	PIM-DM、PIM-SM
Routing Redundancy	VRRP	VRRP
IP Interfaces	Max. 512 VLAN interfaces	Max. 512 VLAN interfaces
Routing Entries	1024	1024
ARP Entries	1024	1024
NAT	NAPT	NAPT
Layer2 Feature		
Unicast / Multicast	Static Multicast, IGMPv1/v2/v3	Static Multicast, IGMPv1/v2/v3
Redundancy Protocols	SW-Ring (Recovery Time ≤ 20ms), STP/RSTP/MSTP, ERPSv1/v2 (G. 8032 with OAM standard), Loopback	SW-Ring (Recovery Time ≤ 20ms), STP/RSTP/MSTP, ERPSv1/v2 (G. 8032 with OAM standard), Loopback
LACP	Max. 12 groups, Max. 8 ports within one group Load Balance: Dst-ip, Dst-mac, Src-dst-ip, Src-dst-mac	Max. 12 groups, Max. 8 ports within one group Load Balance: Dst-ip, Dst-mac, Src-dst-ip, Src-dst-mac
VLAN	Port-based, MAC-based, Protocol-based, Subnet-based, Maximum active VLANs: 4094, VLAN IDs available: 1-4094	Port-based, MAC-based, Protocol-based, Subnet-based, Maximum active VLANs: 4094, VLAN IDs available: 1-4094

Management & Security		
IP Address	IPv4/IPv6	IPv4/IPv6
Device Management	Web, Console, Telnet, SSH, SNMPv1/v2c/v3, ROMN	Web, Console, Telnet, SSH, SNMPv1/v2c/v3, ROMN
Time Management	NTP Client	NTP Client
Port Mirror	Max. 4 groups, TX/ RX/ Both, many-to-1 monitor	Max. 4 groups, TX/ RX/ Both, many-to-1 monitor
Power Supply		
Input Voltage	HV: 110VDC (66~156VDC) LV: 24VDC (18~36VDC)	HV: 110VDC (66~156VDC) LV: 24VDC (18~36VDC)
Power Redundancy	Dual power supply	Dual power supply
Power Connector	HV/LV: 4-Pin M12 A-Coded, Male Connector	HV/LV: 4-Pin M12 A-Coded, Male Connector
Environmental Limit		
Operating Temperature	-40~75℃(-40~167℉)	
Storage Temperature	-40~85℃ (-40~185℉)	
Relative Humidity	5% ~ 95% (no condensation)	
Cooling Method	Shell Heat Dissipation (Fanless)	
Physical Characteristic		
Housing	Metal, IP67	
Installation	Wall mounting	
Dimension		
Size(W*H*D)	260mm × 160mm × 70mm	
Certification		
Certification	CE, FCC, RoHS	
Warranty	5 years	

Certification in Details	
Certification Item	Standard
CE-LVD	EN 61010-1: 2010
CE-EMC-EMI-RE	EN 55032: 2015
CE-EMC-EMI-CE	EN 55032: 2015
CE-EMC-EMI-Harmonic	EN 61000-3-2: 2019
CE-EMC-EMI-Flicker	EN 61000-3-3: 2013+ A1:2019
CE-EMC-EMS-ESD	IEC 61000-4-2
CE-EMC-EMS-RS	IEC 61000-4-3
CE-EMC-EMS-EFT	IEC 61000-4-4
CE-EMC-EMS-Surge	IEC 61000-4-5
CE-EMC-EMS-CS	IEC 61000-4-6
CE-EMC-EMS-DIPs	IEC 61000-4-11
CE-EMC-EMS-PFMF	IEC 61000-4-8
FCC	FCC 47 CFR Part 15
RoHS-Pb	IEC 62321-5:2013
RoHS-Cd	IEC 62321-5:2013
RoHS-Hg	IEC 62321-4:2013+AMDI1:2017 CSV
RoHS-Cr6+	IEC 62321-7-1:2015 or IEC 62321-7-2:2017
RoHS-PBBs	IEC 62321-6:2015
RoHS-PBDEs	IEC 62321-6:2015
RoHS-BBP/DBP/DEHP/DIBP	IEC 62321-8:2017
Safety	UL 60950-1, UL 62368-1
Vibration	IEC60068-2-6
Shock	IEC60068-2-27
Free Fall	IEC60068-2-32
Rail Standard	EN50155, EN50121-3-2, EN50121-4, IEC61373, EN45545

TNS5800D-8GP4GT Series

TNS5800D-8P4GT Series

Interface		
10G Copper Port, 10000Base-T(X)	/	/
Gigabit Copper Port, 10/100/1000Base-T(X)	4 (Bypass) + 8 PoE, 8-Pin X-Coded	4 (Bypass), 8-Pin X-Coded
Fast Copper Port, 10/100Base-T(X)	/	8 PoE, 4-Pin D-Coded
Console Port	1, RS-232 (TxD, RxD, GND), 4-pin M12 D-Coded (115200, n, 8, 1)	1, RS-232 (TxD, RxD, GND), 4-pin M12 D-Coded (115200, n, 8, 1)
Alarm Contact Channels	2, 4-Pin D-Coded (Port alarm, Power supply alarm) Relay output with current carrying capacity of 1A@30VDC or 0.3A@125VAC	2, 4-Pin D-Coded (Port alarm, Power supply alarm) Relay output with current carrying capacity of 1A@30VDC or 0.3A@125VAC
PoE Features		
PoE Standards	IEEE 802.3af: Class0 (0.44W~12.94W), Class1 (0.44W~3.84W), Class2 (3.84W~6.49W), Class3 (6.49W~12.95W) IEEE 802.3at: Class4 (12.95W~25.50W)	IEEE 802.3af: Class0 (0.44W~12.94W), Class1 (0.44W~3.84W), Class2 (3.84W~6.49W), Class3 (6.49W~12.95W) IEEE 802.3at: Class4 (12.95W~25.50W)
Power Budget	Max. 100W for total PD consumption Max. 30W for single PoE port	Max. 100W for total PD consumption Max. 30W for single PoE port
Pins of PoE	IEEE 802.3af/at: 1/2+, 3/4-	IEEE 802.3af/at: 1/3+, 2/4-
Switch Properties		
10000M Forwarding Rate	/	/
1000M Forwarding Rate	1488100pps	1488100pps
100M Forwarding Rate	148810pps	148810pps
Throughput	17.86Mpps@64 bytes	7.14Mpps@64 bytes
Transmit Mode	Store and Forward	Store and Forward
DRAM	256MB	256MB
Flash	64MB	64MB
Buffer	12Mbits	12Mbits
Switching Fabric Capacity	128G	128G
MAC Address Table	16K	16K
Jumbo Frame Size	16K	16K
Layer3 Feature		
Routing Protocols	Satic routing, RIPv1/v2, OSPFv1/v2/v3	Satic routing, RIPv1/v2, OSPFv1/v2/v3
Multicast Routing	PIM-DM、PIM-SM	PIM-DM、PIM-SM
Routing Redundancy	VRRP	VRRP
IP Interfaces	Max. 512 VLAN interfaces	Max. 512 VLAN interfaces
Routing Entries	1024	1024
ARP Entries	1024	1024
NAT	NAPT	NAPT
Layer2 Feature		
Unicast / Multicast	Static Multicast, IGMPv1/v2/v3	Static Multicast, IGMPv1/v2/v3
Redundancy Protocols	SW-Ring (Recovery Time ≤ 20ms), STP/RSTP/MSTP, ERPSv1/v2 (G. 8032 with OAM standard), Loopback	SW-Ring (Recovery Time ≤ 20ms), STP/RSTP/MSTP, ERPSv1/v2 (G. 8032 with OAM standard), Loopback
LACP	Max. 12 groups, Max. 8 ports within one group Load Balance: Dst-ip, Dst-mac, Src-dst-ip, Src-dst-mac	Max. 12 groups, Max. 8 ports within one group Load Balance: Dst-ip, Dst-mac, Src-dst-ip, Src-dst-mac
VLAN	Port-based, MAC-based, Protocol-based, Subnet-based, Maximum active VLANs: 4094, VLAN IDs available: 1-4094	Port-based, MAC-based, Protocol-based, Subnet-based, Maximum active VLANs: 4094, VLAN IDs available: 1-4094

Management & Security		
IP Address	IPv4/IPv6	IPv4/IPv6
Device Management	Web, Console, Telnet, SSH, SNMPv1/v2c/v3, ROMN	Web, Console, Telnet, SSH, SNMPv1/v2c/v3, ROMN
Time Management	NTP Client	NTP Client
Port Mirror	Max. 4 groups, TX/ RX/ Both, many-to-1 monitor	Max. 4 groups, TX/ RX/ Both, many-to-1 monitor
Power Supply		
Input Voltage	HV: 110VDC (66~156VDC) LV: 24VDC (18~36VDC)	HV: 110VDC (66~156VDC) LV: 24VDC (18~36VDC)
Power Redundancy	Dual power supply	Dual power supply
Power Connector	HV/LV: 4-Pin M12 A-Coded, Male Connector	HV/LV: 4-Pin M12 A-Coded, Male Connector
Environmental Limit		
Operating Temperature	-40~75℃(-40~167℉)	
Storage Temperature	-40~85℃ (-40~185℉)	
Relative Humidity	5% ~ 95% (no condensation)	
Cooling Method	Shell Heat Dissipation (Fanless)	
Physical Characteristic		
Housing	Metal, IP67	
Installation	Wall mounting	
Dimension		
Size(W*H*D)	178mm × 104mm × 92mm	
Certification		
Certification	CE, FCC, RoHS	
Warranty	5 years	

Certification in Details	
Certification Item	Standard
CE-LVD	EN 61010-1: 2010
CE-EMC-EMI-RE	EN 55032: 2015
CE-EMC-EMI-CE	EN 55032: 2015
CE-EMC-EMI-Harmonic	EN 61000-3-2: 2019
CE-EMC-EMI-Flicker	EN 61000-3-3: 2013+ A1:2019
CE-EMC-EMS-ESD	IEC 61000-4-2
CE-EMC-EMS-RS	IEC 61000-4-3
CE-EMC-EMS-EFT	IEC 61000-4-4
CE-EMC-EMS-Surge	IEC 61000-4-5
CE-EMC-EMS-CS	IEC 61000-4-6
CE-EMC-EMS-DIPs	IEC 61000-4-11
CE-EMC-EMS-PFMF	IEC 61000-4-8
FCC	FCC 47 CFR Part 15
RoHS-Pb	IEC 62321-5:2013
RoHS-Cd	IEC 62321-5:2013
RoHS-Hg	IEC 62321-4:2013+AMDI1:2017 CSV
RoHS-Cr6+	IEC 62321-7-1:2015 or IEC 62321-7-2:2017
RoHS-PBBs	IEC 62321-6:2015
RoHS-PBDEs	IEC 62321-6:2015
RoHS-BBP/DBP/DEHP/DIBP	IEC 62321-8:2017
Safety	UL 60950-1, UL 62368-1
Vibration	IEC60068-2-6
Shock	IEC60068-2-27
Free Fall	IEC60068-2-32
Rail Standard	EN50155, EN50121-3-2, EN50121-4, IEC61373, EN45545

	TNS5500D-16GP4GT Series	TNS5500D-16P4GT Series
Interface		
10G Copper Port, 10000Base-T(X)	/	/
Gigabit Copper Port, 10/100/1000Base-T(X)	4 (Bypass) + 16 PoE, 8-Pin X-Coded	4 (Bypass), 8-Pin X-Coded
Fast Copper Port, 10/100Base-T(X)	/	16 PoE, 4-Pin D-Coded
Console Port	1, RS-232 (TxD, RxD, GND), 4-pin M12 D-Coded (115200, n, 8, 1)	1, RS-232 (TxD, RxD, GND), 4-pin M12 D-Coded (115200, n, 8, 1)
Alarm Contact Channels	2, 4-Pin D-Coded (Port alarm, Power supply alarm) Relay output with current carrying capacity of 1A@30VDC or 0.3A@125VAC	2, 4-Pin D-Coded (Port alarm, Power supply alarm) Relay output with current carrying capacity of 1A@30VDC or 0.3A@125VAC
PoE Features		
PoE Standards	IEEE 802.3af: Class0 (0.44W–12.94W), Class1 (0.44W–3.84W), Class2 (3.84W–6.49W), Class3 (6.49W–12.95W) IEEE 802.3at: Class4 (12.95W–25.50W)	IEEE 802.3af: Class0 (0.44W–12.94W), Class1 (0.44W–3.84W), Class2 (3.84W–6.49W), Class3 (6.49W–12.95W) IEEE 802.3at: Class4 (12.95W–25.50W)
Power Budget	Max. 100W for total PD consumption Max. 30W for single PoE port	Max. 100W for total PD consumption Max. 30W for single PoE port
Pins of PoE	IEEE 802.3af/at: 1/2+, 3/4-	IEEE 802.3af/at: 1/3+, 2/4-
Switch Properties		
10000M Forwarding Rate	/	/
1000M Forwarding Rate	1488100pps	1488100pps
100M Forwarding Rate	/	148810pps
Throughput	29.76Mpps@64 bytes	8.33Mpps@64 bytes
Transmit Mode	Store and Forward	Store and Forward
DRAM	256MB	256MB
Flash	64MB	64MB
Buffer	12Mbits	12Mbits
Switching Fabric Capacity	56G	56G
MAC Address Table	16K	16K
Jumbo Frame Size	16K	16K
Layer2 Feature		
Unicast / Multicast	Static Multicast, IGMPv1/v2/v3	Static Multicast, IGMPv1/v2/v3
Redundancy Protocols	SW-Ring (Recovery Time ≤ 20ms), STP/RSTP/MSTP, ERPSv1/v2 (G. 8032 with OAM standard), Loopback	SW-Ring (Recovery Time ≤ 20ms), STP/RSTP/MSTP, ERPSv1/v2 (G. 8032 with OAM standard), Loopback
LACP	Max. 12 groups, Max. 8 ports within one group Load Balance: Dst-ip, Dst-mac, Src-dst-ip, Src-dst-mac	Max. 12 groups, Max. 8 ports within one group Load Balance: Dst-ip, Dst-mac, Src-dst-ip, Src-dst-mac
VLAN	Port-based, MAC-based, Protocol-based, Subnet-based, Maximum active VLANs: 4094, VLAN IDs available: 1-4094	Port-based, MAC-based, Protocol-based, Subnet-based, Maximum active VLANs: 4094, VLAN IDs available: 1-4094
Management & Security		
IP Address	IPv4/IPv6	IPv4/IPv6
Device Management	Web, Console, Telnet, SSH, SNMPv1/v2c/v3, ROMN	Web, Console, Telnet, SSH, SNMPv1/v2c/v3, ROMN
Time Management	NTP Client	NTP Client
Port Mirror	Max. 4 groups, TX/ RX/ Both, many-to-1 monitor	Max. 4 groups, TX/ RX/ Both, many-to-1 monitor

Power Supply		
Input Voltage	HV: 110VDC (66~156VDC) LV: 24VDC (18~36VDC)	HV: 110VDC (66~156VDC) LV: 24VDC (18~36VDC)
Power Redundancy	Dual power supply	Dual power supply
Power Connector	HV/LV: 4-Pin M12 A-Coded, Male Connector	HV/LV: 4-Pin M12 A-Coded, Male Connector
Environmental Limit		
Operating Temperature	-40~75℃(-40~167℉)	
Storage Temperature	-40~85℃ (-40~185℉)	
Relative Humidity	5% ~ 95% (no condensation)	
Cooling Method	Shell Heat Dissipation (Fanless)	
Physical Characteristic		
Housing	Metal, IP67	
Installation	Wall mounting	
Dimension		
Size(W*H*D)	260mm × 160mm × 70mm	
Certification		
Certification	CE, FCC, RoHS	
Warranty	5 years	

Certification in Details	
Certification Item	Standard
CE-LVD	EN 61010-1: 2010
CE-EMC-EMI-RE	EN 55032: 2015
CE-EMC-EMI-CE	EN 55032: 2015
CE-EMC-EMI-Harmonic	EN 61000-3-2: 2019
CE-EMC-EMI-Flicker	EN 61000-3-3: 2013+ A1:2019
CE-EMC-EMS-ESD	IEC 61000-4-2
CE-EMC-EMS-RS	IEC 61000-4-3
CE-EMC-EMS-EFT	IEC 61000-4-4
CE-EMC-EMS-Surge	IEC 61000-4-5
CE-EMC-EMS-CS	IEC 61000-4-6
CE-EMC-EMS-DIPs	IEC 61000-4-11
CE-EMC-EMS-PFMF	IEC 61000-4-8
FCC	FCC 47 CFR Part 15
RoHS-Pb	IEC 62321-5:2013
RoHS-Cd	IEC 62321-5:2013
RoHS-Hg	IEC 62321-4:2013+AMDI1:2017 CSV
RoHS-Cr6+	IEC 62321-7-1:2015 or IEC 62321-7-2:2017
RoHS-PBBs	IEC 62321-6:2015
RoHS-PBDEs	IEC 62321-6:2015
RoHS-BBP/DBP/DEHP/DIBP	IEC 62321-8:2017
Safety	UL 60950-1, UL 62368-1
Vibration	IEC60068-2-6
Shock	IEC60068-2-27
Free Fall	IEC60068-2-32
Rail Standard	EN50155, EN50121-3-2, EN50121-4, IEC61373, EN45545

TNS5500D-8GP4GT Series

TNS5500D-8P4GT Series

Interface		
10G Copper Port, 10000Base-T(X)	/	/
Gigabit Copper Port, 10/100/1000Base-T(X)	4 (Bypass) + 8 PoE, 8-Pin X-Coded	4 (Bypass), 8-Pin X-Coded
Fast Copper Port, 10/100Base-T(X)	/	8 PoE, 4-Pin D-Coded
Console Port	1, RS-232 (TxD, RxD, GND), 4-pin M12 D-Coded (115200, n, 8, 1)	1, RS-232 (TxD, RxD, GND), 4-pin M12 D-Coded (115200, n, 8, 1)
Alarm Contact Channels	2, 4-Pin D-Coded (Port alarm, Power supply alarm) Relay output with current carrying capacity of 1A@30VDC or 0.3A@125VAC	2, 4-Pin D-Coded (Port alarm, Power supply alarm) Relay output with current carrying capacity of 1A@30VDC or 0.3A@125VAC
PoE Features		
PoE Standards	IEEE 802.3af: Class0 (0.44W–12.94W), Class1 (0.44W–3.84W), Class2 (3.84W–6.49W), Class3 (6.49W–12.95W) IEEE 802.3at: Class4 (12.95W–25.50W)	IEEE 802.3af: Class0 (0.44W–12.94W), Class1 (0.44W–3.84W), Class2 (3.84W–6.49W), Class3 (6.49W–12.95W) IEEE 802.3at: Class4 (12.95W–25.50W)
Power Budget	Max. 100W for total PD consumption Max. 30W for single PoE port	Max. 100W for total PD consumption Max. 30W for single PoE port
Pins of PoE	IEEE 802.3af/at: 1/2+, 3/4-	IEEE 802.3af/at: 1/3+, 2/4-
Switch Properties		
10000M Forwarding Rate	/	/
1000M Forwarding Rate	1488100pps	1488100pps
100M Forwarding Rate	148810pps	148810pps
Throughput	17.86Mpps@64 bytes	7.14Mpps@64 bytes
Transmit Mode	Store and Forward	Store and Forward
DRAM	256MB	256MB
Flash	64MB	64MB
Buffer	12Mbits	12Mbits
Switching Fabric Capacity	56G	56G
MAC Address Table	16K	16K
Jumbo Frame Size	16K	16K
Layer2 Feature		
Unicast / Multicast	Static Multicast, IGMPv1/v2/v3	Static Multicast, IGMPv1/v2/v3
Redundancy Protocols	SW-Ring (Recovery Time ≤ 20ms), STP/RSTP/MSTP, ERPSv1/v2 (G. 8032 with OAM standard), Loopback	SW-Ring (Recovery Time ≤ 20ms), STP/RSTP/MSTP, ERPSv1/v2 (G. 8032 with OAM standard), Loopback
LACP	Max. 12 groups, Max. 8 ports within one group Load Balance: Dst-ip, Dst-mac, Src-dst-ip, Src-dst-mac	Max. 12 groups, Max. 8 ports within one group Load Balance: Dst-ip, Dst-mac, Src-dst-ip, Src-dst-mac
VLAN	Port-based, MAC-based, Protocol-based, Subnet-based, Maximum active VLANs: 4094, VLAN IDs available: 1-4094	Port-based, MAC-based, Protocol-based, Subnet-based, Maximum active VLANs: 4094, VLAN IDs available: 1-4094
Management & Security		
IP Address	IPv4/IPv6	IPv4/IPv6
Device Management	Web, Console, Telnet, SSH, SNMPv1/v2c/v3, ROMN	Web, Console, Telnet, SSH, SNMPv1/v2c/v3, ROMN
Time Management	NTP Client	NTP Client
Port Mirror	Max. 4 groups, TX/ RX/ Both, many-to-1 monitor	Max. 4 groups, TX/ RX/ Both, many-to-1 monitor

Power Supply		
Input Voltage	HV: 110VDC (66~156VDC) LV: 24VDC (18~36VDC)	HV: 110VDC (66~156VDC) LV: 24VDC (18~36VDC)
Power Redundancy	Dual power supply	Dual power supply
Power Connector	HV/LV: 4-Pin M12 A-Coded, Male Connector	HV/LV: 4-Pin M12 A-Coded, Male Connector
Environmental Limit		
Operating Temperature	-40~75℃(-40~167℉)	
Storage Temperature	-40~85℃ (-40~185℉)	
Relative Humidity	5% ~ 95% (no condensation)	
Cooling Method	Shell Heat Dissipation (Fanless)	
Physical Characteristic		
Housing	Metal, IP67	
Installation	Wall mounting	
Dimension		
Size(W*H*D)	178mm × 104mm × 92mm	
Certification		
Certification	CE, FCC, RoHS	
Warranty	5 years	

Certification in Details	
Certification Item	Standard
CE-LVD	EN 61010-1: 2010
CE-EMC-EMI-RE	EN 55032: 2015
CE-EMC-EMI-CE	EN 55032: 2015
CE-EMC-EMI-Harmonic	EN 61000-3-2: 2019
CE-EMC-EMI-Flicker	EN 61000-3-3: 2013+ A1:2019
CE-EMC-EMS-ESD	IEC 61000-4-2
CE-EMC-EMS-RS	IEC 61000-4-3
CE-EMC-EMS-EFT	IEC 61000-4-4
CE-EMC-EMS-Surge	IEC 61000-4-5
CE-EMC-EMS-CS	IEC 61000-4-6
CE-EMC-EMS-DIPs	IEC 61000-4-11
CE-EMC-EMS-PFMF	IEC 61000-4-8
FCC	FCC 47 CFR Part 15
RoHS-Pb	IEC 62321-5:2013
RoHS-Cd	IEC 62321-5:2013
RoHS-Hg	IEC 62321-4:2013+AMDI1:2017 CSV
RoHS-Cr6+	IEC 62321-7-1:2015 or IEC 62321-7-2:2017
RoHS-PBBs	IEC 62321-6:2015
RoHS-PBDEs	IEC 62321-6:2015
RoHS-BBP/DBP/DEHP/DIBP	IEC 62321-8:2017
Safety	UL 60950-1, UL 62368-1
Vibration	IEC60068-2-6
Shock	IEC60068-2-27
Free Fall	IEC60068-2-32
Rail Standard	EN50155, EN50121-3-2, EN50121-4, IEC61373, EN45545

TNS5500D-2GX8GP, Unmanaged

Interface	
10G Copper Port, 10000Base-T(X)	2, 8-Pin X-Coded
Gigabit Copper Port, 10/100/1000Base-T(X)	8, 8-Pin X-Coded
Fast Copper Port, 10/100Base-T(X)	/
Console Port	1, RS-232 (TxD, RxD, GND), 4-pin M12 D-Coded (115200, n, 8, 1)
Alarm Contact Channels	2, 4-Pin D-Coded (Port alarm, Power supply alarm) Relay output with current carrying capacity of 1A@30VDC or 0.3A@125VAC
PoE Features	
PoE Standard	IEEE 802.3af: Class0 (0.44W~12.94W), Class1 (0.44W~3.84W), Class2 (3.84W~6.49W), Class3 (6.49W~12.95W) IEEE 802.3at: Class4 (12.95W~25.50W)
Power Budget	Max. 160W for total PD consumption Max. 30W for single PoE port
Pins of PoE	IEEE 802.3af/at: 1/2-, 3/4+
Switch Properties	
10000M Forwarding Rate	14881000pps
1000M Forwarding Rate	1488100pps
100M Forwarding Rate	148810pps
Throughput	41.66Mpps@64 bytes
Transmit Mode	Store and Forward
DRAM	/
Flash	/
Buffer	2Mbits
Switching Fabric Capacity	56G
MAC Address Table	16K
Jumbo Frame Size	/
Power Supply	
Input Voltage	LV: 24VDC (18~36VDC)
Power Redundancy	Dual power supply
Power Connector	LV: 4-Pin M12 A-Coded, Male Connector
Environmental Limit	
Operating Temperature	-40~75℃(-40~167℉)
Storage Temperature	-40~85℃ (-40~185℉)
Relative Humidity	5% ~ 95% (no condensation)
Cooling Method	Shell Heat Dissipation (Fanless)
Physical Characteristic	
Housing	Metal, IP67
Installation	Wall mounting
Dimension	
Size(W*H*D)	178mm × 92mm × 104mm
Certification	
Certification	CE, FCC, RoHS
Warranty	5 years

Certification in Details	
Certification Item	Standard
CE-LVD	EN 61010-1: 2010
CE-EMC-EMI-RE	EN 55032: 2015
CE-EMC-EMI-CE	EN 55032: 2015
CE-EMC-EMI-Harmonic	EN 61000-3-2: 2019
CE-EMC-EMI-Flicker	EN 61000-3-3: 2013+ A1:2019
CE-EMC-EMS-ESD	IEC 61000-4-2
CE-EMC-EMS-RS	IEC 61000-4-3
CE-EMC-EMS-EFT	IEC 61000-4-4
CE-EMC-EMS-Surge	IEC 61000-4-5
CE-EMC-EMS-CS	IEC 61000-4-6
CE-EMC-EMS-DIPs	IEC 61000-4-11
CE-EMC-EMS-PFMF	IEC 61000-4-8
FCC	FCC 47 CFR Part 15
RoHS-Pb	IEC 62321-5:2013
RoHS-Cd	IEC 62321-5:2013
RoHS-Hg	IEC 62321-4:2013+AMDI:2017 CSV
RoHS-Cr6+	IEC 62321-7-1:2015 or IEC 62321-7-2:2017
RoHS-PBBs	IEC 62321-6:2015
RoHS-PBDEs	IEC 62321-6:2015
RoHS-BBP/DBP/DEHP/DIBP	IEC 62321-8:2017
Safety	UL 60950-1, UL 62368-1
Vibration	IEC60068-2-6
Shock	IEC60068-2-27
Free Fall	IEC60068-2-32
Rail Standard	EN50155, EN50121-3-2, EN50121-4, IEC61373, EN45545

TNS5800D-20GT Series

TNS5800D-16T4GT Series

Interface		
Gigabit Copper Port, 10/100/1000Base-T(X)	20 (4 Bypass), 8-Pin X-Coded	4 (Bypass), 8-Pin X-Coded
Fast Copper Port, 10/100Base-T(X)	/	16, 4-Pin D-Coded
Console Port	1, RS-232 (TxD, RxD, GND), 4-pin M12 D-Coded (115200, n, 8, 1)	1, RS-232 (TxD, RxD, GND), 4-pin M12 D-Coded (115200, n, 8, 1)
Alarm Contact Channels	2, 4-Pin D-Coded (Port alarm, Power supply alarm) Relay output with current carrying capacity of 1A@30VDC or 0.3A@125VAC	2, 4-Pin D-Coded (Port alarm, Power supply alarm) Relay output with current carrying capacity of 1A@30VDC or 0.3A@125VAC
Switch Properties		
1000M Forwarding Rate	1488100pps	1488100pps
100M Forwarding Rate	/	148810pps
Throughput	29.76Mpps@64 bytes	8.33Mpps@64 bytes
Transmit Mode	Store and Forward	Store and Forward
DRAM	256MB	256MB
Flash	64MB	64MB
Buffer	12Mbits	12Mbits
Switching Fabric Capacity	128G	128G
MAC Address Table	16K	16K
Jumbo Frame Size	16K	16K
Layer3 Feature		
Routing Protocols	Satic routing, RIPv1/v2, OSPFv1/v2/v3	Satic routing, RIPv1/v2, OSPFv1/v2/v3
Multicast Routing	PIM-DM、PIM-SM	PIM-DM、PIM-SM
Routing Redundancy	VRRP	VRRP
IP Interfaces	Max. 512 VLAN interfaces	Max. 512 VLAN interfaces
Routing Entries	1024	1024
ARP Entries	1024	1024
NAT	NAPT	NAPT
Layer2 Feature		
Unicast / Multicast	Static Multicast, IGMPv1/v2/v3	Static Multicast, IGMPv1/v2/v3
Redundancy Protocols	SW-Ring (Recovery Time ≤ 20ms), STP/RSTP/MSTP, ERPSv1/v2 (G. 8032 with OAM standard), Loopback	SW-Ring (Recovery Time ≤ 20ms), STP/RSTP/MSTP, ERPSv1/v2 (G. 8032 with OAM standard), Loopback
LACP	Max. 12 groups, Max. 8 ports within one group Load Balance: Dst-ip, Dst-mac, Src-dst-ip, Src-dst-mac	Max. 12 groups, Max. 8 ports within one group Load Balance: Dst-ip, Dst-mac, Src-dst-ip, Src-dst-mac
VLAN	Port-based, MAC-based, Protocol-based, Subnet-based, Maximum active VLANs: 4094, VLAN IDs available: 1-4094	Port-based, MAC-based, Protocol-based, Subnet-based, Maximum active VLANs: 4094, VLAN IDs available: 1-4094
Management & Security		
IP Address	IPv4/IPv6	IPv4/IPv6
Device Management	Web, Console, Telnet, SSH, SNMPv1/v2c/v3, ROMN	Web, Console, Telnet, SSH, SNMPv1/v2c/v3, ROMN
Time Management	NTP Client	NTP Client
Port Mirror	Max. 4 groups, TX/ RX/ Both, many-to-1 monitor	Max. 4 groups, TX/ RX/ Both, many-to-1 monitor
Power Supply		
Input Voltage	HV: 110VDC (66~156VDC) LV: 24VDC (18~36VDC)	
Power Redundancy	Dual power supply	
Power Connector	HV/LV: 4-Pin M12 A-Coded, Male Connector	

Environmental Limit	
Operating Temperature	-40~75℃(-40~167℉)
Storage Temperature	-40~85℃ (-40~185℉)
Relative Humidity	5% ~ 95% (no condensation)
Cooling Method	Shell Heat Dissipation (Fanless)
Physical Characteristic	
Housing	Metal, IP67
Installation	Wall mounting
Dimension	
Size(W*H*D)	260mm × 160mm × 70mm
Certification	
Certification	CE, FCC, RoHS
Warranty	5 years

Certification in Details	
Certification Item	Standard
CE-LVD	EN 61010-1: 2010
CE-EMC-EMI-RE	EN 55032: 2015
CE-EMC-EMI-CE	EN 55032: 2015
CE-EMC-EMI-Harmonic	EN 61000-3-2: 2019
CE-EMC-EMI-Flicker	EN 61000-3-3: 2013+ A1:2019
CE-EMC-EMS-ESD	IEC 61000-4-2
CE-EMC-EMS-RS	IEC 61000-4-3
CE-EMC-EMS-EFT	IEC 61000-4-4
CE-EMC-EMS-Surge	IEC 61000-4-5
CE-EMC-EMS-CS	IEC 61000-4-6
CE-EMC-EMS-DIPs	IEC 61000-4-11
CE-EMC-EMS-PFMF	IEC 61000-4-8
FCC	FCC 47 CFR Part 15
RoHS-Pb	IEC 62321-5:2013
RoHS-Cd	IEC 62321-5:2013
RoHS-Hg	IEC 62321-4:2013+AMDI1:2017 CSV
RoHS-Cr6+	IEC 62321-7-1:2015 or IEC 62321-7-2:2017
RoHS-PBBs	IEC 62321-6:2015
RoHS-PBDEs	IEC 62321-6:2015
RoHS-BBP/DBP/DEHP/DIBP	IEC 62321-8:2017
Safety	UL 60950-1, UL 62368-1
Vibration	IEC60068-2-6
Shock	IEC60068-2-27
Free Fall	IEC60068-2-32
Rail Standard	EN50155, EN50121-3-2, EN50121-4, IEC61373, EN45545

TNS5800D-12GT Series

TNS5800D-8T4GT Series

Interface		
Gigabit Copper Port, 10/100/1000Base-T(X)	12 (4 Bypass), 8-Pin X-Coded	4 (Bypass), 8-Pin X-Coded
Fast Copper Port, 10/100Base-T(X)	/	8, 4-Pin D-Coded
Console Port	1, RS-232 (TxD, RxD, GND), 4-pin M12 D-Coded (115200, n, 8, 1)	1, RS-232 (TxD, RxD, GND), 4-pin M12 D-Coded (115200, n, 8, 1)
Alarm Contact Channels	2, 4-Pin D-Coded (Port alarm, Power supply alarm) Relay output with current carrying capacity of 1A@30VDC or 0.3A@125VAC	2, 4-Pin D-Coded (Port alarm, Power supply alarm) Relay output with current carrying capacity of 1A@30VDC or 0.3A@125VAC
Switch Properties		
1000M Forwarding Rate	1488100pps	1488100pps
100M Forwarding Rate	/	148810pps
Throughput	17.86Mpps@64 bytes	7.14Mpps@64 bytes
Transmit Mode	Store and Forward	Store and Forward
DRAM	256MB	256MB
Flash	64MB	64MB
Buffer	12Mbits	12Mbits
Switching Fabric Capacity	128G	128G
MAC Address Table	16K	16K
Jumbo Frame Size	16K	16K
Layer3 Feature		
Routing Protocols	Satic routing, RIPv1/v2, OSPFv1/v2/v3	Satic routing, RIPv1/v2, OSPFv1/v2/v3
Multicast Routing	PIM-DM、PIM-SM	PIM-DM、PIM-SM
Routing Redundancy	VRRP	VRRP
IP Interfaces	Max. 512 VLAN interfaces	Max. 512 VLAN interfaces
Routing Entries	1024	1024
ARP Entries	1024	1024
NAT	NAPT	NAPT
Layer2 Feature		
Unicast / Multicast	Static Multicast, IGMPv1/v2/v3	Static Multicast, IGMPv1/v2/v3
Redundancy Protocols	SW-Ring (Recovery Time ≤ 20ms), STP/RSTP/MSTP, ERPSv1/v2 (G. 8032 with OAM standard), Loopback	SW-Ring (Recovery Time ≤ 20ms), STP/RSTP/MSTP, ERPSv1/v2 (G. 8032 with OAM standard), Loopback
LACP	Max. 12 groups, Max. 8 ports within one group Load Balance: Dst-ip, Dst-mac, Src-dst-ip, Src-dst-mac	Max. 12 groups, Max. 8 ports within one group Load Balance: Dst-ip, Dst-mac, Src-dst-ip, Src-dst-mac
VLAN	Port-based, MAC-based, Protocol-based, Subnet-based, Maximum active VLANs: 4094, VLAN IDs available: 1-4094	Port-based, MAC-based, Protocol-based, Subnet-based, Maximum active VLANs: 4094, VLAN IDs available: 1-4094
Management & Security		
IP Address	IPv4/IPv6	IPv4/IPv6
Device Management	Web, Console, Telnet, SSH, SNMPv1/v2c/v3, ROMN	Web, Console, Telnet, SSH, SNMPv1/v2c/v3, ROMN
Time Management	NTP Client	NTP Client
Port Mirror	Max. 4 groups, TX/ RX/ Both, many-to-1 monitor	Max. 4 groups, TX/ RX/ Both, many-to-1 monitor
Power Supply		
Input Voltage	HV: 110VDC (66~156VDC) LV: 24VDC (18~36VDC)	
Power Redundancy	Dual power supply	
Power Connector	HV/LV: 4-Pin M12 A-Coded, Male Connector	

Environmental Limit	
Operating Temperature	-40~75℃(-40~167℉)
Storage Temperature	-40~85℃ (-40~185℉)
Relative Humidity	5% ~ 95% (no condensation)
Cooling Method	Shell Heat Dissipation (Fanless)
Physical Characteristic	
Housing	Metal, IP67
Installation	Wall mounting
Dimension	
Size(W*H*D)	178mm × 104mm × 92mm
Certification	
Certification	CE, FCC, RoHS
Warranty	5 years

Certification in Details

Certification Item	Standard
CE-LVD	EN 61010-1: 2010
CE-EMC-EMI-RE	EN 55032: 2015
CE-EMC-EMI-CE	EN 55032: 2015
CE-EMC-EMI-Harmonic	EN 61000-3-2: 2019
CE-EMC-EMI-Flicker	EN 61000-3-3: 2013+ A1:2019
CE-EMC-EMS-ESD	IEC 61000-4-2
CE-EMC-EMS-RS	IEC 61000-4-3
CE-EMC-EMS-EFT	IEC 61000-4-4
CE-EMC-EMS-Surge	IEC 61000-4-5
CE-EMC-EMS-CS	IEC 61000-4-6
CE-EMC-EMS-DIPs	IEC 61000-4-11
CE-EMC-EMS-PFMF	IEC 61000-4-8
FCC	FCC 47 CFR Part 15
RoHS-Pb	IEC 62321-5:2013
RoHS-Cd	IEC 62321-5:2013
RoHS-Hg	IEC 62321-4:2013+AMDI1:2017 CSV
RoHS-Cr6+	IEC 62321-7-1:2015 or IEC 62321-7-2:2017
RoHS-PBBs	IEC 62321-6:2015
RoHS-PBDEs	IEC 62321-6:2015
RoHS-BBP/DBP/DEHP/DIBP	IEC 62321-8:2017
Safety	UL 60950-1, UL 62368-1
Vibration	IEC60068-2-6
Shock	IEC60068-2-27
Free Fall	IEC60068-2-32
Rail Standard	EN50155, EN50121-3-2, EN50121-4, IEC61373, EN45545

	TNS5500D-20GT Series	TNS5500D-16T4GT Series
Interface		
Gigabit Copper Port, 10/100/1000Base-T(X)	20 (4 Bypass), 8-Pin X-Coded	4 (Bypass), 8-Pin X-Coded
Fast Copper Port, 10/100Base-T(X)	/	16, 4-Pin D-Coded
Console Port	1, RS-232 (TxD, RxD, GND), 4-pin M12 D-Coded (115200, n, 8, 1)	1, RS-232 (TxD, RxD, GND), 4-pin M12 D-Coded (115200, n, 8, 1)
Alarm Contact Channels	2, 4-Pin D-Coded (Port alarm, Power supply alarm) Relay output with current carrying capacity of 1A@30VDC or 0.3A@125VAC	2, 4-Pin D-Coded (Port alarm, Power supply alarm) Relay output with current carrying capacity of 1A@30VDC or 0.3A@125VAC
Switch Properties		
1000M Forwarding Rate	1488100pps	1488100pps
100M Forwarding Rate	/	148810pps
Throughput	29.76Mpps@64 bytes	8.33Mpps@64 bytes
Transmit Mode	Store and Forward	Store and Forward
DRAM	256MB	256MB
Flash	64MB	64MB
Buffer	12Mbits	12Mbits
Switching Fabric Capacity	56G	56G
MAC Address Table	16K	16K
Jumbo Frame Size	16K	16K
Layer2 Feature		
Unicast / Multicast	Static Multicast, IGMPv1/v2/v3	Static Multicast, IGMPv1/v2/v3
Redundancy Protocols	SW-Ring (Recovery Time ≤ 20ms), STP/RSTP/MSTP, ERPSv1/v2 (G. 8032 with OAM standard), Loopback	SW-Ring (Recovery Time ≤ 20ms), STP/RSTP/MSTP, ERPSv1/v2 (G. 8032 with OAM standard), Loopback
LACP	Max. 12 groups, Max. 8 ports within one group Load Balance: Dst-ip, Dst-mac, Src-dst-ip, Src-dst-mac	Max. 12 groups, Max. 8 ports within one group Load Balance: Dst-ip, Dst-mac, Src-dst-ip, Src-dst-mac
VLAN	Port-based, MAC-based, Protocol-based, Subnet-based, Maximum active VLANs: 4094, VLAN IDs available: 1-4094	Port-based, MAC-based, Protocol-based, Subnet-based, Maximum active VLANs: 4094, VLAN IDs available: 1-4094
Management & Security		
IP Address	IPv4/IPv6	IPv4/IPv6
Device Management	Web, Console, Telnet, SSH, SNMPv1/v2c/v3, ROMN	Web, Console, Telnet, SSH, SNMPv1/v2c/v3, ROMN
Time Management	NTP Client	NTP Client
Port Mirror	Max. 4 groups, TX/ RX/ Both, many-to-1 monitor	Max. 4 groups, TX/ RX/ Both, many-to-1 monitor
Power Supply		
Input Voltage	HV: 110VDC (66~156VDC) LV: 24VDC (18~36VDC)	
Power Redundancy	Dual power supply	
Power Connector	HV/LV: 4-Pin M12 A-Coded, Male Connector	
Environmental Limit		
Operating Temperature	-40~75℃(-40~167℉)	
Storage Temperature	-40~85℃ (-40~185℉)	
Relative Humidity	5% ~ 95% (no condensation)	
Cooling Method	Shell Heat Dissipation (Fanless)	

Physical Characteristic	
Housing	Metal, IP67
Installation	Wall mounting
Dimension	
Size(W*H*D)	260mm × 160mm × 70mm
Certification	
Certification	CE, FCC, RoHS
Warranty	5 years

Certification in Details	
Certification Item	Standard
CE-LVD	EN 61010-1: 2010
CE-EMC-EMI-RE	EN 55032: 2015
CE-EMC-EMI-CE	EN 55032: 2015
CE-EMC-EMI-Harmonic	EN 61000-3-2: 2019
CE-EMC-EMI-Flicker	EN 61000-3-3: 2013+ A1:2019
CE-EMC-EMS-ESD	IEC 61000-4-2
CE-EMC-EMS-RS	IEC 61000-4-3
CE-EMC-EMS-EFT	IEC 61000-4-4
CE-EMC-EMS-Surge	IEC 61000-4-5
CE-EMC-EMS-CS	IEC 61000-4-6
CE-EMC-EMS-DIPs	IEC 61000-4-11
CE-EMC-EMS-PFMF	IEC 61000-4-8
FCC	FCC 47 CFR Part 15
RoHS-Pb	IEC 62321-5:2013
RoHS-Cd	IEC 62321-5:2013
RoHS-Hg	IEC 62321-4:2013+AMDI1:2017 CSV
RoHS-Cr6+	IEC 62321-7-1:2015 or IEC 62321-7-2:2017
RoHS-PBBs	IEC 62321-6:2015
RoHS-PBDEs	IEC 62321-6:2015
RoHS-BBP/DBP/DEHP/DIBP	IEC 62321-8:2017
Safety	UL 60950-1, UL 62368-1
Vibration	IEC60068-2-6
Shock	IEC60068-2-27
Free Fall	IEC60068-2-32
Rail Standard	EN50155, EN50121-3-2, EN50121-4, IEC61373, EN45545

TNS5500D-12GT Series

TNS5500D-8T4GT Series

Interface		
Gigabit Copper Port, 10/100/1000Base-T(X)	12 (4 Bypass), 8-Pin X-Coded	4 (Bypass), 8-Pin X-Coded
Fast Copper Port, 10/100Base-T(X)	/	8, 4-Pin D-Coded
Console Port	1, RS-232 (TxD, RxD, GND), 4-pin M12 D-Coded (115200, n, 8, 1)	1, RS-232 (TxD, RxD, GND), 4-pin M12 D-Coded (115200, n, 8, 1)
Alarm Contact Channels	2, 4-Pin D-Coded (Port alarm, Power supply alarm) Relay output with current carrying capacity of 1A@30VDC or 0.3A@125VAC	2, 4-Pin D-Coded (Port alarm, Power supply alarm) Relay output with current carrying capacity of 1A@30VDC or 0.3A@125VAC
Switch Properties		
1000M Forwarding Rate	1488100pps	1488100pps
100M Forwarding Rate	/	148810pps
Throughput	17.86Mpps@64 bytes	7.14Mpps@64 bytes
Transmit Mode	Store and Forward	Store and Forward
DRAM	256MB	256MB
Flash	64MB	64MB
Buffer	12Mbits	12Mbits
Switching Fabric Capacity	56G	56G
MAC Address Table	16K	16K
Jumbo Frame Size	16K	16K
Layer2 Feature		
Unicast / Multicast	Static Multicast, IGMPv1/v2/v3	Static Multicast, IGMPv1/v2/v3
Redundancy Protocols	SW-Ring (Recovery Time ≤ 20ms), STP/RSTP/MSTP, ERPSv1/v2 (G. 8032 with OAM standard), Loopback	SW-Ring (Recovery Time ≤ 20ms), STP/RSTP/MSTP, ERPSv1/v2 (G. 8032 with OAM standard), Loopback
LACP	Max. 12 groups, Max. 8 ports within one group Load Balance: Dst-ip, Dst-mac, Src-dst-ip, Src-dst-mac	Max. 12 groups, Max. 8 ports within one group Load Balance: Dst-ip, Dst-mac, Src-dst-ip, Src-dst-mac
VLAN	Port-based, MAC-based, Protocol-based, Subnet-based, Maximum active VLANs: 4094, VLAN IDs available: 1-4094	Port-based, MAC-based, Protocol-based, Subnet-based, Maximum active VLANs: 4094, VLAN IDs available: 1-4094
Management & Security		
IP Address	IPv4/IPv6	IPv4/IPv6
Device Management	Web, Console, Telnet, SSH, SNMPv1/v2c/v3, ROMN	Web, Console, Telnet, SSH, SNMPv1/v2c/v3, ROMN
Time Management	NTP Client	NTP Client
Port Mirror	Max. 4 groups, TX/ RX/ Both, many-to-1 monitor	Max. 4 groups, TX/ RX/ Both, many-to-1 monitor
Power Supply		
Input Voltage	HV: 110VDC (66~156VDC) LV: 24VDC (18~36VDC)	
Power Redundancy	Dual power supply	
Power Connector	HV/LV: 4-Pin M12 A-Coded, Male Connector	
Environmental Limit		
Operating Temperature	-40~75℃(-40~167℉)	
Storage Temperature	-40~85℃ (-40~185℉)	
Relative Humidity	5% ~ 95% (no condensation)	
Cooling Method	Shell Heat Dissipation (Fanless)	

Physical Characteristic	
Housing	Metal, IP67
Installation	Wall mounting
Dimension	
Size(W*H*D)	178mm × 104mm × 92mm
Certification	
Certification	CE, FCC, RoHS
Warranty	5 years

Certification in Details	
Certification Item	Standard
CE-LVD	EN 61010-1: 2010
CE-EMC-EMI-RE	EN 55032: 2015
CE-EMC-EMI-CE	EN 55032: 2015
CE-EMC-EMI-Harmonic	EN 61000-3-2: 2019
CE-EMC-EMI-Flicker	EN 61000-3-3: 2013+ A1:2019
CE-EMC-EMS-ESD	IEC 61000-4-2
CE-EMC-EMS-RS	IEC 61000-4-3
CE-EMC-EMS-EFT	IEC 61000-4-4
CE-EMC-EMS-Surge	IEC 61000-4-5
CE-EMC-EMS-CS	IEC 61000-4-6
CE-EMC-EMS-DIPs	IEC 61000-4-11
CE-EMC-EMS-PFMF	IEC 61000-4-8
FCC	FCC 47 CFR Part 15
RoHS-Pb	IEC 62321-5:2013
RoHS-Cd	IEC 62321-5:2013
RoHS-Hg	IEC 62321-4:2013+AMDI1:2017 CSV
RoHS-Cr6+	IEC 62321-7-1:2015 or IEC 62321-7-2:2017
RoHS-PBBs	IEC 62321-6:2015
RoHS-PBDEs	IEC 62321-6:2015
RoHS-BBP/DBP/DEHP/DIBP	IEC 62321-8:2017
Safety	UL 60950-1, UL 62368-1
Vibration	IEC60068-2-6
Shock	IEC60068-2-27
Free Fall	IEC60068-2-32
Rail Standard	EN50155, EN50121-3-2, EN50121-4, IEC61373, EN45545

TNS5500D-8T

TNS5000D-8T, Unmanaged

Interface		
Gigabit Copper Port, 10/100/1000Base-T(X)	/	/
Fast Copper Port, 10/100Base-T(X)	8, 4-Pin D-Coded	8, 4-Pin D-Coded
Console Port	1, RS-232 (TxD, RxD, GND), 4-pin M12 D-Coded (115200, n, 8, 1)	1, RS-232 (TxD, RxD, GND), 4-pin M12 D-Coded (115200, n, 8, 1)
Alarm Contact Channels	1, 4-Pin D-Coded (Port alarm, Power supply alarm) Relay output with current carrying capacity of 1A@30VDC or 0.3A@125VAC	1, 4-Pin D-Coded (Port alarm, Power supply alarm) Relay output with current carrying capacity of 1A@30VDC or 0.3A@125VAC
Switch Properties		
1000M Forwarding Rate	/	/
100M Forwarding Rate	148810pps	148810pps
Throughput	1.19Mpps@64 bytes	1.19Mpps@64 bytes
Transmit Mode	Store and Forward	Store and Forward
DRAM	512K	/
Flash	2MB	/
Buffer	1Mbits	1Mbits
Switching Fabric Capacity	7.6G	7.6G
MAC Address Table	8K	8K
Jumbo Frame Size	/	/
Layer2 Feature		
Unicast / Multicast	Static Multicast, IGMPv1/v2	/
Redundancy Protocols	SW-Ring (Recovery Time ≤ 20ms), STP/RSTP	/
LACP	Max. 2 groups, Max. 8 ports within one group	/
VLAN	Port-based Maximum active VLANs: 64, VLAN IDs available: 1-4094	/
Management & Security		
IP Address	/	/
Device Management	Web, Console, Telnet, SSH, SNMPv1/v2c, ROMN	/
Time Management	SNTP	/
Port Mirror	Max. 4 groups, TX/ RX/ Both, many-to-1 monitor	/
Power Supply		
Input Voltage	HV: 110VDC (66~156VDC) LV: 24VDC (18~36VDC)	HV: 110VDC (66~154VDC) LV: 24VDC (18~36VDC)
Power Redundancy	Single power supply	Single power supply
Power Connector	HV/LV: 4-Pin M12 A-Coded, Male Connector	HV/LV: 4-Pin M12 A-Coded, Male Connector
Environmental Limit		
Operating Temperature	-40~75℃(-40~167℉)	
Storage Temperature	-40~85℃ (-40~185℉)	
Relative Humidity	5% ~ 95% (no condensation)	
Cooling Method	Shell Heat Dissipation (Fanless)	
Physical Characteristic		
Housing	Metal, IP67	
Installation	Wall mounting	

Dimension	
Size(W*H*D)	175mm × 104mm × 53.2mm
Certification	
Certification	CE, FCC, RoHS
Warranty	5 years

Certification in Details	
Certification Item	Standard
CE-LVD	EN 61010-1: 2010
CE-EMC-EMI-RE	EN 55032: 2015
CE-EMC-EMI-CE	EN 55032: 2015
CE-EMC-EMI-Harmonic	EN 61000-3-2: 2019
CE-EMC-EMI-Flicker	EN 61000-3-3: 2013+ A1:2019
CE-EMC-EMS-ESD	IEC 61000-4-2
CE-EMC-EMS-RS	IEC 61000-4-3
CE-EMC-EMS-EFT	IEC 61000-4-4
CE-EMC-EMS-Surge	IEC 61000-4-5
CE-EMC-EMS-CS	IEC 61000-4-6
CE-EMC-EMS-DIPs	IEC 61000-4-11
CE-EMC-EMS-PFMF	IEC 61000-4-8
FCC	FCC 47 CFR Part 15
RoHS-Pb	IEC 62321-5:2013
RoHS-Cd	IEC 62321-5:2013
RoHS-Hg	IEC 62321-4:2013+AMDI1:2017 CSV
RoHS-Cr6+	IEC 62321-7-1:2015 or IEC 62321-7-2:2017
RoHS-PBBs	IEC 62321-6:2015
RoHS-PBDEs	IEC 62321-6:2015
RoHS-BBP/DBP/DEHP/DIBP	IEC 62321-8:2017
Safety	UL 60950-1, UL 62368-1
Vibration	IEC60068-2-6
Shock	IEC60068-2-27
Free Fall	IEC60068-2-32
Rail Standard	EN50155, EN50121-3-2, EN50121-4, IEC61373, EN45545

SOFTWARE

Integrated Equipment Management Software

BlueEyes View

Operating System	
Linux	Linux 64-bit operating systems
Windows	64-bit operating systems of Windows Server 2016/2019, Windows7/10
Performance(Single Server)	
Device Quantity	Maximum number of nodes: 2000
Connected Users	Maximum number of web concurrent user connections: 200
Response Speed	Second-level
Performance(Single Server)	
Network Topology	Support view list switching between the Universal View, 3onedata View and Traffic View Support real-time link and device alarm dispaly, device and link information dispaly Support web and telnet configuration for device
Network Management	Device management of subnet, management of topology links
Device Discovery	Suopprt discovery methods such as smart discovery, IP address discovery and private protocol discovery
Panel Management	Support visual management of physical panel and logical panel
Device Management	
Device Configuration	Support batch modification of device information
Wireless Configuration	Support wireless device account configuration, wireless user profile configuration, wireless log information
Basic Data	Support the management of device manufacturer, device type and device model
Configuration Management	
Topology Configuration	Support basic configuration, Telnet, SNMP configuration and inquiry, network diagnosis, configuration record
Wireless Configuration	Support the management and maintenance of wireless group
Software Management	Support firmware management and remote upgrade, configuration file backup and recovery
Polling Management	Support interface polling and device management
Alarm Management	
Alarm List	Support real-time alarm list, historical alarm list and alarm playback
Alarm Configuration	Support custom alarm level Support e-mail, SMS and audio alarm alarm notification method Support limitation for frequent alarms
Statistic Analysis	
Statistic Analysis	Support statistic chart such as device status, device type and normal device proportion Support intelligent analysis chart such as current alarm and historical alarm
System Management	
Users Management	Support administrator account and role assignment, online user lists and authorized information checking
System Settings	Support network adapter bind, configuration of monitoring port, web proxy, Database backup, data dictionary, data cleaning, northbound interface and system configuration
System Log	Support users login, users operating records

DEVICE NETWORKING PRODUCT

CE FC RoHS C UL US LISTED IEC62443

SERIAL DEVICE SERVER

NP301 Series

NP302T Series

NP304T Series

Serial Interface			
Quantity	1	2	4
Serial Standard	RS-232/422/485	RS-232, RS-422/485	RS-232, RS-422/485, RS232/422/485
Serial Connector	Terminal Block, DB9 Male Connector	Terminal Block, RJ45	Terminal Block, RJ45
RS-232 Signal	DSR, RTS, GND, TXD, RXD, DCD, CTS, DTR	DSR, RTS, GND, TXD, RXD, DCD, CTS, DTR	DSR, RTS, GND, TXD, RXD, DCD, CTS, DTR
RS-485 Signal	D+, D-, GND	D+, D-, GND	D+, D-, GND
RS-422 Signal	T+, T-, GND, R+, R-	T+, T-, GND, R+, R-	T+, T-, GND, R+, R-
Baudrate	300bps ~ 115200bps	300bps ~ 115200bps	300bps ~ 115200bps
Data Bits	5, 6, 7, 8	5, 6, 7, 8	5, 6, 7, 8
Stop Bits	1, 2	1, 2	1, 2
Parity	None, Even, Odd, Space, Mark	None, Even, Odd, Space, Mark	None, Even, Odd, Space, Mark
Flow Control	RTS/CTS, DTR/DSR, XON/XOFF	RTS/CTS, DTR/DSR, XON/XOFF	RTS/CTS, DTR/DSR, XON/XOFF
Load capacity	RS-485/422 end supports 16 points	RS-485/422 end supports 16 points	RS-485/422 end supports 16 points
	polling (customizable 128 points)	polling (customizable 128 points)	polling (customizable 128 points)
Isolation	1.5 kVDC	1.5 kVDC	1.5 kVDC
Ethernet Interface			
Quantity	1	1	1
Rate	10/100 Mbps	10/100 Mbps	10/100 Mbps
Function	/	/	/
Management & Standards			
Protocol	TCP, UDP, ARP, HTTP, TELNET, ICMP, DHCP, DNS	TCP, UDP, ARP, HTTP, TELNET, ICMP, DHCP, DNS	
Working Mode	RealCOM, TCP Server, TCP Client, UDP, TCP Auto, Advanced TCP, Advanced UDP	RealCOM, TCP Server, TCP Client, UDP Server, UDP Client, Pair Master, Pair Slave	
Device Management	Web, CLI over Console, Telnet, SSH	Web, CLI over Console, Telnet, SSH	
Windows Real COM Drivers	Windows 2000/XP/2003/Server 2008/Server 2012/Server 2016/7/8/10 32/64-bit		
Power Supply			
Input Voltage	9~48VDC	9~48VDC	12~48VDC
Power Redundancy	Single Power Supply	Single Power Supply	Single Power Supply
Power Connector	Terminal Block	Terminal Block	Terminal Block
Environmental Limit			
Operating Temperature	-40~75℃(-40~167℉)	-40~75℃(-40~167℉)	-40~75℃(-40~167℉)
Storage Temperature	-40~85℃ (-40~185℉)	-40~85℃ (-40~185℉)	-40~85℃ (-40~185℉)
Relative Humidity	5% ~ 95% (no condensation)	5% ~ 95% (no condensation)	5% ~ 95% (no condensation)
Physical Characteristic			
Housing	Metal, IP40	Metal, IP40	Metal, IP30
Installation	Wall mounting	Wall mounting	Desktop/ Wall mounting
Dimension			
Size(W*H*D)	69mm×22mm×100mm	69mm×22mm×100mm	170mm×31.5mm×110mm
Certification			
Certification	CE, FCC, RoHS		
Warranty	3 years	3 years	3 years

NP314T Series

NP308T Series

NP318T Series

Serial Interface			
Quantity	4	8	8
Serial Standard	RS-232, RS-422/485, RS-232/422/485	RS-232, RS-422/485, RS-232/422/485	RS-232, RS-422/485, RS-232/422/485
Serial Connector	Terminal Block, RJ45	Terminal Block, RJ45	Terminal Block, RJ45
RS-232 Signal	DSR, RTS, GND, TXD, RXD, DCD, CTS, DTR	DSR, RTS, GND, TXD, RXD, DCD, CTS, DTR	DSR, RTS, GND, TXD, RXD, DCD, CTS, DTR
RS-485 Signal	D+, D-, GND	D+, D-, GND	D+, D-, GND
RS-422 Signal	T+, T-, GND, R+, R-	T+, T-, GND, R+, R-	T+, T-, GND, R+, R-
Baudrate	300bps ~ 115200bps	300bps ~ 115200bps	300bps ~ 115200bps
Data Bits	5, 6, 7, 8	5, 6, 7, 8	5, 6, 7, 8
Stop Bits	1, 2	1, 2	1, 2
Parity	None, Even, Odd, Space, Mark	None, Even, Odd, Space, Mark	None, Even, Odd, Space, Mark
Flow Control	RTS/CTS, DTR/DSR, XON/XOFF	RTS/CTS, DTR/DSR, XON/XOFF	RTS/CTS, DTR/DSR, XON/XOFF
Load capacity	RS-485/422 end supports 16 points	RS-485/422 end supports 16 points	RS-485/422 end supports 16 points
	polling (customizable 128 points)	polling (customizable 128 points)	polling (customizable 128 points)
Isolation	1.5 kVDC	1.5 kVDC	1.5 kVDC
Ethernet Interface			
Quantity	2	1	2
Rate	10/100 Mbps	10/100 Mbps	10/100 Mbps
Function	Dual IP	/	Dual IP
Management & Standards			
Protocol	TCP, UDP, ARP, HTTP, TELNET, ICMP, DHCP, DNS		
Working Mode	RealCOM, TCP Server, TCP Client, UDP Server, UDP Client, Pair Master, Pair Slave		
Device Management	Web, CLI over Console, Telnet, SSH		
Windows Real COM Drivers	Windows 2000/XP/2003/Server 2008/Server 2012/Server 2016/7/8/10 32/64-bit		
Power Supply			
Input Voltage	12~48VDC	12~48VDC	12~48VDC
Power Redundancy	Single Power Supply	Single Power Supply	Single Power Supply
Power Connector	Terminal Block	Terminal Block	Terminal Block
Environmental Limit			
Operating Temperature	-40~75℃(-40~167℉)	-40~75℃(-40~167℉)	-40~75℃(-40~167℉)
Storage Temperature	-40~85℃ (-40~185℉)	-40~85℃ (-40~185℉)	-40~85℃ (-40~185℉)
Relative Humidity	5% ~ 95% (no condensation)	5% ~ 95% (no condensation)	5% ~ 95% (no condensation)
Physical Characteristic			
Housing	Metal, IP40	Metal, IP30	Metal, IP40
Installation	Desktop/ Wall mounting	Desktop/ Wall mounting	Desktop/ Wall mounting
Dimension			
Size(W*H*D)	170mm×31.5mm×110mm	170mm×31.5mm×110mm	170mm×31.5mm×110mm
Certification			
Certification	CE, FCC, RoHS		
Warranty	3 years	3 years	3 years

NP3008T Series

NP3016T Series

NP3116T Series

Serial Interface			
Quantity	8	16	16
Serial Standard	RS-232/422/485	RS-232/422/485	RS-232/422/485
Serial Connector	Terminal Block, RJ45	Terminal Block, RJ45	Terminal Block, RJ45
RS-232 Signal	DSR, RTS, GND, TXD, RXD, DCD, CTS, DTR	DSR, RTS, GND, TXD, RXD, DCD, CTS, DTR	DSR, RTS, GND, TXD, RXD, DCD, CTS, DTR
RS-485 Signal	D+, D-, GND	D+, D-, GND	D+, D-, GND
RS-422 Signal	T+, T-, GND, R+, R-	T+, T-, GND, R+, R-	T+, T-, GND, R+, R-
Baudrate	300bps ~ 115200bps	300bps ~ 115200bps	300bps ~ 115200bps
Data Bits	5, 6, 7, 8	5, 6, 7, 8	5, 6, 7, 8
Stop Bits	1, 2	1, 2	1, 2
Parity	None, Even, Odd, Space, Mark	None, Even, Odd, Space, Mark	None, Even, Odd, Space, Mark
Flow Control	RTS/CTS, DTR/DSR, XON/XOFF	RTS/CTS, DTR/DSR, XON/XOFF	RTS/CTS, DTR/DSR, XON/XOFF
Load capacity	RS-485/422 end supports 16 points polling (customizable 128 points)	RS-485/422 end supports 16 points polling (customizable 128 points)	RS-485/422 end supports 16 points polling (customizable 128 points)
Isolation	1.5 kVDC	1.5 kVDC	1.5 kVDC
Ethernet Interface			
Quantity	1	1	2
Rate	10/100 Mbps	10/100 Mbps	10/100 Mbps
Function	/	/	Dual IP
Management & Standards			
Protocol	TCP, UDP, ARP, HTTP, TELNET, ICMP, DHCP, DNS		
Working Mode	RealCOM, TCP Server, TCP Client, UDP Server, UDP Client, Pair Master, Pair Slave		
Device Management	Web, CLI over Console, Telnet, SSH		
Windows Real COM Drivers	Windows 2000/XP/2003/Server 2008/Server 2012/Server 2016/7/8/10 32/64-bit		
Power Supply			
Input Voltage	85~265VAC	85~265VAC	85~265VAC
Power Redundancy	Single Power Supply	Single Power Supply	Single Power Supply
Power Connector	Single-phase socket	Single-phase socket	Single-phase socket
Environmental Limit			
Operating Temperature	-40~75℃(-40~167℉)	-40~75℃(-40~167℉)	-40~75℃(-40~167℉)
Storage Temperature	-40~85℃ (-40~185℉)	-40~85℃ (-40~185℉)	-40~85℃ (-40~185℉)
Relative Humidity	5% ~ 95% (no condensation)	5% ~ 95% (no condensation)	5% ~ 95% (no condensation)
Physical Characteristic			
Housing	Metal, IP30	Metal, IP30	Metal, IP30
Installation	1U, Rack mounting	1U, Rack mounting	1U, Rack mounting
Dimension			
Size(W*H*D)	441.6mm×44.6mm×207.9mm	441.6mm×44.6mm×207.9mm	441.6mm×44.6mm×207.9mm
Certification			
Certification	CE, FCC, RoHS		
Warranty	3 years	3 years	3 years

NP5000 Series

NP5100 Series

NP5200 Series

Serial Interface			
Quantity	1, 2, 4, 8	16, 32	1, 2, 4
Serial Standard	RS-232/422/485	RS-232/422/485	RS-232/422/485
Serial Connector	RJ45, DB9 Male	RJ45	DB9 Male
RS-232 Signal	RXD, TXD, DTR, GND, DSR, RTS, CTS, DCD or RXD, TXD, DTR, GND, DSR, RTS, CTS	RXD, TXD, DTR, GND, DSR, RTS, CTS, DCD or RXD, TXD, DTR, GND, DSR, RTS, CTS	RXD, TXD, DTR, GND, DSR, RTS, CTS, DCD or RXD, TXD, DTR, GND, DSR, RTS, CTS
RS-485 Signal	D+, D-, GND	D+, D-, GND	D+, D-, GND
RS-422 Signal	T+, T-, GND, R+, R-	T+, T-, GND, R+, R-	T+, T-, GND, R+, R-
Baudrate	110bps ~ 115200bps, 110bps ~ 921600bps (Upscale Chip)	110bps ~ 115200bps, 110bps ~ 921600bps (Upscale Chip)	110bps ~ 115200bps, 110bps ~ 921600bps (Upscale Chip)
Data Bits	5, 6, 7, 8	5, 6, 7, 8	5, 6, 7, 8
Stop Bits	1, 1.5 (Available when Data Bit is 5), 2	1, 1.5 (Available when Data Bit is 5), 2	1, 1.5 (Available when Data Bit is 5), 2
Parity	None, Even, Odd, Space, Mark	None, Even, Odd, Space, Mark	None, Even, Odd, Space, Mark
Flow Control	RTS/CTS, DTR/DSR, XON/XOFF	RTS/CTS, DTR/DSR, XON/XOFF	RTS/CTS, DTR/DSR, XON/XOFF
Load capacity	RS-485/422 end supports 32 points polling (customizable 256 points)	RS-485/422 end supports 32 points polling (customizable 256 points)	RS-485/422 end supports 32 points polling (customizable 256 points)
Isolation	2kVDC	2kVDC	2kVDC
Ethernet Interface			
Quantity	1, 2	2	2
Rate	10/100 Mbps	10/100 Mbps	10/100 Mbps
Function	Dual IP, Redundant, Switch	Dual IP, Redundant, Switch	Dual IP, Redundant, Switch
Management & Standards			
Protocol	TCP, UDP, ARP, BOOTP, HTTP, HTTPS, TELNET, ICMP, SMTP, SNMPv1/v2c, SNTP, DHCP, DNS, RFC2217		
Working Mode	RealCom, Reverse RealCom, TCP Server, TCP Client, UDP Server, UDP Client, Pair Master, Pair Slave, UDP Rang, UDP Multicast, Telnet, Reverse Telnet, RFC2217, Redundant COM, DRDAS RealCom, DRDAS TCPServer, Disable		
Device Management	Web, CLI over Console, Telnet, SSH		
User Interface	/	OLED display, configuration buttons	/
Windows Real COM Drivers	Windows 2000/XP/2003/Server 2008/Server 2012/Server 2016/7/8/10 32/64-bit		
Power Supply			
Input Voltage	12-48VDC	85~265VAC	12-48VDC
Power Redundancy	Single Power Supply	Dual Power Supply	Dual Power Supply
Power Connector	Terminal Block	Single-phase socket	Terminal Block
Environmental Limit			
Operating Temperature	-40~75℃(-40~167℉)	-40~75℃(-40~167℉)	-40~75℃(-40~167℉)
Storage Temperature	-40~85℃ (-40~185℉)	-40~85℃ (-40~185℉)	-40~85℃ (-40~185℉)
Relative Humidity	5% ~ 95% (no condensation)	5% ~ 95% (no condensation)	5% ~ 95% (no condensation)
Physical Characteristic			
Housing	Metal, IP40	Metal, IP40	Metal, IP40
Installation	Wall/ Desktop mounting	1U, Rack mounting	DIN-Rail mounting
Dimension			
Size(W*H*D)	97mm×25mm×110mm (1,2 Serial port) 170mm×32.6mm×110mm (4, 8 Serial port)	440mm×44mm×265.6mm	33mm×138mm×110mm(1,2 Serial port) 53mm×138mm×110mm(4 Serial port)
Certification			
Certification	CE, FCC, RoHS		
Warranty	3 years	3 years	3 years

IO SERVER

RIO1000-2T-8IO(DI)-8IO(DO)-TB

DI Interface	
Quantity	8
Input Connector	TB
Input Type	Dry contact (ON: GND short circuit; off: open circuit) Wet contact Source(NPN) (ON: 0~3VDC; OFF: 10~30VDC) Wet contact Sink (PNP) (ON: 10~30VDC: OFF: 0~3VDC)
Digital Filtering	software configuration (1-65535ms
Counter Frequency	≤1kHz
Working Mode	DI or counter
DO Interface	
Quantity	8
Output Connector	TB
Output Type	Sink (PNP)
Pulse Frequency	≤ 500Hz
Working Mode	DO or pulse output
Rated current	200mA/Channel
Overcurrent protection	650mA/Channel
Overvoltage protection	45VDC
Ethernet Interface	
Quantity	2
Connector	RJ45
Rate	10/100 Mbps
Function	Dual IP, Redundant, Switch
Management&Standards	
Protocol	Modbus TCP, TCP, IP, UDP, TELNET, ARP, ICMP, HTTP, HTTPS, SNMP, SSH, SMTP, SNTP, DNS and DHCP
Working Mode	Modbus TCP Slave (Server), support function codes 01, 02, 03, 04, 05, 06, 15 and 16, and support up to 10 master connections
Device Management	WEB configuration (HTTP/HTTPS), TELNET configuration, SSHD configuration
Security	Mail alarm, SNMP Trap alarm, I/O Trap alarm, system alarm, IP address filtering, MAC address filtering
Power Supply	
Input Voltage	12~48VDC
Power Redundancy	Single power supply
Power Connector	Terminal Block
Environmental Limit	
Operating Temperature	-40~75℃(-40~167℉)
Storage Temperature	-40~85℃ (-40~185℉)
Relative Humidity	5% ~ 95% (no condensation)
Physical Characteristic	
Housing	Metal, IP40
Installation	DIN-Rail mounting
Dimension	
Size(W*H*D)	33mm×138mm×110mm
Certification	
Certification	CE, FCC, RoHS
Warranty	3 years

MODBUS GATEWAY

GW1101 Series

GW1102 Series

Serial Interface		
Quantity	1	2
Serial Standard	RS-422/485, RS-232/422/485	
Serial Connector	Terminal Block, DB9 Male Connector	
RS-232 Signal	DSR, RTS, GND, TXD, RXD, DCD, CTS, DTR	
RS-485 Signal	D+, D-, GND	
RS-422 Signal	T+, T-, GND, R+, R-	
Baudrate	110bps ~ 115200bps, 110bps ~ 921600bps (Upscale Chip)	
Data Bits	7, 8	
Stop Bits	1, 2	
Parity	None, Even, Odd, Space, Mark	
Flow Control	RTS/CTS, DTR/DSR, XON/XOFF	
Load capacity	RS-485/422 end supports 32 points polling (customizable 256 points)	
Connection quantity	256 Modbus TCP masters, 128 Modbus TCP slaves	
Isolation	2kVDC	
Ethernet Interface		
Quantity	1	
Rate	10/100 Mbps	
Function	/	
Management&Standards		
Protocol	Modbus TCP, Modbus RTU/ASCII, TCP, IP, UDP, ARP, HTTP, TELNET, SNMP, SMTP, ICMP, DHCP, DNS	
Working Mode	RTU Master, RTU Slave, ASCII Master, ASCII Slave	
Device Management	Web, Console, Telnet, SSH	
Power Supply		
Input Voltage	12-48VDC	
Power Redundancy	Single Power Supply	
Power Connector	Terminal Block	
Environmental Limit		
Operating Temperature	-40~75℃(-40~167℉)	
Storage Temperature	-40~85℃ (-40~185℉)	
Relative Humidity	5% ~ 95% (no condensation)	
Physical Characteristic		
Housing	Metal, IP40	
Installation	Wall mounting	
Dimension		
Size(W*H*D)	97mm×110mm×25mm	
Certification		
Certification	CE, FCC, RoHS	
Warranty	3 years	

GW1114 Series

GW1118 Series

Serial Interface		
Quantity	4	8
Serial Standard	RS-485, RS-232/422/485	
Serial Connector	Terminal Block, RJ45	
RS-232 Signal	DSR, RTS, GND, TXD, RXD, DCD, CTS, DTR	
RS-485 Signal	D+, D-, GND	
RS-422 Signal	T+, T-, GND, R+, R-	
Baudrate	110bps ~ 115200bps, 110bps ~ 921600bps (Upscale Chip)	
Data Bits	7, 8	
Stop Bits	1, 2	
Parity	None, Even, Odd, Space, Mark	
Flow Control	RTS/CTS, DTR/DSR, XON/XOFF	
Load capacity	RS-485/422 end supports 32 points polling (customizable 256 points)	
Connection quantity	256 Modbus TCP masters, 128 Modbus TCP slaves	
Isolation	2kVDC	
Ethernet Interface		
Quantity	2	
Rate	10/100 Mbps	
Function	Dual IP, Redundant, Switch	
Management&Standards		
Protocol	Modbus TCP, Modbus RTU/ASCII, TCP, IP, UDP, ARP, HTTP, TELNET, SNMP, SMTP, ICMP, DHCP, DNS	
Working Mode	RTU Master, RTU Slave, ASCII Master, ASCII Slave	
Device Management	Web, Console, Telnet, SSH	
Power Supply		
Input Voltage	12~48VDC	
Power Redundancy	Single power supply	
Power Connector	Terminal Block	
Environmental Limit		
Operating Temperature	-40~75℃(-40~167℉)	
Storage Temperature	-40~85℃ (-40~185℉)	
Relative Humidity	5% ~ 95% (no condensation)	
Physical Characteristic		
Housing	Metal, IP40	
Installation	Desktop/ Wall mounting	
Dimension		
Size(W*H*D)	170mm×30mm×110mm (lugs are not included)	
Certification		
Certification	CE, FCC, RoHS	
Warranty	3 years	

IGW1111 Series

IGW1112 Series

IGW1114 Series

Serial Interface			
Quantity	1	2	4
Serial Standard	RS-232/422/485		
Serial Connector	DB9 Male Connector		
RS-232 Signal	DSR, RTS, GND, TXD, RXD, DCD, CTS, DTR		
RS-485 Signal	D+, D-, GND		
RS-422 Signal	T+, T-, GND, R+, R-		
Baudrate	110bps ~ 115200bps, 110bps ~ 921600bps (Upscale Chip)		
Data Bits	5, 6, 7, 8		
Stop Bits	1, 1.5 (Available when Data Bit is 5), 2		
Parity	None, Even, Odd, Space, Mark		
Flow Control	RTS/CTS, DTR/DSR, XON/XOFF		
Load capacity	RS-485/422 end supports 32 points polling (customizable 256 points)		
Connection quantity	256 Modbus TCP masters, 128 Modbus TCP slaves		
Isolation	2kVDC		
Ethernet Interface			
Quantity	2		
Rate	10/100 Mbps		
Function	Dual IP, Redundant, Switch		
Management&Standards			
Protocol	Modbus TCP, Modbus RTU/ASCII, TCP, IP, UDP, ARP, HTTP, TELNET, SNMP, SMTP, ICMP, DHCP, DNS		
Working Mode	RTU Master, RTU Slave, ASCII Master, ASCII Slave		
Device Management	Web, Console, Telnet, SSH		
Power Supply			
Input Voltage	12~48VDC		
Power Redundancy	Dual power supply		
Power Connector	Terminal Block		
Environmental Limit			
Operating Temperature	-40~75℃(-40~167℉)		
Storage Temperature	-40~85℃ (-40~185℉)		
Relative Humidity	5% ~ 95% (no condensation)		
Physical Characteristic			
Housing	Metal, IP40		
Installation	DIN-Rail mounting		
Dimension			
Size(W*H*D)	33mm×138mm×110mm		53mm×138mm×110mm
Certification			
Certification	CE, FCC, RoHS		
Warranty	3 years		

CAN-BUS DEVICE SERVER

ICP222-2F-2CI

CP202-2CI

CAN Interface		
Quantity	2	
CAN Standard	CAN 2.0A, CAN 2.0B	
CAN Connector	Terminal Block	
CAN Signal	CAN H, CAN L	
Baudrate	2.5K~1000K	
Load capacity	Support concurrent transmitting of 110 nodes	
Isolation	2kVDC	
Ethernet Interface		
Quantity	2	1
Connector	Fiber Optic, SC	Copper Port, RJ45
Rate	100 Mbps	10/100 Mbps
Function	Ring Redundancy	/
Management&Standards		
Protocol	TCP, UDP, ARP, HTTP, SW-Ring, TELNET, ICMP, DHCP, DNS	
Working Mode	TCP Server, TCP Client, UDP Server, UDP Client, UDP Multicast, UDP Rang	
Device Management	Web, Console, Telnet, SSH	
Power Supply		
Input Voltage	12~48VDC	
Power Redundancy	Single power supply	
Power Connector	Terminal Block	
Environmental Limit		
Operating Temperature	-40~75℃(-40~167℉)	
Storage Temperature	-40~85℃ (-40~185℉)	
Relative Humidity	5% ~ 95% (no condensation)	
Physical Characteristic		
Housing	Metal, IP40	Metal, IP40
Installation	DIN-Rail mounting	Wall mounting
Dimension		
Size(W*H*D)	35mm×110mm×95mm	97mm×110mm×25mm
Certification		
Certification	CE, FCC, RoHS	
Warranty	3 years	

SERIAL FIBER MODEM

MODEL277 Series

MODEL277A

MODEL277B

MC201

IMF204/208

IMF2100

Optical Fiber Side						
Number of Ports	1	1	1	1	2	1/2 support ring network
Fiber Connectors	SC/ST/FC	SC/ST/FC	SC/ST/FC	SC/ST/FC	SC/ST/FC	SC/ST/FC
Multimode	850nm/2km, 1310/2/5km					2km
Single mode	1310nm/20/40/60km, 1550nm/80/100/120km					20/40/60km
Serial Interface						
RS-232	1	1	/	1	/	1 RS-232/485/422
RS-422/485	1	/	1	/	4/8	
CAN	/	/	/	/	/	/
Connector	terminal block	Db9	terminal block	terminal block	terminal block	terminal block
Signals	RS-232 signal: Tx, Rx, GNG RS-422 signals: T+, T-, R+, R-, GND RS-485 signal: D+, D-, GND	RS-232 signal: Tx, Rx, GNG	RS-422 signal: T+, T-, R+, R-, GND RS-485 signal: D+, D-, GND	CANH, CANLGND	RS-422 signal: T+, T-, R+, R-, GND RS-485 signal: D+, D-, GND	RS-232 signal: RXD, TXD, GND RS-485 signal: D+, D-, GND RS-422 signal: T+, T-, GND, R+, R
Compliance	EIA RS-232, EIA RS-422, EIA RS-485	EIA RS-232	EIA RS-422, EIA RS-485	CAN2.0A, CAN2.0B	EIA RS-422, EIA RS-485	EIA RS-232C, RS-485, RS-422
Baudrate	300~115200bps	300~115200bps	300~115200bps	2.5Kbps~1000Kbps	0bps~115200bps	300~115200bps
Power Supply						
Input Voltage	12~48VDC	5VDC,-48VDC,220VAC		5VDC	9~48VDC/110~240VDC	12~48VDC/12~48VDC 110~370VDC/85~265VAC
Environmental Limit						
Operating Temperature	-40~75℃	-40~75℃		-40~75℃	-10~70℃	-40~75℃
Storage Temperature	-40~75℃	-40~85℃		-40~85℃	-10~70℃	-40~85℃
Relative Humidity	5% ~ 95% (no condensation)					
Dimension						
Size(W*H*D)	100*69*22 (mm)	94*71*26 (mm)		100*69*22(mm)	200*120*35 (mm)	35*110*95 (mm)
Certification						
Certification	CE, FCC, RoHS					
Warranty	3 years					

SERIAL CONVERTER

USB to RS-232/485/422 Interface Converter	USB232	USB4232	USB8232I	USB485	USB485I	USB4485	USB8485I
USB Interface							
Number of Ports	USB 1.1/USB2.0 compliant, EIA RS-232			USB 1.1/USB2.0 compliant, EIA RS-422, EIA RS-485			
Connectors	USB type A			USB type A			
Speed	VCC, DATA+, DATA-, GND, FG			VCC, DATA+, DATA-, GND, FG			
Serial Interface							
Number Of Ports	1 x RS-232	4 x RS-232	8 x RS-232	1 x RS-485	1 x RS-232/485/422	4 x RS-422/485	8 × RS422/485
Connectors	Db9 male / terminal block						
Interface Protection	15 KV ESD， 600W surge						
Serial Communication Parameters	Data Bits: 5, 6, 7, 8, Stop Bits: 1, 2, Parity: None, Even, Odd, Space, Mark						
Baudrate	300bps-115200bps						
Flow Control	RTS/CTS						
Driver Support							
Windows 2000	√	√	√	√	√	√	√
Windows XP/2003 x86/x64	√	√	√	√	√	√	√
Windows Vista x86/x64	√	√	√	√	√	√	√
Windows CE 4.2/5.0/5.2/6.0	√	√	√	√	√	√	√
Mac OS-X	√	√	√	√	√	√	√
Linux (above 2.4 versions), x86_64 Linux	√	√	√	√	√	√	√
Environmental Limits							
Working Temperature	-20~60℃		-40~75℃	-20~60℃	-40~75℃	-20~60℃	-40~75℃
Storage Temperature	-25~85℃		-40~85℃	-25~85℃	-40~85℃	-25~85℃	-40~85℃
Relative Humidity	5% ~ 95% (no condensation)						
Power Requirements							
Input Voltage	/	5VDC	5VDC	/	12VDC(9~48VDC)	5VDC	9VDC
Dimensions							
Size (L*W*H)	72*33*18 (mm)	160*94*28 (mm)	230*148.3*40 (mm)	72*33*18 (mm)	100*69*22 (mm)	160* 94*28 (mm)	230*148.3*40 (mm)

RS-232/485/422 Interface Converter	TLC485	TLC422	MODEL485P	SW485GI	SW4485I
Serial Interface					
RS-232	√	√	√	√	√
RS-422/485	/	/	√	√	/
RS-422	/	√	/	/	/
RS-485	√	/	/	/	√
Connector	DB9/ terminal block	DB9/ terminal block	DB9/ terminal block	DB9/ terminal block	terminal block
Interface Protection	15kV ESD		15kV ESD, 600W surge	15kV ESD, 600W surge 3kV electrical isolation	2kV electrical isolation
Compliance	EIA RS-232, EIA RS-422, EIA RS-485				
Baudrate	300bps~115200bps				
Flow Control	auto detect direction control				
Working Environment					
Working Temperature	-20~60℃	-20~60℃	-20~60℃	-40~75℃	-40~75℃
Storage Temperature	-25~85℃	-25~85℃	-25~85℃	-40~85℃	-40~85℃
Relative Humidity	5% ~ 95% (no condensation)				
Power Requirements					
Input Voltage	/	/	9VDC	9~36VDC	12~48VDC
Dimensions					
Size (W*H*D)	90*33*16.5 (mm)(DB9)	65*55*16.5 (mm)(DB25)	62.4*93*22 (mm)	69*100*22 (mm)	35*100*95 (mm)

CAN-Bus to RS-232/485/422 Converter	CAN232	CAN485
Serial Port		
Standard	EIA RS-232C	EIA RS-485
Protocol	Modbus RTU (optional)	Modbus RTU (optional)
Serial Port Quantity	1 RS-232 serial port	1 RS-485 serial port
RS-485 Signal	TXD, RXD, GND	D+, D-, GND
Baud Rate	300-115200bps	300-115200bps
Data Bit	8bit	8bit
Check Bit	None, Even, Odd, Space, Mark	None, Even, Odd, Space, Mark
Stop Bit	1bit, 2bit	1bit, 2bit
Interface Form	DB9, Female	DB9, Female
Transmission Distance	15m	1200m
CAN Interface	CAN2.0A, CAN2.0B	CAN2.0A, CAN2.0B
Standard	1 CAN port	1 CAN port
Interface Quantity	CANH, CANL, GND	CANH, CANL, GND
CAN Signal	2-wire Half Duplex Mode	2-wire Half Duplex Mode
Duplex Mode	2.5kbps-1000kbps	2.5kbps-1000kbps
Baud Rate	support concurrent transmitting of 110 nodes	support concurrent transmitting of 110 nodes
Load Capacity	40m~10km	40m~10km
Transmission Distance	adopt 5-pin 5.08mm pitch terminal blocks	adopt 5-pin 5.08mm pitch terminal blocks
Interface Form	optional external 120Ω terminating resistor	optional external 120Ω terminating resistor
Terminating Resistor	2kVAC isolation protection	2kVAC isolation protection
Interface Protection		
Working Environment	-40~75℃	-40~75℃
Working Temperature	-40~85℃	-40~85℃
Storage Temperature	5%~95% (no condensation)	5%~95% (no condensation)
Relative Humidity		
Power Requirement	9~48VDC	9~48VDC
Input Voltage		
Dimensions	69*100*22 (mm)	69*100*22 (mm)
Size (W*H*D)		

PROTOCOL CONVERTER

	Serial to E1		BNC to RJ45
			
Industrial Protocol Converter	E232	E485	TLC703
E1 Interface			
Standard	ITU-T G.703, ITU-TG.735, ITU-TG.823	ITU-T G.703, ITU-TG.735, ITU-TG.823	/
Frame Format	unframed	unframed	/
Interface Rate	2.048Mbps±50ppm	2.048Mbps±50ppm	/
CRC Checkout	No	No	/
Port Coding	HDB3	HDB3	/
Port Transmission	2km	2km	/
Interface Protection	1500W surge protection, 15KV ESD protection	1500W surge protection, 15KV ESD protection	/
Connectors	120 ohm (RJ45) & 75 ohm (BNC double coaxial)	120 ohm (RJ45) & 75 ohm (BNC double coaxial)	/
Balance to Unbalance Converter			
Standard	/	/	ITU/CCITT G.703
Twisted-pair Signal	/	/	T+, T-, R+, R-, GND
Copper Signal	/	/	TX, RX
Working	/	/	Transparent Convert
Baud Rate	/	/	2Mbps
Isolation	/	/	1000V
Interface Style	/	/	BNC (75 ohm, unbalance)
			Rj45 (100 ohm, balance)
Serial Interface			
Standard	EIA RS-232C	EIA RS-485, RS-422	/
Connector	DB25 female	DB25 female	/
Signal	TXD, RXD, CTS, DSR, GND, DCD	D+, D-, GND, TXD+, TXD-, RXD+, RXD-, GND	/
Baud Rate	0~115200BPS	0~115200BPS	/
Work Mode	DCE	DCE	/
Interface Protection	600W surge protection, 15KV ESD protection	600W surge protection, 15KV ESD protection	/
Working	synchronous serial, lucency transmission	synchronous serial, lucency transmission	/
Power Supply			
Input Voltage	220VAC/-48VDC	220VAC/-48VDC	/
Working Environment			
Working Temperature	-25℃~70℃	-25℃~70℃	-40℃~75℃
Storage Temperature	-40℃~85℃	-40℃~85℃	-40℃~85℃
Relative Humidity	5%~95% (no condensation)	5%~95% (no condensation)	5%~95% (no condensation)
Dimensions			
Size (W*H*D)	227.4*146.3*42.7 (mm)	227.4*146.3*42.7 (mm)	66*42*20 (mm)

E1/FE1/Ethernet Protocol Converter	MODEL7210	MODEL7211A
E1 Interface		
Standard	ITU-T G.703, ITU-TG.735, ITU-TG.823	ITU-T G.703, ITU-TG.735, ITU-TG.823
Frame Format	unframed	unframed
Interface Rate	2.048Mbps*4=8.192Mbps	2.048Mbps
CRC Checkout	No	No
Port Coding	HDB3	HDB3
Port Transmission	2km	2km
Interface Protection	1500V electromagnetism isolate	1500V electromagnetism isolate
Connectors	120 ohm (RJ45) & 75 ohm (BNC double coaxial)	120 ohm (RJ45) & 75 ohm (BNC double coaxial)
Ethernet Port		
Interface Types	10/100BaseT, full/half duplex	10/100BaseT, full/half duplex
Standards Compliance	IEEE802.3 (support VLAN)	IEEE802.3
Bit Rate	10/100BaseT limited to max 2.048Mbps	10/100BaseT limited to max 2.048Mbps
Connectors	RJ45 (10/100Base-T electrical)	RJ45 (10/100Base-T electrical)
Line Code	manchester encoding	manchester encoding
Clock Selection	internal and recover clock	internal and recover clock
V35 Interface		
Standard	/	/
Clock	/	/
Connector	/	/
Line Code	/	/
Clock Selection	/	/
Test Facility	/	/
Power Supply		
Input Voltage	220VAC/-48VDC	220VAC/-48VDC
Working Environment		
Working Temperature	-25℃~70℃	-25℃~70℃
Storage Temperature	-40℃~85℃	-40℃~85℃
Relative Humidity	5%~95% (no condensation)	5%~95% (no condensation)
Dimensions		
Size (W*H*D)	483*160*44 (mm)	227.4*146.3*42.7 (mm)

SERIAL PROTECTOR

	FL45-E100	FL485	FL-BNC
Date Line Surge Protection			
Interface	RJ45	terminal block	BNC
Standard	IEC6100-4-5, ITU-TK20 & 21	IEC6100-4-5, ITU-TK20 & 21	IEC6100-4-5, ITU-TK20 & 21
Nominal Discharge Current (In)	5KA (8/20 S)μ	5KA (8/20 S)μ	5KA (8/20 S)μ
Working Voltage	0~5V	0~5V	0~2V
Limit Voltage	≤40V	≤15V	≤30V
Apply Band Rate	100Mbps	1Mbps	10Mbps
Insert Consumption	≤0.5dB	≤0.5dB	≤0.5dB
Delay Time	<1ns	<1ns	<10ns
Working Environment			
Working Temperature	-20℃~60℃	-20℃~60℃	-20℃~60℃
Storage Temperature	-25℃~85℃	-25℃~85℃	-25℃~85℃
Relative Humidity	5%~95% (no condensation)	5%~95% (no condensation)	5%~95% (no condensation)
Dimensions			
Size (W*H*D)	84*25*25 (mm)	73*25*25(mm)	86*25*25 (mm)

EDGE COMPUTING GATEWAY

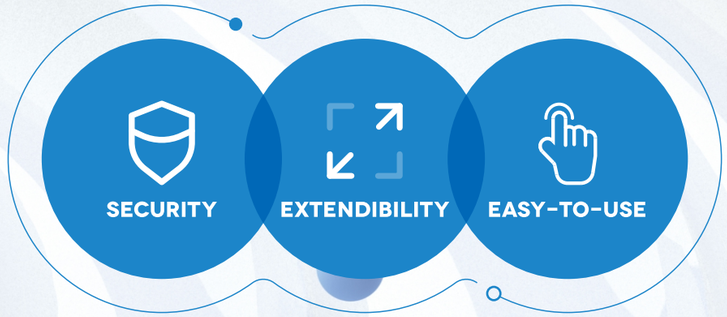
TCU2000

Interface	
Processor	Quad core CPU, 1.2GHz
Operating System	Linux
RAM	2GB DDR3
Internal Storage	8GB (16GB, 32GB optional) eMMC, support 1 Micro-SD card (TF) expansion storage
Interface	
SFP Slot	4, 1000base-X
LAN Port	8, 10/100/1000Base-T(X)
Serial Port	6, RS-232/RS-485
CAN Port	2, Reserved
I/O Port	4DI, 4DO
HDMI Port	1, 1080P@60FPS video output
AUDIO Port	1, Reserved
USB Port	1, Type A, USB 2.0
LTE Antenna Port	1, Reserved
SIM/Micro-SD Slot	1, Reserved
Console Port	1, RS-232 (TxD, RxD, GND), 8-pin RJ45 (115200, n, 8, 1)
Switch Feature	
Switch Property	MAC Address: Backplane Bandwidth: Packet Buffer Size: DRAM: Flash:
Security Function	Firewall-access control, firewall-port mapping, data encryption
Redundant Technology	STP/RSTP
Time Management	NTP/SNTP
Network management	DHCP Client, DNS Client, NAT, Intranet Penetration
System Management	Remote monitoring, remote upgrade, remote debugging, dual-zone active/standby upgrade, real-time clock synchronization, routing mode, switching mode
Industrial Protocol	Modbus RTU、Modbus TCP、DLT645
Edge Computing Feature	
Edge Computing	Time rules, Equipment Linkage, Object Model
Northbound connection	The preset APP supports the MQTT/HTTP-based open object model connection protocol, and supports the development of custom northbound protocols
Southbound equipment	The preset APP supports street light controllers, weather environment monitoring equipment, electronic door locks, information release screens, network cameras, smart meter equipment, and supports self-developed equipment docking
Application development	Support basic IO application service development, southbound equipment service development and northbound connection service development, provide application service development environment, application service development examples and related application service development auxiliary tools
Configuration Tool	Device discovery, network setting, network diagnosis, time setting, system maintenance, container application management, southbound device configuration, northbound connection configuration

Power Supply	
Input Voltage	12~48VDC
Power Redundancy	Dual Power Supply
Power Connector	Terminal Block
Environmental Limit	
Operating Temperature	-40~75℃(-40~167℉)
Storage Temperature	-40~85℃ (-40~185℉)
Relative Humidity	5% ~ 95% (no condensation)
Physical Characteristic	
Housing	Metal, IP40
Installation	DIN-Rail mounting
Dimension	
Size(W*H*D)	70mm×160mm×130mm
Certification	
Certification	CE, FCC, RoHS
Warranty	5 years

INDUSTRIAL WIRELESS PRODUCT

CE FC RoHS SRRC



INDUSTRIAL WIRELESS AP

IAP2600S-4A25 Series

IAP2300C-2E-2T-1D

Product Orientation	Wireless AP/ Bridge	Wireless Client
Interface		
WAN Port, RJ45	1, with PD feature	/
LAN Port, RJ45	3/4	2
Rate of Ethernet	10/100/1000Base-T(X)	10/100Base-T(X)
2.4GHz Antenna	2, N-type (female)	2, RP-SMA-K (female)
5GHz Antenna	2, N-type (female)	2, RP-SMA-K (female)
Antenna Gain	Omnidirectional antenna: 5dBi/ 8dBi Directional antenna: 14dBi	Omnidirectional antenna: 5dBi
Console Port	1	/
Serial Port	/	1 RS-232/485/422, DB9 Male
WLAN Feature		
WLAN Standard	IEEE802.11 a/b/g/n/ac, IEEE802.11i, IEEE802.11r, IEEE802.11e	IEEE802.11a/b/g/n, IEEE802.11i, IEEE802.11r, IEEE802.11e
Modulation	802.11ac: OFDM (BPSK/ QPSK/ 16QAM/ 64QAM) 802.11a/g/n: OFDM (BPSK/ QPSK/ 16QAM/ 64QAM) 802.11b: DSSS (DBPSK/ DQPSK/ CCK)	802.11ac: OFDM (BPSK/ QPSK/ 16QAM/ 64QAM) 802.11a/g/n: OFDM (BPSK/ QPSK/ 16QAM/ 64QAM) 802.11b: DSSS (DBPSK/ DQPSK/ CCK)
Frequency Band	2.4GHz: FCC: 2.412~2.462GHz, ETSI: 2.412~2.472GHz 5GHz: FCC: 5.180~5.240GHz, 5.745~5.825GHz, ETSI: 5.180~5.700GHz	2.4GHz: FCC: 2.412~2.462GHz, ETSI: 2.412~2.472GHz 5GHz: FCC: 5.180~5.240GHz, 5.745~5.825GHz, ETSI: 5.180~5.700GHz
Operating Channels	2.4GHz: FCC: 1~11 Channels, ETSI: 1~13 Channels 5GHz: FCC: 36, 40, 44, 48, 149, 153, 157, 161, 165 (9 Channels) ETSI: 36, 40, 44, 48, 100, 104, 108, 112, 116, 132, 136, 140 (12 Channels) 5GHz channel list may vary in different countries depending on their regulations.	2.4GHz: FCC: 1~11 Channels, ETSI: 1~13 Channels 5GHz: FCC: 36, 40, 44, 48, 149, 153, 157, 161, 165 (9 Channels) ETSI: 36, 40, 44, 48, 100, 104, 108, 112, 116, 132, 136, 140 (12 Channels) 5GHz channel list may vary in different countries depending on their regulations.
Max. Transmit Power (dBm)	20dBm	20dBm
Maximum Wireless Throughput	1167Mbps	300Mbps
WAN Type	Static IP, Dynamic IP, PPPoE	/
Wireless Modes	Router, AP, Bridge, Client, Dual-link	Bridge mode (connection: WDS bridge, universal bridge; point-to-point, roaming) Client mode (connection: WDS bridge, universal bridge, wireless NAT; point-to-point, roaming)
Channel Width	2.4GHz: 20MHz, 40MHz; 5GHz: 20MHz, 40MHz, 80MHz	/
Max. SSIDs	8 (4 per radio)	/
Max. Wireless Clients	100	/
Wireless QoS	Wi-Fi Multimedia (WMM)	Wi-Fi Multimedia (WMM)

Serial Feature		
Operating Mode	/	RealCom Mode、TCP Server Mode、TCP Client Mode、
Standard	/	UDP Server Mode、UDP Client Mode RS-232/422/485
Baud Rate	/	300bps~115200bps
Serial Connector	/	Terminal Block
Security		
Encryption Type	WPA/WPA2 (CCMP/AES, TKIP/AES) WPA2/WPA3(CCMP/AES)	WPA/WPA2 (CCMP/AES, TKIP/AES) WPA2/WPA3(CCMP/AES)
Firewall (Route Mode)	IP filtering, MAC filtering, URL filtering, port forwarding, ARP binding, DMZ setting	IP filtering, MAC filtering, URL filtering, port forwarding, ARP binding, DMZ setting
Management		
Device Management	Web, SSH, SNMP, AC Management	Web, SNMP, AC Management
Power Supply		
Input Voltage	48VDC PoE Input	12~36VDC
Power Redundancy	Single power supply	Single power supply
Power Connector	RJ45	Terminal Block
Environmental Limit		
Operating Temperature	-40~75℃(-40~167℉)	-40~75℃(-40~167℉)
Storage Temperature	-40~85℃ (-40~185℉)	-40~85℃ (-40~185℉)
Relative Humidity	5% ~ 95% (no condensation)	5% ~ 95% (no condensation)
Physical Characteristic		
Housing	Metal, IP68	Metal, IP30
Installation	Wall/Pole mounting	DIN-Rail mounting
Dimension		
Size(W*H*D)	275mm×76mm×245mm	26mm×114mm×77mm
Certification		
Certification	CE, FCC, RoHS	
Warranty	5 years	5 years

4G INDUSTRIAL ROUTER

IRT5300L

Product Orientation	Wireless Router
Interface	
WAN Port, RJ45	1
LAN Port, RJ45	4
Rate of Ethernet	10/100Base-T(X)
WLAN Antenna	2, RP-SMA-K (female)
WLAN Antenna Gain	Omnidirectional antenna: 5dBi
Cellular Antenna	2, SMA-K (female)
Cellular Antenna Gain	/
SIM	2, Micro SIM
Console	1, RS-232 (TxD, RxD, GND), 8-pin RJ45 (115200, n, 8, 1)
Serial Port	2
IO Port	1, DI
Cellular Feature	
Cellular Standards	3G/4G cellular network, LTE FDD/ LTE TDD/ WCDMA/ TD-SCDMA/ HSPA/ CDMA/ EVDO
Band Options	EU: FDD LTE B1/B3/B5/B7/B8/B20 (2100/1800/850/2600/900/800) TDD LTE B38/B40/B41 (2600/2300/2500) WCDMA B1/B5/B8 (2100/850/900) GSM/EDGE B3/B8 (1800/900) US: FDD LTE B2/B4/B12 (1900/AWS1700/700) WCDMA B2/B4/B5 (1900/AWS1700/850)
Cellular Bandwidth	TDD-LTE: Rel 9 Cat4 TDD-LTE 112Mbps/30Mbps FDD-LTE: Rel 9 Cat4 FDD-LTE 150Mbps/50Mbps UMTS: 384kbps/384kbps EVDO RevA: 3.1Mbps/1.8Mbps TD- SCDMA: 2.8Mbps/2.2Mbps CDMA 1x: 153.6kbps/153.6kbps GPRS: 85.6kbps/85.6kbps
WLAN Feature	
WLAN Standard	IEEE802.11 a/b/g/n, IEEE802.11i, IEEE802.11r
Modulation	802.11ac: OFDM (BPSK/ QPSK/ 16QAM/ 64QAM) 802.11a/g/n: OFDM (BPSK/ QPSK/ 16QAM/ 64QAM) 802.11b: DSSS (DBPSK/ DQPSK/ CCK)
Frequency Band	2.4GHz: FCC: 2.412~2.462GHz, ETSI: 2.412~2.472GHz
Operating Channels	2.4GHz: FCC: 1~11 Channels, ETSI: 1~13 Channels
Max. Transmit Power (dBm)	20dBm
Maximum Wireless Throughput	300Mbps
WAN Type	Static IP, Dynamic IP, PPPoE, 3/4G
Channel Width	2.4GHz: 20MHz, 40MHz

Serial Feature	
Operating Mode	RealCom Mode、TCP Server Mode、TCP Client Mode、UDP Server Mode、UDP Client Mode
Standard	RS-232/485
Baud Rate	300bps~115200bps
Serial Connector	Terminal Block
ManagementS&ecurity	
Device Management	Web, SSH, SNMP
Network Management	Port Forwarding , Port Redirection, DMZ, UPnP, Static DHCP
Firewall	IP Filtering, MAC Filtering, URL Filtering and Keyword Filtering
VPN Tunnel	GRE, PPTP Client/Server, L2TP Client/Server, IPSec
Routing	VRRP, RIP, OSPF
Power Supply	
Input Voltage	12~48VDC
Power Redundancy	Dual power supply
Power Connector	Terminal Block
Environmental Limit	
Operating Temperature	-40~75℃(-40~167℉)
Storage Temperature	-40~85℃ (-40~185℉)
Relative Humidity	5% ~ 95% (no condensation)
Physical Characteristic	
Housing	Metal, IP68
Installation	Wall/Pole mounting
Dimension	
Size(W*H*D)	40.6mm x 103mm x 78 mm
Certification	
Certification	CE, FCC, RoHS
Warranty	5 years

5G CPE

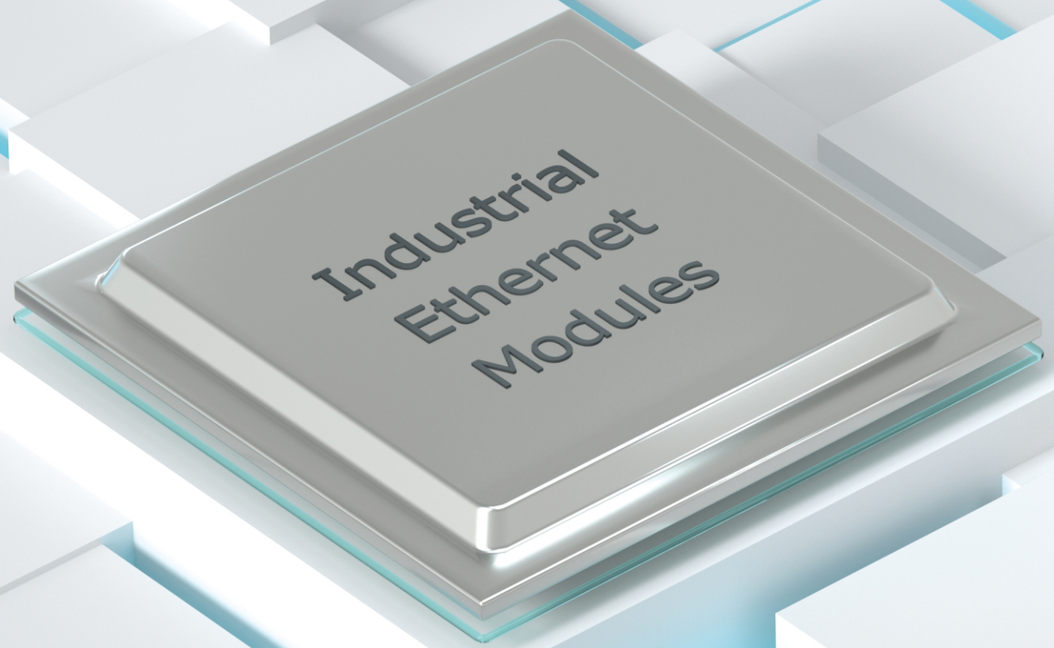
ICPE2600 Series

ICPE2300 Series

Product Orientation	Outdoor industrial CPE	Indoor industrial CPE
Interface		
WAN Port, RJ45	1, with PD feature	1, with PD feature
LAN Port, RJ45	1	3
Rate of Ethernet	10/100/1000Base-T(X)	10/100/1000Base-T(X)
WLAN Antenna	2.4GHz: 2, N-type (female) 5GHz: 2, N-type (female)	2.4GHz: 2, RP-SMA-K (female) 5GHz: 2, RP-SMA-K (female)
WLAN Antenna Gain	Omnidirectional antenna: 5dBi/ 8dBi Directional antenna: 14dBi	Omnidirectional antenna: 5dBi/ 8dBi Directional antenna: 14dBi
Cellular Antenna	4, Sub-6G N-type (female)	4, Sub-6G SMA-K (female)
Cellular Antenna Gain	5G Sub-6G (3dBi), 5G Sub-6G (5dBi)	5G Sub-6G (3dBi), 5G Sub-6G (5dBi)
SIM	2, 1*Micro SIM, 1*Nano SIM	2, 1*Micro SIM, 1*Nano SIM
Cellular Feature		
Cellular Standards	5G NR/LTE FDD/ LTE TDD/ WCDMA/ TD-SCDMA/ HSPA/ CDMA/ EVDO	
Band Options	Qualcomm Module: 5G NR: n1/n2/n3/n5/n7/n8/n12/n20/n28/n38/n40/n41/n48/n66/n71/n77/n78/n79 4G LTE-FDD: B1/B2/B3/B4/B5/B7/B8/B9/B12/B13/B14/B17/B18/B19/B20/B25/B26/B28/B29/B30/B32/B66/B71 4G LTE-TDD: B34/B38/39/B40/B41/B42/B48 3G WCDMA: B1/B2/B3/B4/B5/B6/B8/B19 HUAWEI Module: 5G NR: n78/n79/n41 4G LTE: B1/B3/B5/B8/B34/B38/B39/B40/B41 3G WCDMA: B1/B8	
Cellular Bandwidth	Qualcomm Module: 5G SA: DL 2.1Gbps; UL 900Mbps 5G NSA: DL 2.5Gbps; UL 650Mbps LTE: DL 1Gbps; UL 200Mbps WCDMA: DL 42Mbps; UL 5.76Mbps HUAWEI Module: 5G NR: DL 2Gbps; UL 230Mbps LTE-TDD: DL 1Gbps; UL 30Mbps LTE-FDD: DL 600Mbps; UL 75Mbps 3G (DC-HSPA+) : DL 42Mbps; UL 5.76Mbps 3G (HSPA+) : DL 21Mbps; UL 5.76Mbps	

WLAN Feature		
WLAN Standard	IEEE802.11a/b/g/n, IEEE802.11i, IEEE802.11r, IEEE802.11e	
Modulation	802.11ac: OFDM (BPSK/ QPSK/ 16QAM/ 64QAM) 802.11a/g/n: OFDM (BPSK/ QPSK/ 16QAM/ 64QAM) 802.11b: DSSS (DBPSK/ DQPSK/ CCK)	
Frequency Band	2.4GHz: FCC: 2.412~2.462GHz, ETSI: 2.412~2.472GHz 5GHz: FCC: 5.180~5.240GHz, 5.745~5.825GHz, ETSI: 5.180~5.700GHz	
Operating Channels	2.4GHz: FCC: 1~11 Channels, ETSI: 1~13 Channels 5GHz: FCC: 36, 40, 44, 48, 149, 153, 157, 161, 165 (9 Channels) ETSI: 36, 40, 44, 48, 100, 104, 108, 112, 116, 132, 136, 140 (12 Channels) 5GHz channel list may vary in different countries depending on their regulations.	
Max. Transmit Power (dBm)	20dBm	
Maximum Wireless Throughput	1167Mbps	
WAN Type	Static IP, Dynamic IP, PPPoE, 5G	
Channel Width	2.4GHz: 20MHz, 40MHz; 5GHz: 20MHz, 40MHz, 80MHz	
ManagementS&ecurity		
Device Management	Web, SSH, SNMP	
Network Management	Port Forwarding , Port Redirection, DMZ, UPnP, Static DHCP	
Firewall	IP Filtering, MAC Filtering, URL Filtering and Keyword Filtering	
VPN Tunnel	GRE, PPTP Client/Server, L2TP Client/Server, IPSec	
Routing	VRRP, RIP, OSPF	
Power Supply		
Input Voltage	12~48VDC, 48VDC PoE Input	
Power Redundancy	Single power supply	
Power Connector	Terminal Block, Rj45	
Environmental Limit		
Operating Temperature	-40~75℃(-40~167℉)	
Storage Temperature	-40~85℃ (-40~185℉)	
Relative Humidity	5% ~ 95% (no condensation)	
Physical Characteristic		
Housing	Metal, IP68	Metal, IP40
Installation	Wall/Pole mounting	DIN-Rail mounting
Dimension		
Size(W*H*D)	275mm×76mm×245mm	88mm×150mm×135mm
Certification		
Certification	CE, FCC, RoHS	
Warranty	5 years	

INDUSTRIAL ETHERNET MODULE



INDUSTRIAL SWITCH MODULE

IEM7128G Series

IEM7112G Series

IEM7110-3G Series

Interface			
Gigabit Optic Port, 1000Base-FX	4	4	3 (Optic and copper port optional)
Gigabit Copper Port, 10/100/1000Base-T(X)	16	8	
QSGMII Port	8	/	/
Fast Optic Port, 100Base-FX	/	/	7 (Optic and copper port optional)
Fast Copper Port, 10/100/1000Base-T(X)	/	/	
Switch Property			
1000M Forwarding Rate	1488100pps	1488100pps	1488100pps
100M Forwarding Rate	/	/	148810pps
Throughput	95.23Mpps@64 bytes	17.86Mpps@64 bytes	5.51Mpps@64 bytes
Transmit Mode	Store and Forward	Store and Forward	Store and Forward
DRAM	1Gb	512Mb	512K
Flash	256Mb	128Mb	2M
Buffer	12Mbits	4Mbits	1Mbit
Switching Fabric Capacity	56G	24G	7.6G
MAC Address Table	16K	8K	8K
Jumbo Frame Size	16K	16K	/
Layer2 Feature			
Unicast / Multicast	Static Multicast, GMRP, IGMPv1/v2		
Redundancy Protocols	SW-Ring (Recovery Time ≤ 20ms), STP/RSTP/MSTP, ERPSv1/v2		SW-Ring (Recovery Time ≤ 20ms), STP/RSTP
LACP	Max. 16 groups, Max. 8 ports within one group Load Balance: Src Mac, Dst Mac, Src&Dst Mac		Max. 2 groups, Max. 10 ports within one group
VLAN	Port-based Maximum active VLANs: 4094, VLAN IDs available: 1-4094		Port-based Maximum active VLANs: 64, VLAN IDs available: 1-4094
Management & Security			
Device Management	Web, Console, Telnet, SSH, SNMPv1/v2c/v3, ROMN		Web, Console, Telnet, SNMPv1/v2c
Time Management	NTP Client		SNTP
ACL	IP-based ACL, MAC-based ACL, Max. 2048 ACL entries	IP-based ACL, MAC-based ACL, Max. 512 ACL entries	/
QoS	Best-Effort, Int-Serv, Diff-Serv CoS: 8 ToS: 8 DSCP: 64		Strict, Weighted Fair (8:4:2:1) CoS: 8 ToS: 8 DSCP: 64
Port Mirror	Max. 4 groups, TX/ RX/ Both, many-to-1 monitor		Max. 1 groups, TX/ RX/ Both, many-to-1 monitor
Power Supply			
Input Voltage	3.3V (±5%)	3.3V (±5%)	3.3V (±5%)
Power Consumption	< 12W@3.3VDC	< 6.6W@3.3VDC	< 3W@3.3VDC
Environmental Limit			
Operating Temperature	-40~75℃(-40~167℉)	-40~75℃(-40~167℉)	-40~75℃(-40~167℉)
Storage Temperature	-40~85℃ (-40~185℉)	-40~85℃ (-40~185℉)	-40~85℃ (-40~185℉)
Relative Humidity	5% ~ 95% (no condensation)	5% ~ 95% (no condensation)	5% ~ 95% (no condensation)
Installation			
DIP Connector	2*50, Pin Pitch: 1.27mm	2*32, Pin Pitch: 2mm	2*25, Pin Pitch: 2mm
Dimension			
Size(W*H*D)	90mm×72mm×14.6mm	90mm×72mm×14.6mm	72mm×8.9mm×54mm
Certification			
Certification	CE, FCC, RoHS		
Warranty	5 years	5 years	5 years

SERIAL DEVICE SERVER MODULE

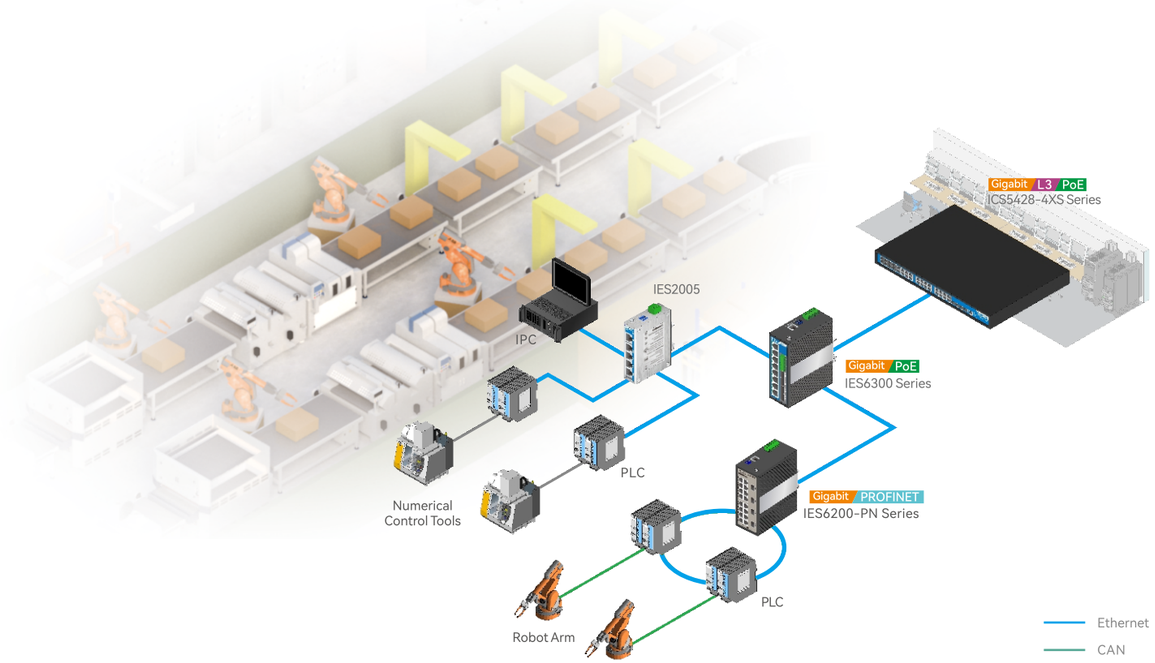
NPM301

Ethernet Interface	
10/100Base Port	1
Serial Interface	
TTL Ports	1 Port
Signals	TXD,RXD,DTR,DSR,CTS,RTS,GND
Baudrate	Data Bits: 5, 6 , 7 , 8, Stop Bits: 1, 1.5, 2, Parity: None, Even, Odd, Space, Mark
Serial Parameters	RTS/CTS,or No flow control
Flow Control	300bps~115200bps
Network Management and Control	
Protocol	TCP, UDP, ARP, ICMP,DHCP, DNS
Setting Way	WEB/serial/telnet
Serial Command	support
Real Com Driver	Win2000, WinXP, Win2003, Vista, Server2008, Win7, Win8
Operation Mode	TCP server/client, TCP auto, UDP, real com driver
Power Supply	
Input Voltage	3.3V (±5%)
Power Consumption	≤0.41
Working Environment	
Storage Temperature	-40~75℃(-40~167℉)
Working Temperature	-40~85℃ (-40~185℉)
Relative Humidity	5% ~ 95% (no condensation)
Installation	
DIP Connector(double row)	2*50+1*32, Pin pitch: 2mm
Dimension	
Size(W*H*D)	32.5mm×13.8mm×25mm
Certification	
Certification	CE, FCC, RoHS
Warranty	3 years

VERTICAL MARKET SOLUTION

INDUSTRIAL AUTOMATION SOLUTION

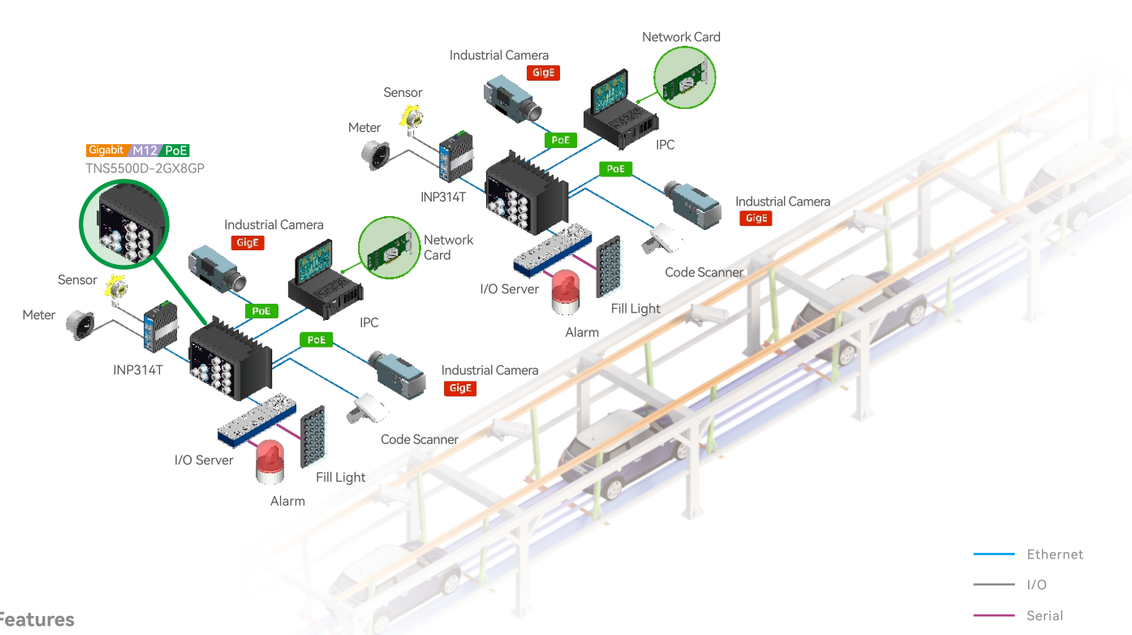
Intelligent Assembling System



Features

- Ultra low latency, commands can be transmitted immediately
- Profinet networking prioritizes transmission of critical data

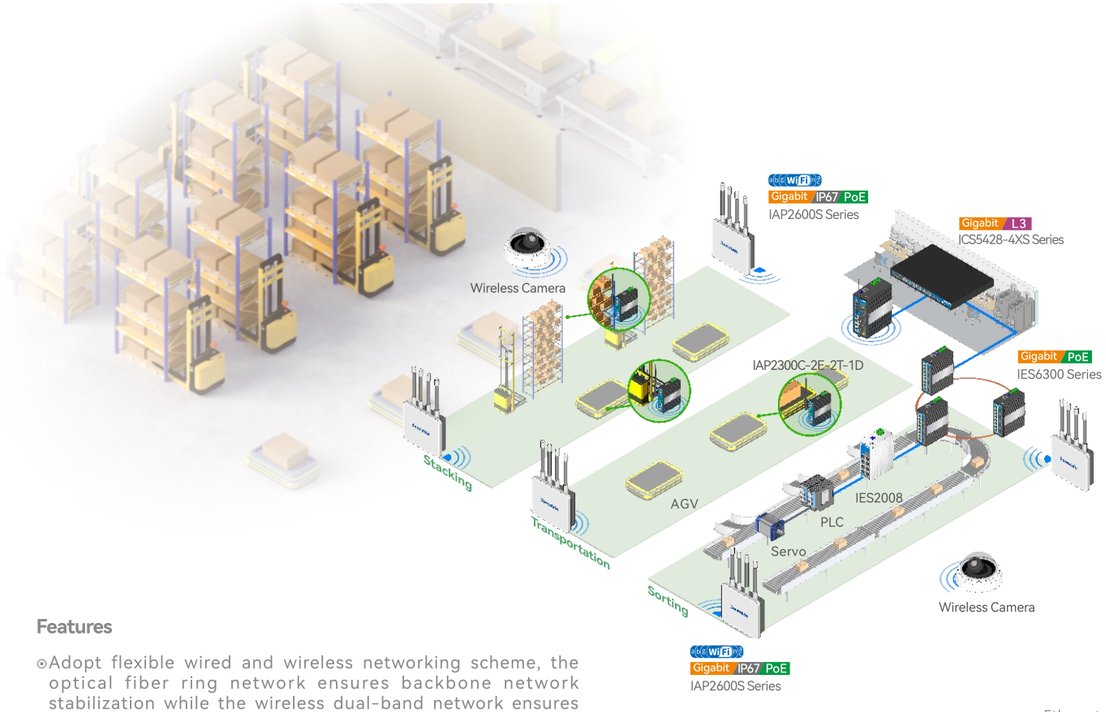
Machine Vision System



Features

- Precise localization plus intelligent vision recognition ensure real-time identification and object tracking
- Excellent data exchange ability can coordinate various equipment on the production line
- 10 Gigabit high bandwidth ensures smooth transmission of heavy traffic data

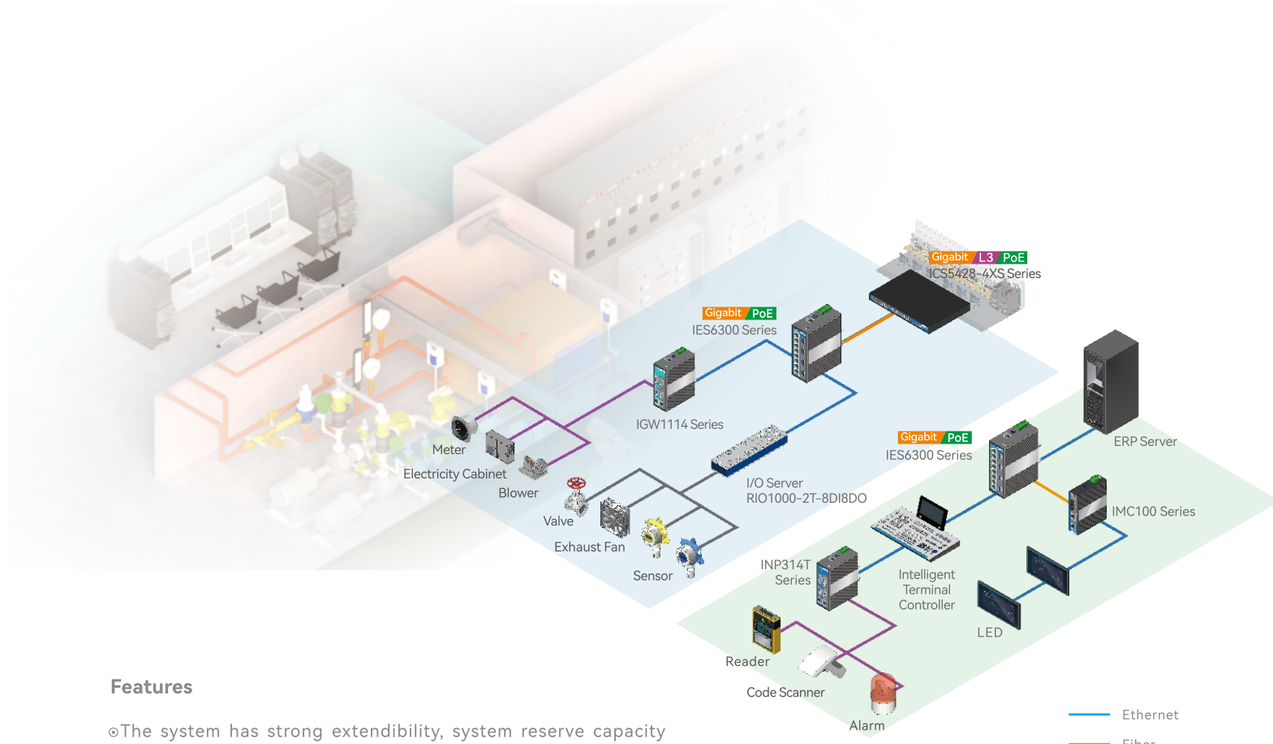
Intelligent Warehousing System



Features

- Adopt flexible wired and wireless networking scheme, the optical fiber ring network ensures backbone network stabilization while the wireless dual-band network ensures seamless communication of data
- Industrial grade design provides stable communication for piler, AGV and other equipment
- Low-power dissipation and compact design meets the demand of mobile application

Manufacturing Execution System



Features

- The system has strong extendibility, system reserve capacity can be expanded and upgraded to ensure flexible data acquisition
- Rich management functions allow remote management and real time control of factory energy administration and manufacturing process
- Industrial grade design ensures the stability and reliability of network in harsh environments

Key Products

ICS6420 Series

20-Port 10G L3 Industrial Ethernet Switch

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TNS5500D Series

10-port 10G Unmanaged PoE Ethernet Switch

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IES6300 Series

10/12-Port Gigabit L2 Industrial Ethernet Switch(Optional PoE or I/O)

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IES2005/2008

5/8-port 100M Unmanaged Industrial Ethernet Switch

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NP301 Series

1-port RS-232/485/422 Serial Device Server

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GW1101 Series

1-port RS-232/485/422 to Ethernet Modbus Gateway

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IRT5300 Series

Industrial-grade 4G Router

IAP2300C Series

Industrial Wireless AP

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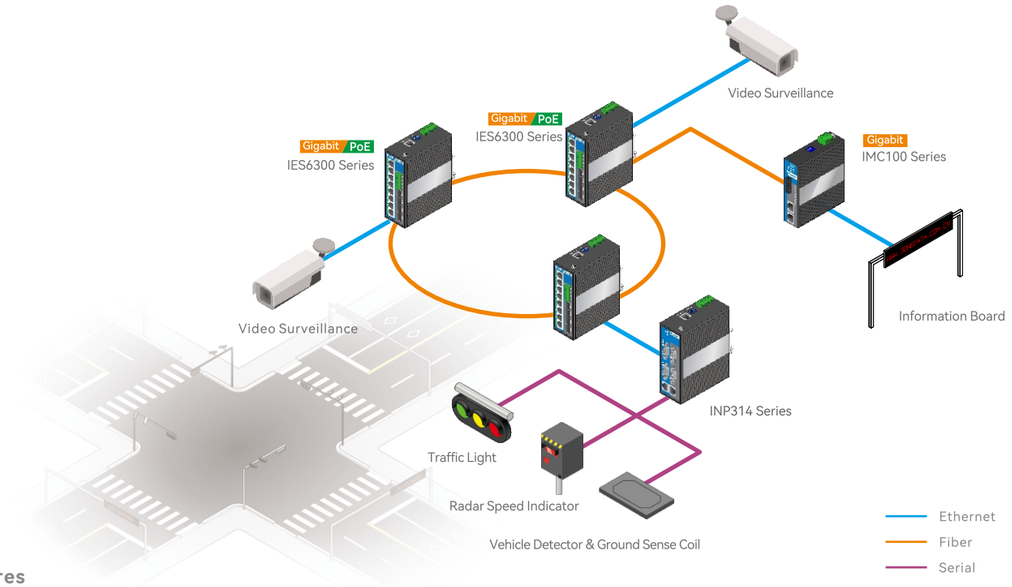
TRANSPORTATION SOLUTION

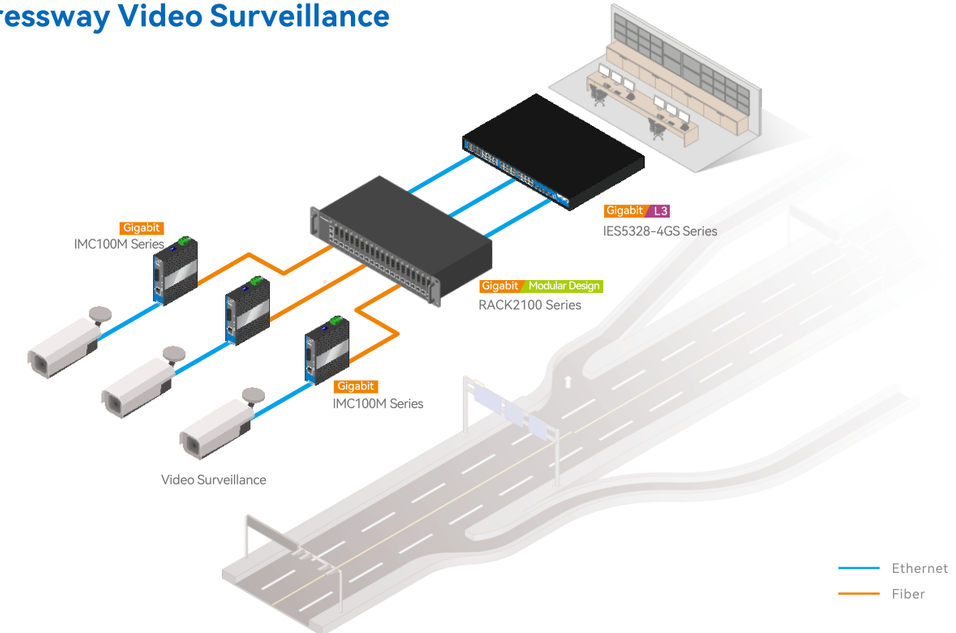
Vehicle Violation Monitoring



Features

- Full Gigabit redundant Ethernet solution ensures the fluency of HD videos, the stability and real time of network
- Use VLAN, IGMP, flow control and other management functions to ensure efficient transmission of videos
- PoE (Power over Ethernet) reduces cabling requirements and installation costs

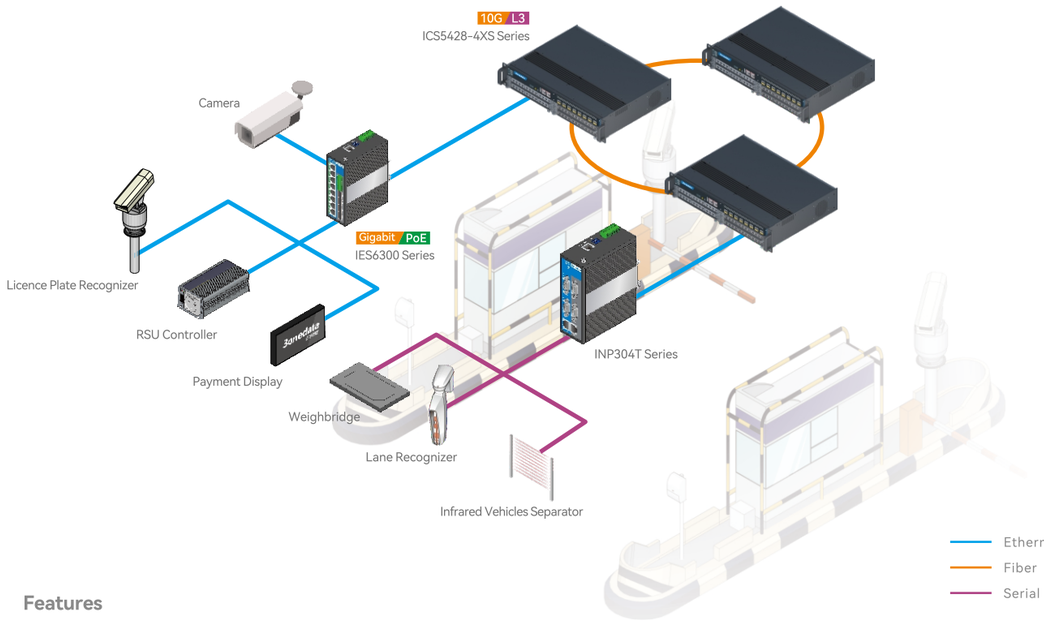
Expressway Video Surveillance



Features

- Industrial-grade media converters can transmit distributed monitoring information back to the data center
- Rich management functions to manage the network device along the expressway efficiently
- Industrial grade design ensures the stability and reliability of long-distance data transmission in harsh environments

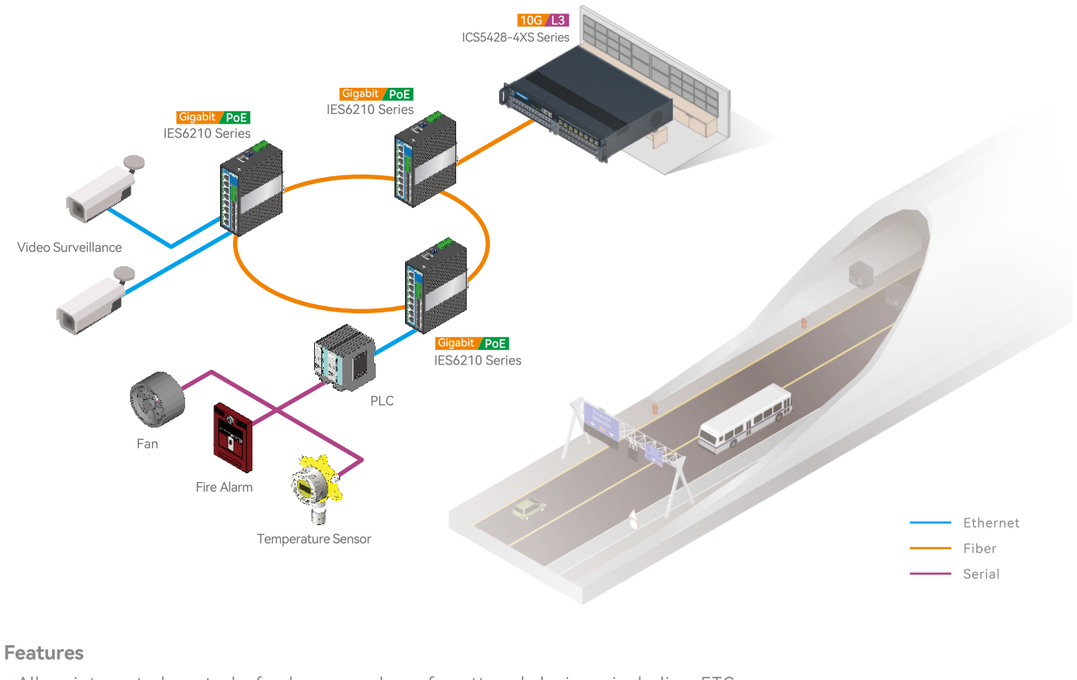
Expressway Bayonet System



Features

- Allow integrated control of a large number of scattered devices, including ETC, camera and computer
- Adopt simple ring network topology to make it convenient for site operation and maintenance, reducing manpower cost
- Industrial grade design ensures the stability of system in harsh environments

Expressway Tunnel Integration Supervision System



Features

- Allow integrated control of a large number of scattered devices, including ETC, camera and computer
- Adopt simple ring network topology to make it convenient for site operation and maintenance, reducing manpower cost
- Industrial grade design ensures the stability of system in harsh environments

Key Products

IES6300 Series
10/12-Port Gigabit L2 Industrial Ethernet Switch(Optional PoE or I/O)

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ICS5556 Series
56-Port 10G Modular L3 Industrial Ethernet Switch

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IES6210 Series
6/10-port 100M/Gigabit L2 Industrial PoE Ethernet Switch

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IMC100 Series
2-port Full Gigabit Unmanaged Industrial Media Converter

▸Page 45

INP314 Series
4 RS-232/485/422 to 2 100M Ethernet Ports Serial Server

NP304T Series
4-port RS-232/485/422 Serial Device Server

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RACK2100 Series
18-Slot Card Industrial Media Converter Rack

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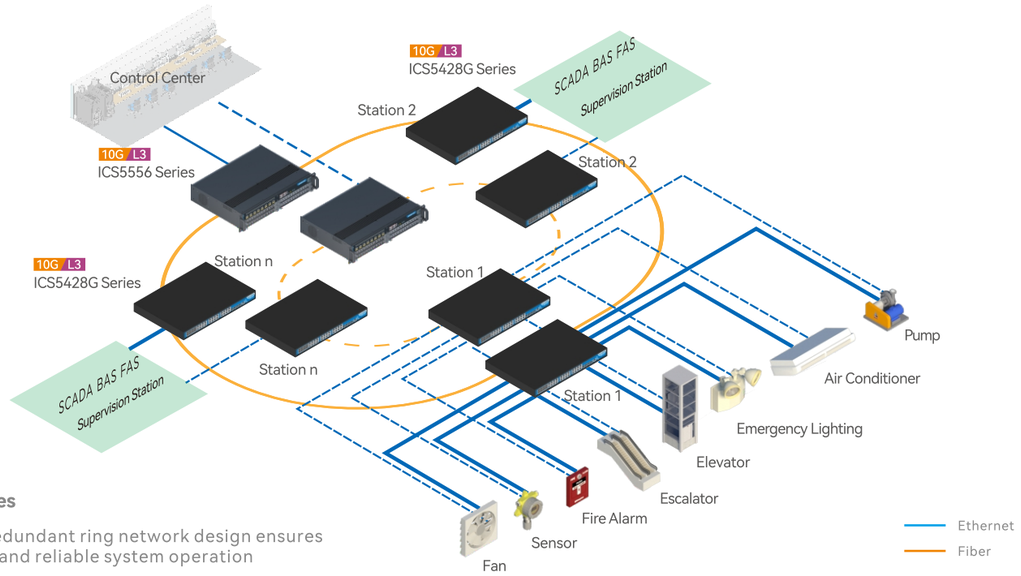
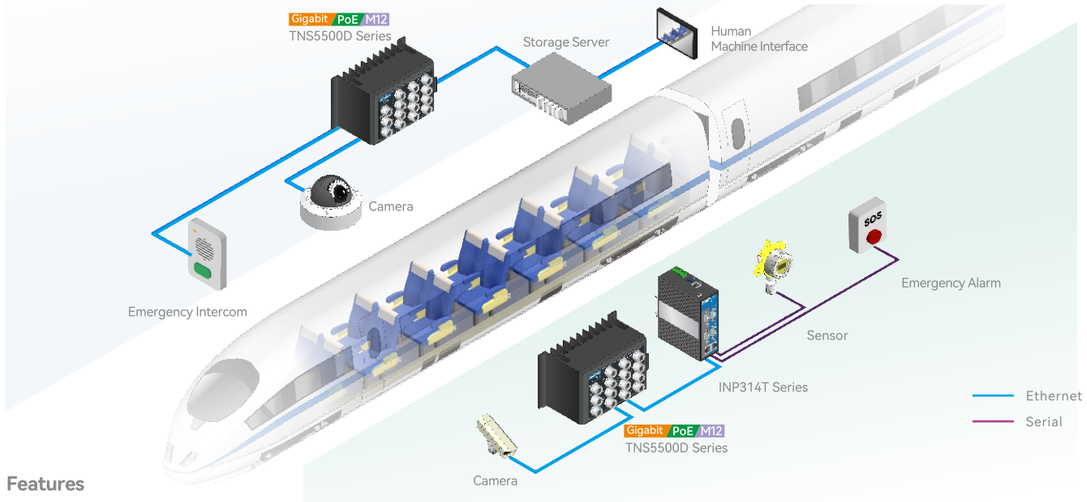
ISCS (Integrated Supervisory and Control System)



Features

- Dual redundant ring network design ensures stable and reliable system operation
- RIP, OSPF and BGP routing protocols, automatic route management simplifies maintenance for network administrator

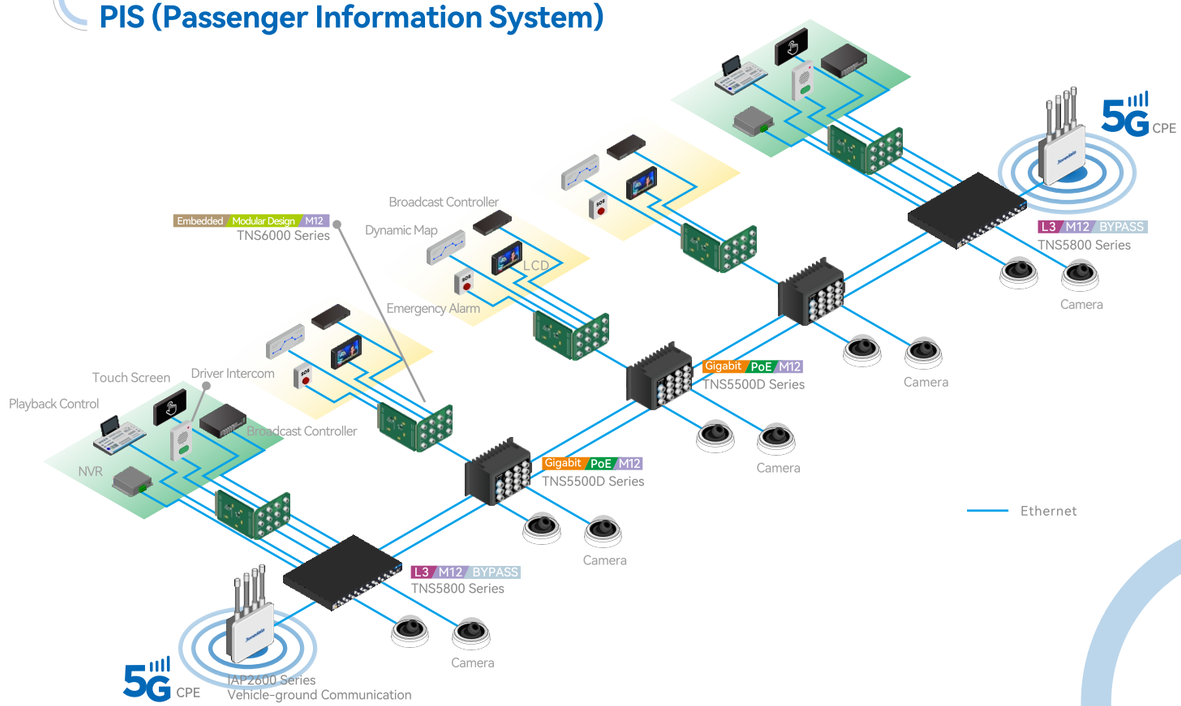
On-board Monitoring System & Emergency Alert System



Features

- Vehicle surveillance video can be transmitted stably and timely
- Adopt multi-port serial device server to let multiple types and a large number of serial devices connected easily

PIS (Passenger Information System)



Features

- Regular product and 3U embedded PCB are available for users' choice
- The solution has been designed to conform to the requirements of anti-vibration and shock
- PoE ports power devices via RJ45 Ethernet cables to simplify field wiring
- Static AGGR plus bypass technology ensure the stable of onboard network

Key Products

ICS5428 Series
28-port 10G L3
Industrial Ethernet Switch

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IES6220 Series
20-port Gigabit L2
Industrial PoE Ethernet Switch

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TNS5500D Series
10-port 10G Unmanaged PoE
Ethernet Switch

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TNS5800D Series
12/20-Port L3 Industrial Ethernet
Switch for Rail Transit

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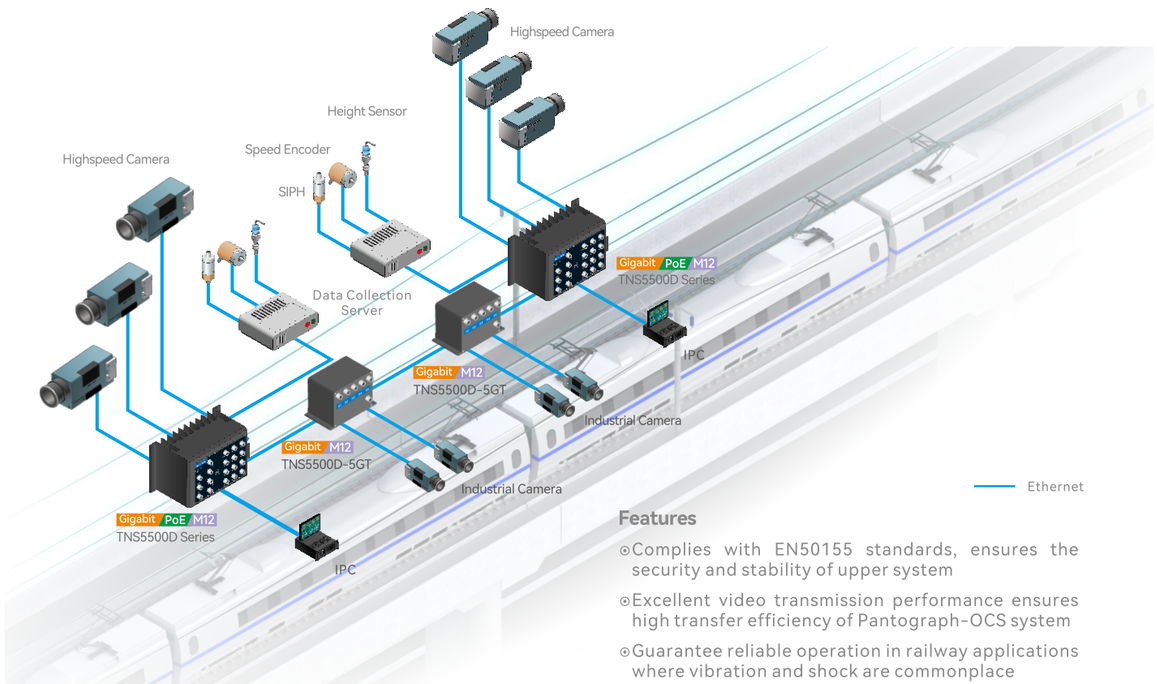
TNS5800 Series
12/20-Port L3 Industrial Ethernet
Switch for Rail Transit

INP314 Series
4 RS-232/485/422 to 2 100M
Ethernet Ports Serial Server

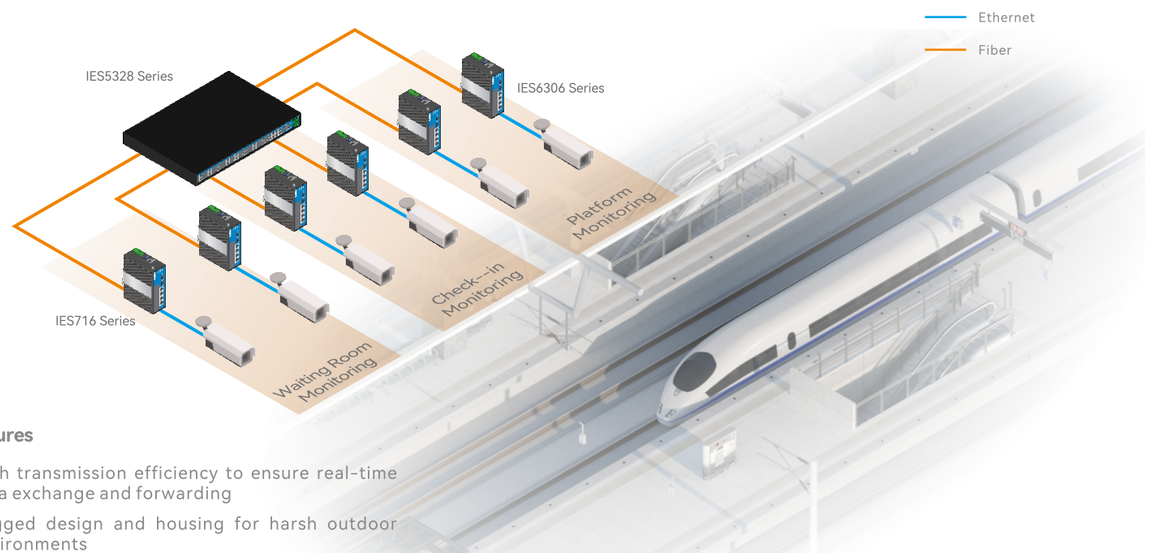
HSR Power Supply Security Monitoring System



Features

- Complies with EN50155 standards, ensures the security and stability of upper system
- Excellent video transmission performance ensures high transfer efficiency of Pantograph-OCS system
- Guarantee reliable operation in railway applications where vibration and shock are commonplace

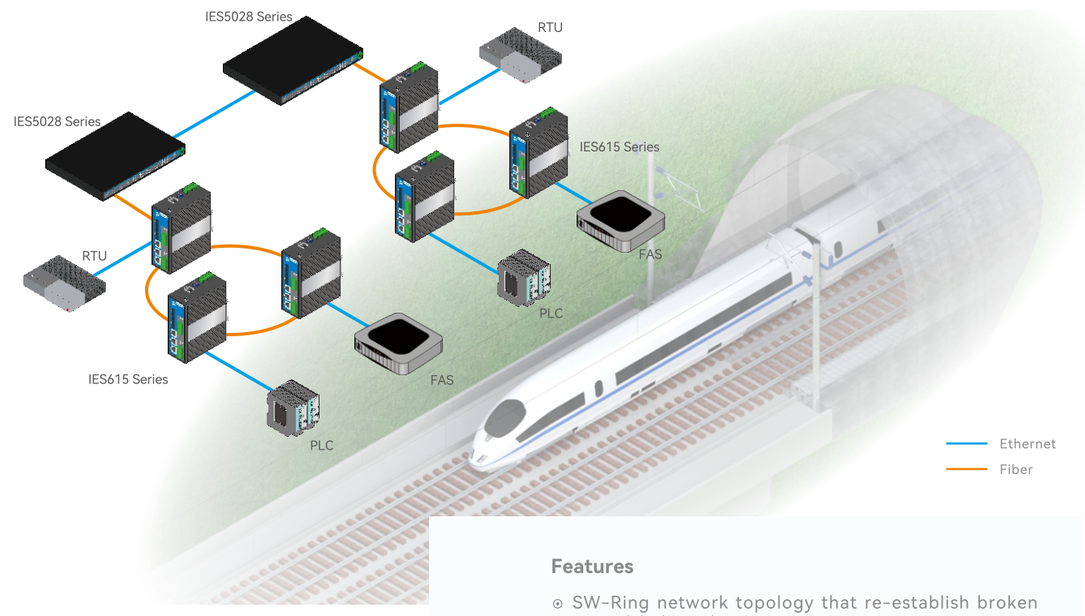
HSR Station Monitoring System



Features

- High transmission efficiency to ensure real-time data exchange and forwarding
- Rugged design and housing for harsh outdoor environments

Railway Tunnel Monitoring System



Features

- SW-Ring network topology that re-establish broken network links within 20ms
- Use VLAN segments to set isolation between different data in order to control traffic broadcast, enhance performance, and reinforce security access
- Photoelectric isolation helps eliminate interference signal and ensure data transmission security

Key Products

TNS5500D Series
10-port 10G Unmanaged PoE Ethernet Switch

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IES5328 Series
16-port Gigabit L2 Industrial Ethernet Switch

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IES5028 Series
28-port Gigabit L2 Industrial Ethernet Switch

IES615 Series
6-port L2 Industrial Ethernet Switch with 2 3IN1 Isolated Serial Ports

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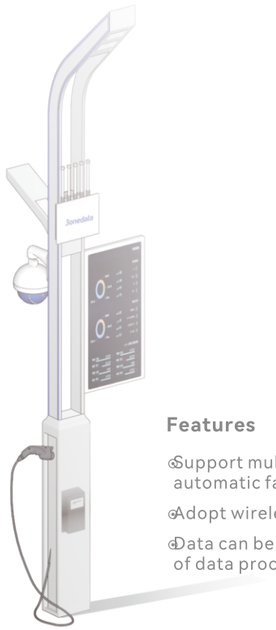
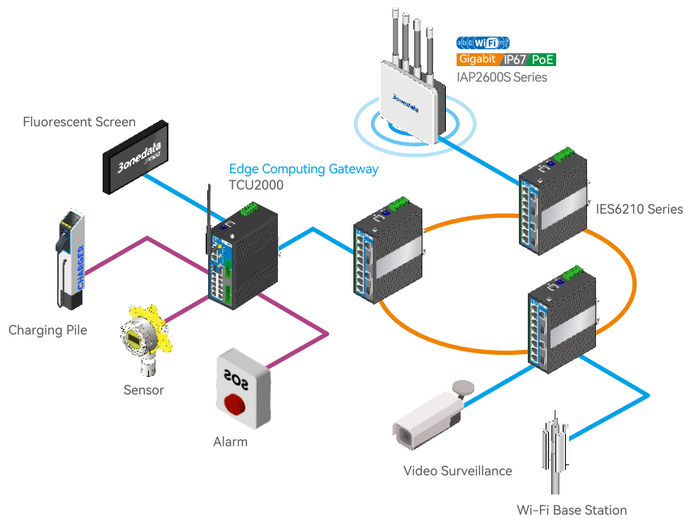
SECURITY SOLUTION

Intelligent Lamp Pole



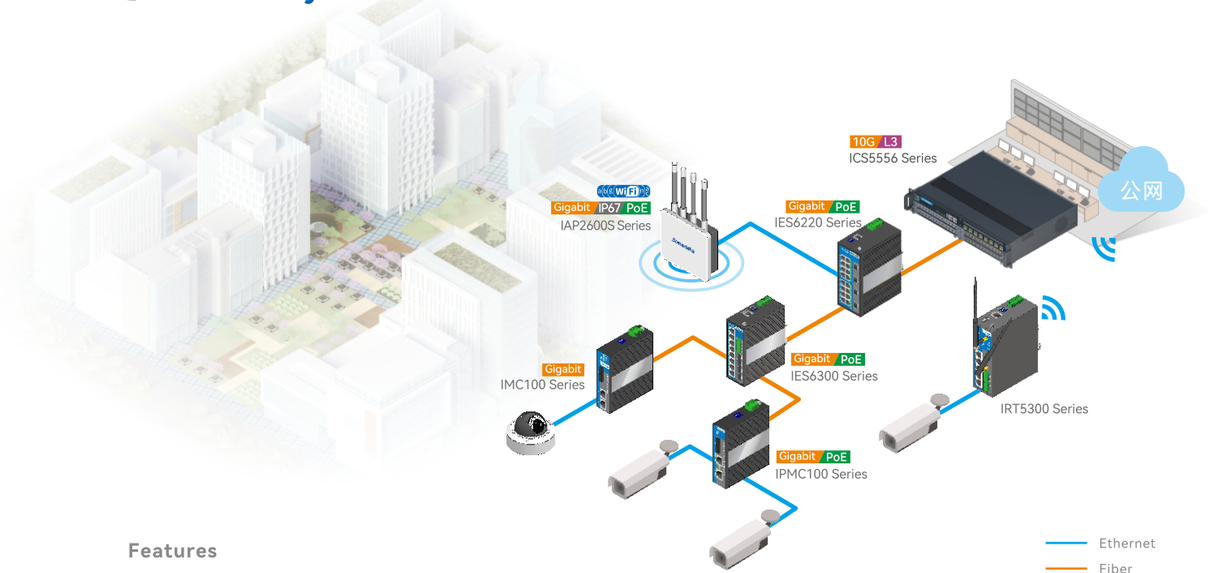


Features

- Support multiple ring network architectures and millisecond automatic fault recovery to fit complex network
- Adopt wireless coverage for remote control and stable transmission
- Data can be processed safely via edge computing, reducing the stress of data processing on core layer

Ethernet
Fiber
Serial

Community Video Surveillance

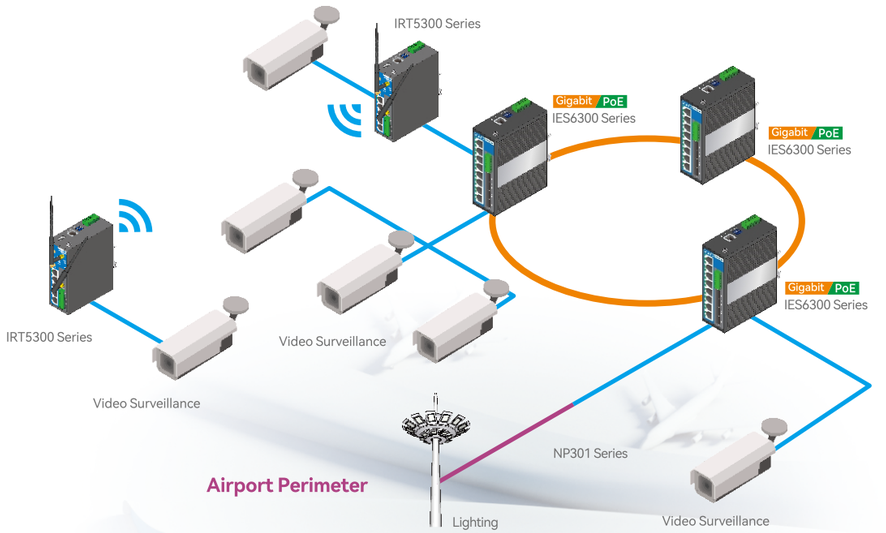


Features

- Use VLAN to isolate disparate business and divide the IP management into separate parts, avoiding mutual interference of data
- Adopt L3 architecture to effectively cover different areas and make maintenance conveniently
- High transmission rate ensures the fluent transmission of HD videos

Ethernet
Fiber

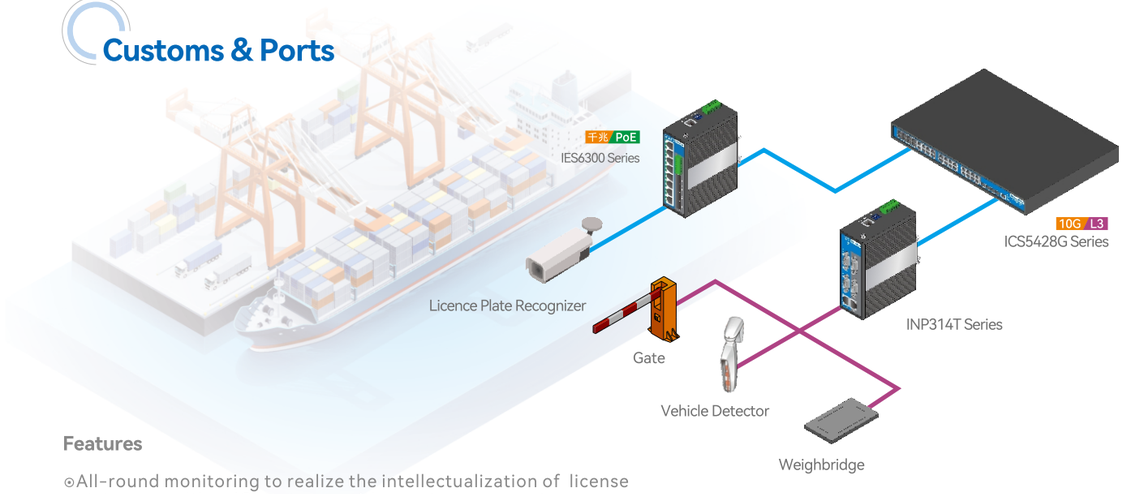
Airport Perimeter Video Surveillance



Features

- Rich management functions to manage the network device along the airport expressway efficiently
- Industrial grade design to withstand electromagnetic environment around the airport
- Gigabit Ethernet solution provides high bandwith and low latency to fit into the deployment of multi-video network

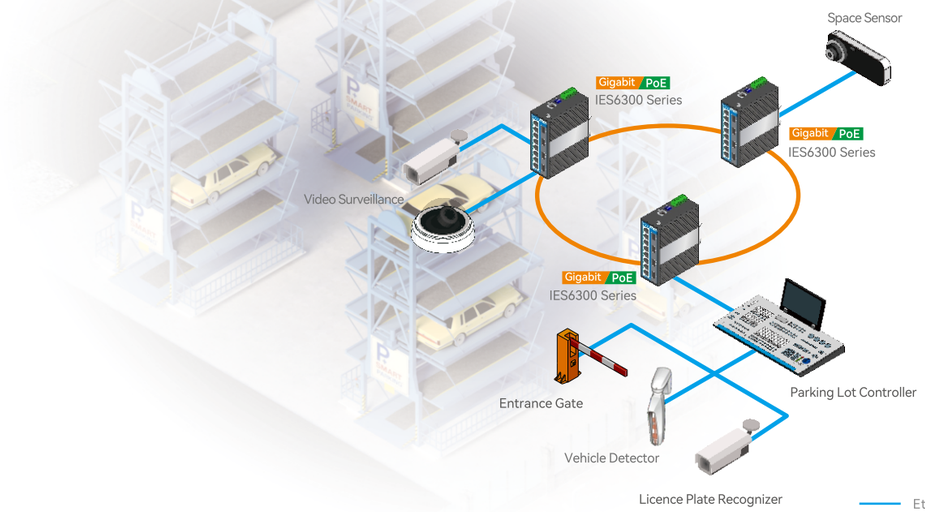
Customs & Ports



Features

- All-round monitoring to realize the intellectualization of license plate recognition, IC card recognition and gate control.
- Support alarm linkage function to real-time alarm and quickly locate the fault address

Intelligent Parking



Features

- Industrial grade design to withstand harsh environments on parking lots
- Gigabit backbone network allows 100+ HDR camera access

Key Products

ICS5556 Series
56-Port 10G Modular L3 Industrial Ethernet Switch

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IES6300 Seires
10/12-Port Gigabit L2 Industrial Ethernet Switch(Optional PoE or I/O)

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IES6210 Seires
6/10-port 100M/Gigabit L2 Industrial PoE Ethernet Switch

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NP301 Seires
1-port RS-232/485/422 Serial Device Server

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NP314T Seires
4-port RS-232/485/422 to 2-port Ethernet Converter

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IAP2600S Seires
Industrial Outdoor Dual-band Wireless AP

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IRT5300L Seires
Industrial-grade 4G Router

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