



# PRODUCT SELECTION GUIDE

## 3ONEDATA CO., LTD.

Add: 3/B, Zone 1, Baiwangxin High Technology Industrial Park,  
Xili Street, Nanshan District, Shenzhen, 518105, China

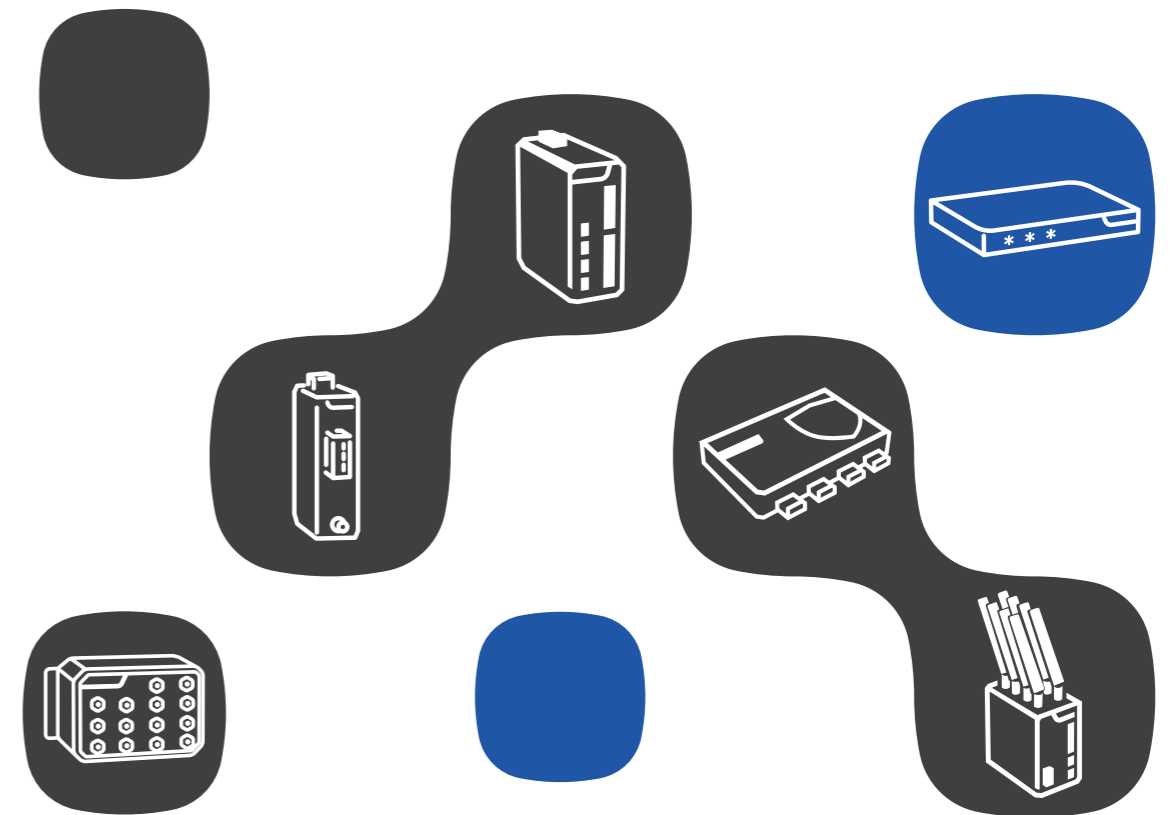
Web: [www.3onedata.com](http://www.3onedata.com)

Tel: +86-755-26702688 ext.826

Email: [marketing@3onedata.com](mailto:marketing@3onedata.com)



Connect on LinkedIn





Zonedata, a leading industrial connectivity brand, pioneered HaaS. Our comprehensive R&D enables a wide range of offerings like industrial ethernet switches, networking, wireless, and automation control systems. These are widely applied in industrial automation and intelligent manufacturing. As the top in industrial communication, we have over 70 million products in global operation. In 2020, we achieved a major milestone by being the first IIoT firm to list on the SSE STAR Market, with Stock Code 688618.

**HEADQUARTERS IN SHENZHEN:**

3/B, Zone 1, Baiwangxin Industrial Park, Songbai Road, Nanshan District, Shenzhen 518105, China

**R&D CENTER IN SHANGHAI:**

Lane No. 58, Sibao Road, Songjiang District, Shanghai, China

**FACTORY IN JIANGXI PROVINCE:**

Yonghao Industrial Park, Chengnan Avenue, Yunshan Economic Development Zone, Yongxiu County, Jiujiang City, Jiangxi Province, China

# CONTENTS

## 01 INDUSTRIAL ETHERNET SWITCHES

- P03 ----- UNIVERSAL MANAGED L3 SWITCH
- P05 ----- UNIVERSAL MANAGED L2 SWITCH
- P12 ----- UNIVERSAL UNMANAGED SWITCH
- P15 ----- TSN & PTP SWITCH
- P16 ----- MANAGED PoE SWITCH
- P19 ----- UNMANAGED PoE SWITCH
- P20 ----- ITxPT SWITCH
- P21 ----- EN50155 SWITCH
- P23 ----- IEC 61850 SWITCH
- P24 ----- PROFINET SWITCH
- P25 ----- EMBEDDED SWITCH MODULE
- P27 ----- MEDIA CONVERTER CHASSIS & CARD
- P29 ----- MEDIA CONVERTER
- P30 ----- NETWORK MANAGEMENT SOFTWARE

## 02 INDUSTRIAL WIRELESS NETWORKING

- P32 ----- WIRELESS AP
- P33 ----- WIRELESS ROAMING CLIENT
- P34 ----- CELLULAR ROUTER

## 03 INDUSTRIAL DEVICE NETWORKING

- P37 ----- SECURE SERIAL DEVICE SERVER
- P38 ----- SERIAL DEVICE SERVER
- P39 ----- MODBUS GATEWAY
- P40 ----- CAN SERVER
- P40 ----- FIELDBUS MODEM
- P41 ----- PROTOCOL GATEWAY
- P43 ----- SERIAL MODEM
- P43 ----- FIELDBUS-TO-FIBER MODEM
- P44 ----- USB-TO-SERIAL CONVERTER
- P44 ----- INTERFACE CONVERTER/HUB/REPEATER

## 04 INDUSTRIAL CONTROL

- P47 ----- ETHERCAT COUPLER
- P47 ----- IO COUPLER
- P48 ----- IO-LINK MASTER
- P49 ----- IO EXPANSION MODULE
- P51 ----- IO-LINK SLAVE
- P53 ----- VERTICAL IO

# INDUSTRIAL ETHERNET SWITCHES



# Universal Managed L3 Switch



	ICS5556 -24GT24GS8XS	ICS5530 -16GS8GC6XS	ICS5428 -16GT8GC4XS	ICS6400 -12GT12GS4XS	ICS6420 -12GT4GS4XS	ICS6420 -8GT8GS4XS
<b>Interface</b>						
Number of Main Ports	56	30	28	28	20	20
10/100/1000Base-T(X) MGMT RJ45	✓	-	-	-	-	-
1G/10GBase-X SFP Slot	8	6	4	4	4	4
1G Combo (RJ45 or SFP)	-	8	8	-	-	-
100/1000Base-X SFP Slot	24	16	-	12	4	8
10/100/1000Base-T(X) RJ45	24	-	16	12	12	8
Console	✓	✓	✓	✓	✓	✓
Relay	✓	✓	✓	✓	✓	✓
<b>Switch Properties</b>						
MAC Address Table	96K	16K	16K	16K	16K	16K
Buffer	32Mbit	16Mbit	12Mbit	12Mbit	12Mbit	12Mbit
Switching Fabric	256G	168G	128G	128G	128G	128G
Jumbo Frame Size	16K	16K	16K	16K	16K	16K
<b>Layer 3 Features</b>						
IPv4, IPv6	✓	✓	✓	✓	✓	✓
Inter-VLAN Routing, Static Routing RIPv1/v2, OSPFv2, VRRP, NAT	✓	✓	✓	✓	✓	✓
<b>Multicast</b>						
PIM-DM/SM	✓	✓	✓	✓	✓	✓
IGMPv1/v2/v3, IGMP Snooping, SSM Mapping	✓	✓	✓	✓	✓	✓
<b>Layer 2 Features</b>						
VLAN, LACP	✓	✓	✓	✓	✓	✓
STP/RSTP/MSTP, ERPSv1/v2, SW-Ring	✓	✓	✓	✓	✓	✓
<b>Management</b>						
Telnet/SSH, HTTP/HTTPS, Console	✓	✓	✓	✓	✓	✓
SNMPv1/v2c/v3, SNMP Trap, RMON	✓	✓	✓	✓	✓	✓
DHCP Server/Client, DHCP Relay, DHCP option82	✓	✓	✓	✓	✓	✓
LLDP, QoS	✓	✓	✓	✓	✓	✓
DDM	✓	✓	✓	✓	✓	✓
Port Mirroring	✓	✓	✓	✓	✓	✓
NTP Client	✓	✓	✓	✓	✓	✓
<b>Security</b>						
IEEE 802.1X, RADIUS	✓	✓	✓	✓	✓	✓
DHCP Snooping	✓	✓	✓	✓	✓	✓
Access Control Lists	✓	✓	✓	✓	✓	✓
<b>Power Supply</b>						
Dual 220VAC (100-240VAC)	✓	✓	✓	-	-	-
Dual 24/48VDC (18-72VDC)	-	✓	✓	-	-	-
Dual 12-48VDC	-	-	-	✓	✓	✓
<b>Environmental Limits</b>						
Operating Temperature	-40~60°C	-40~75°C	-40~75°C	-40~65°C	-40~75°C	-40~75°C
IP Rating	IP30	IP40	IP30	IP30	IP40	IP40
Installation(Rack mounting)	✓	✓	✓	-	-	-
Installation(DIN-Rail mounting)	-	-	-	✓	✓	✓
<b>Certification</b>						
CE, FCC, RoHS	✓	✓	✓	✓	✓	✓
UL 61010-1	✓	✓	✓	✓	✓	✓



	ICS5400 -24GT16GS4XS	ICS5400 -24GT8GS4XS	ICS5400 -12GT16GS4XS	ICS5400 -24GT4XS
<b>Interface</b>				
Number of Main Ports	44	36	32	28
1G/2.5G/10GBase-X SFP Slot	4	4	4	4
100/1000Base-X SFP Slot	16	8	16	-
10/100/1000Base-T(X) RJ45	24	24	12	24
Console	✓	✓	✓	✓
Relay	✓	✓	✓	✓
<b>Switch Properties</b>				
MAC Address Table	32K	32K	32K	32K
Buffer	32Mbit	32Mbit	32Mbit	32Mbit
Switching Fabric	160G	160G	160G	160G
Jumbo Frame Size	10K	10K	10K	10K
<b>Layer 3 Features</b>				
IPv4, IPv6	✓	✓	✓	✓
Inter-VLAN Routing, Static Routing RIPv1/v2, RIPng, OSPFv2/v3, IS-IS, BGP4, VRRPv3, NAT	✓	✓	✓	✓
<b>Multicast</b>				
IPv4 PIM-DM/SM, IPv6 PIM-DM/SM	✓	✓	✓	✓
MLDv1/v2, MLD Snooping, SSM Mapping	✓	✓	✓	✓
IGMPv1/v2/v3, IGMP Snooping, SSM Mapping	✓	✓	✓	✓
<b>Layer 2 Features</b>				
VLAN, LACP	✓	✓	✓	✓
STP/RSTP/MSTP, ERPSv1/v2, MRP, Smart-link, SW-Ring	✓	✓	✓	✓
<b>Management</b>				
Telnet/SSH, HTTP/HTTPS, Console	✓	✓	✓	✓
SNMPv1/v2c/v3, SNMP Trap, RMON	✓	✓	✓	✓
DHCP Server/Client, DHCP Relay, DHCP option82	✓	✓	✓	✓
LLDP	✓	✓	✓	✓
QoS	✓	✓	✓	✓
DDM	✓	✓	✓	✓
Port Mirroring	✓	✓	✓	✓
NTP Client	✓	✓	✓	✓
<b>Security</b>				
IEEE 802.1X, RADIUS	✓	✓	✓	✓
DHCP Snooping	✓	✓	✓	✓
Access Control Lists	✓	✓	✓	✓
<b>Power Supply</b>				
Dual Power Supply	✓	✓	✓	✓
220VAC (85-264VAC)	✓	✓	✓	✓
12-55VDC	✓	✓	✓	✓
<b>Environmental Limits</b>				
Operating Temperature	-40~75°C	-40~75°C	-40~75°C	-40~75°C
IP Rating	IP40	IP40	IP40	IP40
Installation	Rack mounting	Rack mounting	Rack mounting	Rack mounting
<b>Certification</b>				
CE, FCC, RoHS	✓	✓	✓	✓
UL 61010-1	✓	✓	✓	✓

# Universal Managed L2 Switch



	IES5200 -24T4GC	IES5200 -22T2F4GC	IES5200 -20T4F4GC	IES5200 -16T8F4GC	IES5200 -8T16F4GC
<b>Interface</b>					
Number of Main Ports	28	28	28	28	28
1G Combo (RJ45 or SFP)	4	4	4	4	4
10/100Base-T(X) RJ45	24	22	20	16	8
100Base-X SC/FC/ST	-	2	4	8	16
Console	✓	✓	✓	✓	✓
Relay	✓	✓	✓	✓	✓
<b>Switch Properties</b>					
MAC Address Table	8K	8K	8K	8K	8K
Buffer	4.1Mbits	4.1Mbits	4.1Mbits	4.1Mbits	4.1Mbits
Switching Fabric	12.8G	12.8G	12.8G	12.8G	12.8G
Jumbo Frame Size	10K	10K	10K	10K	10K
<b>Multicast</b>					
IGMPv1/v2/v3	✓	✓	✓	✓	✓
IGMP Snooping	✓	✓	✓	✓	✓
<b>Layer 2 Features</b>					
VLAN, LACP	✓	✓	✓	✓	✓
Smart-link	✓	✓	✓	✓	✓
STP/RSTP/MSTP	✓	✓	✓	✓	✓
ERPSv1/v2	✓	✓	✓	✓	✓
MRP	✓	✓	✓	✓	✓
SW-Ring	✓	✓	✓	✓	✓
<b>Management</b>					
Telnet/SSH	✓	✓	✓	✓	✓
HTTP/HTTPS	✓	✓	✓	✓	✓
Console	✓	✓	✓	✓	✓
SNMPv1/v2c/v3, SNMP Trap	✓	✓	✓	✓	✓
RMON	✓	✓	✓	✓	✓
DHCP Server/Client	✓	✓	✓	✓	✓
LLDP, QoS	✓	✓	✓	✓	✓
DDM	✓	✓	✓	✓	✓
Port Mirroring	✓	✓	✓	✓	✓
NTP Client	✓	✓	✓	✓	✓
<b>Security</b>					
IEEE 802.1X, RADIUS	✓	✓	✓	✓	✓
DHCP Snooping	✓	✓	✓	✓	✓
Access Control Lists	✓	✓	✓	✓	✓
<b>Power Supply</b>					
Dual 18-72VDC	✓	✓	✓	✓	✓
Dual 85-264VAC/DC	✓	✓	✓	✓	✓
<b>Environmental Limits</b>					
Operating Temperature	-40-75°C	-40-75°C	-40-75°C	-40-75°C	-40-75°C
IP Rating	IP40	IP40	IP40	IP40	IP40
Installation (Rack mounting)	✓	✓	✓	✓	✓
<b>Certification</b>					
CE, FCC, RoHS	✓	✓	✓	✓	✓
UL 61010-1	✓	✓	✓	✓	✓



	IES5328 -16GT4GS8GC	IES6316 -8GT8GS	IES6300 -8GT2GS2HS	IES6000 -8GT2HS	IES6000 -4GT2HS
<b>Interface</b>					
Number of main ports	28	16	12	10	6
100M/1G/2.5GBase-X SFP Slot	-	-	2	2	2
1G Combo (RJ45 or SFP)	8	-	-	-	-
100/1000Base-X SFP Slot	-	8	2	-	-
1000Base-X SFP Slot	4	-	-	-	-
10/100/1000Base-T(X) RJ45	16	8	8	8	4
Console	✓	✓	✓	✓	✓
Relay	✓	✓	✓	✓	✓
<b>Switch Properties</b>					
MAC Address Table	16K	16K	8K	8K	8K
Buffer	12Mbit	12Mbit	4Mbit	4Mbit	4Mbit
Switching Fabric	56G	56G	30G	30G	30G
Jumbo Frame Size	16K	16K	9K	9K	9K
<b>Multicast</b>					
IGMPv1/v2/v3, IGMP Snooping	✓	✓	✓	✓	✓
<b>Layer 2 Features</b>					
802.1Q VLAN, LACP	✓	✓	✓	✓	✓
STP/RSTP/MSTP, ERPSv1/v2, SW-Ring	✓	✓	✓	✓	✓
<b>Management</b>					
IPv4, IPv6	✓	✓	✓	✓	✓
Telnet/SSH, HTTP/HTTPS, Console	✓	✓	✓	✓	✓
SNMPv1/v2c/v3, SNMP Trap, RMON	✓	✓	✓	✓	✓
DHCP Server/Client, DHCP Relay	✓	✓	✓	✓	✓
LLDP	✓	✓	✓	✓	✓
QoS	✓	✓	✓	✓	✓
DDM	✓	✓	✓	✓	✓
Port Mirroring	✓	✓	✓	✓	✓
NTP Client	✓	✓	✓	✓	✓
<b>Security</b>					
IEEE 802.1X, RADIUS	✓	✓	✓	✓	✓
DHCP Snooping	✓	✓	✓	✓	✓
Access Control Lists	✓	✓	✓	✓	✓
<b>Power Supply</b>					
Dual 220VAC (100-240VAC)	✓	-	✓ (Single)	-	-
Dual 12-48VDC	-	✓	✓	✓	✓
Dual 24VDC (18-72VDC)	✓	-	-	-	-
Dual 48VDC (36-72VDC)	✓	-	-	-	-
<b>Environmental Limits</b>					
Operating Temperature	-40-75°C	-40-75°C	-40-75°C	-40-75°C	-40-75°C
IP Rating	IP30	IP40	IP40	IP40	IP40
Installation (Rack mounting)	✓	-	-	-	-
Installation (DIN-Rail mounting)	-	✓	✓	✓	✓
<b>Certification</b>					
CE, FCC, RoHS	✓	✓	✓	✓	✓
UL 61010-1	✓	✓	✓	✓	✓
Class 1Div 2(C1D2)	-	-	✓	✓	✓



IES7120-20T4GS    IES7120-16T4GS    IES7120-14T2F4GS    IES7120-12T4F4GS

Interface				
Number of Main Ports	24	20	20	20
100/1000Base-X SFP Slot	4	4	4	4
10/100Base-T(X) RJ45	20	16	14	12
100Base-X SC/FC/ST	-	-	2	4
Console	✓	✓	✓	✓
Relay	✓	✓	✓	✓
Switch Properties				
MAC Address Table	8K	8K	8K	8K
Buffer	4.1Mbits	4.1Mbits	4.1Mbits	4.1Mbits
Switching Fabric	12.8G	12.8G	12.8G	12.8G
Jumbo Frame Size	10K	10K	10K	10K
Multicast				
IGMPv1/v2/v3	✓	✓	✓	✓
IGMP Snooping	✓	✓	✓	✓
Layer 2 Features				
VLAN, LACP	✓	✓	✓	✓
Smart-link	✓	✓	✓	✓
STP/RSTP/MSTP, ERPSv1/v2, SW-Ring	✓	✓	✓	✓
MRP	✓	✓	✓	✓
Management				
Telnet/SSH, HTTP/HTTPS, Console	✓	✓	✓	✓
SNMPv1/v2c/v3, SNMP Trap, RMON	✓	✓	✓	✓
DHCP Server/Client	✓	✓	✓	✓
QoS, LLDP	✓	✓	✓	✓
DDM, Port Mirroring	✓	✓	✓	✓
NTP Client	✓	✓	✓	✓
Security				
IEEE 802.1X, RADIUS	✓	✓	✓	✓
DHCP Snooping	✓	✓	✓	✓
Access Control Lists	✓	✓	✓	✓
Power Supply				
Dual 9-60VDC	✓	✓	✓	✓
Single 100-240VAC/DC	✓	✓	✓	✓
Environmental Limits				
Operating Temperature	-40-75°C	-40-75°C	-40-75°C	-40-75°C
IP Rating	IP40	IP40	IP40	IP40
Installation (DIN-Rail mounting)	✓	✓	✓	✓
Certification				
CE, FCC, RoHS	✓	✓	✓	✓
UL 61010-1	✓	✓	✓	✓



IES6220-16T4GS    IES6210-8T2GC    IES6210-4T2GC    IES7110-3GS    IES7110-2GS    IES7110-2GS-4F

Interface						
Number of main ports	20	10	6	10	10	10
1G Combo (RJ45 or SFP)	-	2	2	-	-	-
1000Base-X SFP Slot	4	-	-	3	2	2
100Base-X SC/FC/ST	-	-	-	-	-	4
10/100Base-T(X) RJ45	16	8	4	7	8	4
Console	✓	✓	✓	✓	✓	✓
Relay	✓	✓	✓	✓	✓	✓
Switch Properties						
MAC Address Table	8K	8K	8K	8K	8K	8K
Buffer	3Mbit	1Mbit	1Mbit	1Mbit	1Mbit	1Mbit
Switching Fabric	12.8G	7.6G	7.6G	7.6G	7.6G	7.6G
Multicast						
Static Multicast	✓	✓	✓	✓	✓	✓
IGMPv1/v2, IGMP Snooping	✓	✓	✓	✓	✓	✓
Layer 2 Features						
VLAN	✓	✓	✓	✓	✓	✓
Link Aggregation	✓	✓	✓	✓	✓	✓
STP/RSTP	✓	✓	✓	✓	✓	✓
SW-Ring	✓	✓	✓	✓	✓	✓
Management						
Telnet/SSH	✓	✓	✓	✓	✓	✓
HTTP	✓	✓	✓	✓	✓	✓
Console	✓	✓	✓	✓	✓	✓
SNMPv1/v2c, SNMP Trap	✓	✓	✓	✓	✓	✓
DHCP Server	✓	✓	✓	✓	✓	✓
DHCP Client	✓	✓	✓	✓	✓	✓
LLDP	✓	✓	✓	✓	✓	✓
Port Mirroring	✓	✓	✓	✓	✓	✓
SNTP Client	✓	✓	✓	✓	✓	✓
Power Supply						
Dual Power Supply	✓	✓	✓	✓	✓	✓
220VAC (85-264VAC)		✓ (Single)		-	-	-
12-48VDC	✓	✓	✓	✓	✓	✓
Environmental Limits						
Operating Temperature	-40-75°C	-40-75°C	-40-75°C	-40-75°C	-40-75°C	-40-75°C
IP Rating	IP40	IP40	IP40	IP40	IP40	IP40
DIN-Rail or wall mounting	✓	✓	✓	✓	✓	✓
Certification						
CE, FCC, RoHS	✓	✓	✓	✓	✓	✓
UL 61010-1	✓	✓	✓	✓	✓	✓



	IES6116	IES6116-2F	IES6116-4F	IES6116-6F	IES6116-8F
<b>Interface</b>					
Number of main ports	16	16	16	16	16
100Base-X SC/FC/ST	-	2	4	6	8
10/100Base-T(X) RJ45	16	14	12	10	8
Console	✓	✓	✓	✓	✓
Relay	✓	✓	✓	✓	✓
<b>Switch Properties</b>					
MAC Address Table	8K	8K	8K	8K	8K
Buffer	3Mbit	3Mbit	3Mbit	3Mbit	3Mbit
Switching Fabric	12.8G	12.8G	12.8G	12.8G	12.8G
<b>Multicast</b>					
Static Multicast	✓	✓	✓	✓	✓
IGMPv1/v2, IGMP Snooping	✓	✓	✓	✓	✓
<b>Layer 2 Features</b>					
VLAN	✓	✓	✓	✓	✓
Link Aggregation	✓	✓	✓	✓	✓
STP/RSTP	✓	✓	✓	✓	✓
SW-Ring	✓	✓	✓	✓	✓
<b>Management</b>					
Telnet/SSH, HTTP, Console	✓	✓	✓	✓	✓
SNMPv1/v2c, SNMP Trap	✓	✓	✓	✓	✓
SNMPv1/v2c/v3, SNMP Trap	-	-	-	-	-
DHCP Server/Client	✓	✓	✓	✓	✓
LLDP	-	-	-	-	-
Port Mirroring	✓	✓	✓	✓	✓
NTP Client	-	-	-	-	-
SNTP Client	✓	✓	✓	✓	✓
<b>Power Supply</b>					
Dual Power Supply	✓	✓	✓	✓	✓
220VAC (85-264VAC)	-	-	-	-	-
12-48VDC	✓	✓	✓	✓	✓
<b>Environmental Limits</b>					
Operating Temperature	-40-75°C	-40-75°C	-40-75°C	-40-75°C	-40-75°C
IP Rating	IP40	IP40	IP40	IP40	IP40
DIN-Rail mounting	✓	✓	✓	✓	✓
<b>Certification</b>					
CE, FCC, RoHS	✓	✓	✓	✓	✓
UL 61010-1	✓	✓	✓	✓	✓



	IES618	IES618-2F	IES618-4F
<b>Interface</b>			
Number of Ethernet ports	8	8	8
100Base-X SC/FC/ST	-	2	4
10/100Base-T(X) RJ45	8	6	4
Console	✓	✓	✓
Relay	✓	✓	✓
<b>Switch Properties</b>			
MAC Address Table	16K	16K	16K
Buffer	4Mbit	4Mbit	4Mbit
Switching Fabric	5.6G	5.6G	5.6G
Jumbo Frame Size	16K	16K	16K
<b>Multicast</b>			
Static Multicast	✓	✓	✓
IGMPv1/v2, IGMP Snooping	✓	✓	✓
<b>Layer 2 Features</b>			
VLAN	✓	✓	✓
Link Aggregation	✓	✓	✓
STP/RSTP	✓	✓	✓
SW-Ring	✓	✓	✓
ERPSv1/v2	✓	✓	✓
<b>Management</b>			
Telnet/SSH, HTTP, Console	✓	✓	✓
SNMPv1/v2c/v3, SNMP Trap	✓	✓	✓
DHCP Server/Client	✓	✓	✓
LLDP	✓	✓	✓
Port Mirroring	✓	✓	✓
NTP Client	✓	✓	✓
<b>Security</b>			
802.1X, RADIUS	✓	✓	✓
Static MAC	✓	✓	✓
<b>Power Supply</b>			
Single 85-264VAC/DC)	✓	✓	✓
Dual 9-60VDC	✓	✓	✓
<b>Environmental Limits</b>			
Operating Temperature	-40-75°C	-40-75°C	-40-75°C
IP Rating	IP40	IP40	IP40
DIN-Rail or wall mounting	✓	✓	✓
<b>Certification</b>			
CE, FCC, RoHS	✓	✓	✓
UL 61010-1	✓	✓	✓



IES6100-6T2F-W2



IES6100-6T3F

Interface		
Number of Ethernet ports	8	9
100Base-X SC/FC/ST	2	3
10/100Base-T(X) RJ45	6	6
2.4G Wi-Fi Antenna Interface	√ (2)	-
Console	√	√
Relay	√	√
WLAN Feature		
WLAN Standard	IEEE 802.11 a/b/g/n	-
Radio Frequency	802.11 b/g/n: 2.412GHz-2.4835GHz	-
RF Power	23dBm	-
Encryption Type	WAP/WAP2/WAP3/RADIUS	-
Operating Mode	AP, Bridge Mode	-
Switch Properties		
MAC Address Table	8K	8K
Buffer	1Mbit	1Mbit
Switching Fabric	7.6G	7.6G
Multicast		
Static Multicast	√	√
IGMPv1/v2, IGMP Snooping	√	√
Layer 2 Features		
VLAN, Link Aggregation	√	√
STP/RSTP, SW-Ring, MRP	√	√
Management		
Telnet/SSH, HTTP, Console	√	√
SNMPv1/v2c/v3, SNMP Trap	√	√
DHCP Server/Client	√	√
LLDP	√	√
Port Mirroring	√	√
NTP Client	√	√
Security		
802.1X, RADIUS	√	√
Static MAC	√	√
Power Supply		
Dual Power Supply	√	√
220VAC/DC (85-264VAC/DC)	√ (Single Power Supply)	√ (Single Power Supply)
9-60VDC	√	√
Environmental Limits		
Operating Temperature	-40~75°C	-40~75°C
IP Rating	IP40	IP40
DIN-Rail or wall mounting	√	√
Certification		
CE, FCC, RoHS	√	√
UL 61010-1	√	√

## Universal Unmanaged Switch



IES2220-16T4GS



IES2210-8T2GC



IES2210-4T2GC

Interface			
Number of main ports	20	10	6
1G Combo (RJ45 or SFP)	-	2	2
1000Base-X SFP Slot	4	-	-
10/100Base-T(X) RJ45	16	8	4
Relay	√	√	√
Switch Properties			
MAC Address Table	8K	8K	8K
Buffer	3Mbit	1Mbit	1Mbit
Switching Fabric	12.8G	7.6G	7.6G
Power Supply			
Single 220VAC (85-264VAC)	√	√	√
Dual 12-48VDC	√	√	√
Environmental Limits			
Operating Temperature	-40~75°C	-40~75°C	-40~75°C
IP Rating	IP40	IP40	IP40
DIN-Rail or wall mounting	√	√	√
Certification			
CE, FCC, RoHS	√	√	√
UL 61010-1	√	√	√



IES318-8T



IES318-7T1F



IES318-6T2F



IES318-4T4F

Interface			
Number of main ports	8	8	8
100Base-X SC/FC/ST	-	1	2
10/100Base-T(X) RJ45	8	7	4
Relay	√	√	√
Switch Properties			
MAC Address Table	2K	2K	2K
Buffer	1Mbit	1Mbit	1Mbit
Switching Fabric	1.6G	1.6G	1.6G
Power Supply			
Single 220VAC/DC (85-264VAC/DC)	√	√	√
Dual 9-60VDC	√	√	√
Environmental Limits			
Operating Temperature	-40~75°C	-40~75°C	-40~75°C
IP Rating	IP40	IP40	IP40
DIN-Rail or wall mounting	√	√	√
Certification			
CE, FCC, RoHS	√	√	√
UL 61010-1	√	√	√





IES2305-5GT IES2305-4GT1GS IES2305-4GT1GF IES2105-5T IES2105-4T1F IES2105-3T2F

Interface						
Number of main ports	5	5	5	5	5	5
1000Base-X SFP Slot	-	1	-	-	-	-
1000Base-X SC/FC/ST	-	-	1	-	-	-
10/100/1000Base-T(X) RJ45	5	4	4	-	-	-
100Base-X SC/FC/ST	-	-	-	-	1	2
10/100Base-T(X) RJ45	-	-	-	5	4	3
Switch Properties						
MAC Address Table	2K	2K	2K	2K	2K	2K
Buffer	1Mbit	1Mbit	1Mbit	1Mbit	1Mbit	1Mbit
Switching Fabric	9.125G	9.125G	9.125G	1G	1G	1G
Power Supply						
Single 220VAC (100-240VAC)	✓	✓	✓	✓	✓	✓
Single 12-48VDC	✓	✓	✓	✓	✓	✓
Environmental Limits						
Operating Temperature	-40-75°C	-40-75°C	-40-75°C	-40-75°C	-40-75°C	-40-75°C
IP Rating	IP40	IP40	IP40	IP40	IP40	IP40
DIN-Rail mounting	✓	✓	✓	✓	✓	✓
Certification						
CE, FCC, RoHS	✓	✓	✓	✓	✓	✓
UL 61010-1	✓	✓	✓	✓	✓	✓



IES2300SL-16GT IES2300SL-8GT IES2300SL-5GT IES2100SL-16T IES2100SL-8T IES2100SL-5T

Interface						
Number of main ports	16	8	5	16	8	5
10/100/1000Base-T(X) RJ45	16	8	5	-	-	-
10/100Base-T(X) RJ45	-	-	-	16	8	5
Switch Properties						
MAC Address Table	4K	4K	4K	8K	2K	2K
Buffer	4.1Mbit	1.5Mbit	1.5Mbit	1.5Mbit	1.5Mbit	1.5Mbit
Switching Fabric	52G	16G	14G	3.2G	1.6G	1G
Power Supply						
Dual Power Supply	✓	✓	✓	✓	✓	✓
9-60VDC	✓	✓	✓	✓	✓	✓
Environmental Limits						
Operating Temperature	-40-75°C	-40-75°C	-40-75°C	-40-75°C	-40-75°C	-40-75°C
IP Rating	IP40	IP40	IP40	IP40	IP40	IP40
DIN-Rail mounting	✓	✓	✓	✓	✓	✓
Certification						
CE, FCC, RoHS	✓	✓	✓	✓	✓	✓
UL 61010-1	✓	✓	✓	✓	✓	✓



IES2300SL-16GT2GS IES2300SL-8GT2GS IES2300SL-4GT2GS IES2010-2GS IES2010-2GS-4F

Interface					
Number of main ports	18	10	6	10	10
1000Base-X SFP Slot	2	2	2	2	2
10/100/1000Base-T(X) RJ45	16	8	4	-	-
10/100Base-T(X) RJ45	-	-	-	8	4
100Base-X SC/FC/ST	-	-	-	-	4
Switch Properties					
MAC Address Table	8K	4K	2K	8K	8K
Buffer	4.1Mbit	2.5Mbit	1Mbit	1Mbit	1Mbit
Switching Fabric	52G	20G	16G	7.6G	7.6G
Power Supply					
Dual 12-60VDC	✓	✓	✓	-	-
Dual 12-48VDC	-	-	-	✓	✓
Environmental Limits					
Operating Temperature	-40-75°C	-40-75°C	-40-75°C	-40-75°C	-40-75°C
IP Rating	IP40	IP40	IP40	IP40	IP40
DIN-Rail or wall mounting	✓	✓	✓	✓	✓
Certification					
CE, FCC, RoHS	✓	✓	✓	✓	✓
UL 61010-1	✓	✓	✓	✓	✓



IES3016 IES3016-2F IES3016-4F IES3016-6F IES3016-8F

Interface					
Number of main ports	16	16	16	16	16
10/100Base-T(X) RJ45	16	14	12	10	8
100Base-X SC/FC/ST	-	2	4	6	8
Switch Properties					
MAC Address Table	8K	8K	8K	8K	8K
Buffer	3Mbit	3Mbit	3Mbit	3Mbit	3Mbit
Switching Fabric	12.8G	12.8G	12.8G	12.8G	12.8G
Power Supply					
Dual Power Supply	✓	✓	✓	✓	✓
12-48VDC	✓	✓	✓	✓	✓
Environmental Limits					
Operating Temperature	-40-75°C	-40-75°C	-40-75°C	-40-75°C	-40-75°C
IP Rating	IP40	IP40	IP40	IP40	IP40
DIN-Rail mounting	✓	✓	✓	✓	✓
Certification					
CE, FCC, RoHS	✓	✓	✓	✓	✓
UL 61010-1	✓	✓	✓	✓	✓

## TSN & PTP Switch



Interface	ICS5400TSN-24GT16GS4XS	ICS5400TSN-12GT12GS4XS	ICS6400TSN-16GT4XS	ICS6400TSN-8GT4XS	ICS5400PTP-24GT16GS4XS	ICS5400PTP-12GT12GS4XS
Number of Main Ports	44	28	20	12	44	28
1G/2.5G/10GBase-X SFP Slot	4	4	4	4	4	4
100/1000Base-X SFP Slot	16	12	-	-	16	12
10/100/1000Base-T(X) RJ45	24	12	16	8	24	12
Console	✓	✓	✓	✓	✓	✓
Relay	✓	✓	✓	✓	✓	✓
<b>Switch Properties</b>						
MAC Address Table	32K	32K	32K	32K	32K	32K
Buffer	32Mbit	32Mbit	32Mbit	32Mbit	32Mbit	32Mbit
Switching Fabric	160G	128G	160G	160G	160G	128G
Jumbo Frame Size	10K	10K	10K	10K	10K	10K
<b>TSN Features</b>						
IEEE 1588v2 (PTPv2), 802.1 AS	✓	✓	✓	✓	✓	✓
802.1 CB/QBV/QBU/QCH/QCI/QCC	✓	✓	✓	✓	-	-
<b>Layer 3 Features</b>						
IPv4, IPv6	✓	✓	✓	✓	✓	✓
Inter-VLAN Routing, Static Routing, RIPv1/v2, RIPv2, OSPFv2/v3, IS-IS, BGP4, VRRPv3, NAT	✓	✓	✓	✓	✓	✓
<b>Multicast</b>						
IPv4 PIM-DM/SM, IPv6 PIM-DM/SM	✓	✓	✓	✓	✓	✓
MLDv1/v2, MLD Snooping, SSM Mapping	✓	✓	✓	✓	✓	✓
IGMPv1/v2/v3, IGMP Snooping, SSM Mapping	✓	✓	✓	✓	✓	✓
<b>Layer 2 Features</b>						
VLAN, LACP	✓	✓	✓	✓	✓	✓
STP/RSTP/MSTP, ERPSv1/v2, MRP, Smart-link, SW-Ring	✓	✓	✓	✓	✓	✓
<b>Management</b>						
Telnet/SSH, HTTP/HTTPS, Console	✓	✓	✓	✓	✓	✓
SNMPv1/v2c/v3, SNMP Trap, RMON	✓	✓	✓	✓	✓	✓
DHCP Server/Client, DHCP Relay, DHCP option82	✓	✓	✓	✓	✓	✓
LLDP, QoS	✓	✓	✓	✓	✓	✓
Port Mirroring, DDM	✓	✓	✓	✓	✓	✓
NTP Client	✓	✓	✓	✓	✓	✓
<b>Security</b>						
IEEE 802.1X, RADIUS	✓	✓	✓	✓	✓	✓
DHCP Snooping	✓	✓	✓	✓	✓	✓
Access Control Lists	✓	✓	✓	✓	✓	✓
<b>Power Supply</b>						
Dual Power Supply	✓	✓	✓	✓	✓	✓
220VAC (85-264VAC)	✓	-	-	-	✓	-
220VAC (90-264VAC)	✓	-	-	-	-	-
12-55VDC	-	✓	-	-	-	✓
12-48VDC	-	✓	✓	✓	-	✓
<b>Environmental Limits</b>						
Operating Temperature	-40-75°C	-40-60°C	-40-65°C	-40-65°C	-40-75°C	-40-60°C
IP Rating	IP40	IP40	IP40	IP40	IP40	IP40
Rack mounting	✓	✓	-	-	✓	✓
DIN-Rail mounting	-	-	✓	✓	-	-
<b>Certification</b>						
CE, FCC, RoHS	✓	✓	✓	✓	✓	✓
UL 61010-1	✓	✓	✓	✓	✓	✓

## Managed PoE Switch



Interface	ICS5428-16GP8GC4XS	ICS5400SL-24GP4XS	ICS6400BT-8GP4XS	IES6300-8GHP2GS2HS	IES6300-8GP2GS2HS
Number of Main Ports	28	28	12	12	12
1G/10GBase-X SFP Slot	4	4	4	-	-
1G Combo (RJ45 or SFP)	8	-	-	-	-
100M/1G/2.5GBase-X SFP Slot	-	-	-	2	2
100/1000Base-X SFP Slot	-	-	-	2	2
10/100/1000Base-T(X) PoE RJ45	16	24	8	8	8
Console	✓	✓	✓	✓	✓
Relay	✓	✓	✓	✓	✓
<b>Switch Properties</b>					
MAC Address Table	16K	16K	16K	8K	8K
Buffer	12Mbit	12Mbit	12Mbit	4Mbit	4Mbit
Switching Fabric	128G	128G	96G	30G	30G
Jumbo Frame Size	16K	10K	10K	9K	9K
<b>Power over Ethernet</b>					
802.3 AF/AT (PoE+)	✓	✓	✓	✓	✓
802.3 BT (PoE++)	-	-	✓	✓	-
Power Pin Assignment	1/2+, 3/6-	1/2+, 3/6-	AF/AT: 1/2-, 3/6+ BT: 1/2-, 3/6+, 4/5-, 7/8+	AF/AT: 1/2-, 3/6+ BT: 1/2-, 3/6+, 4/5-, 7/8+	1/2+, 3/6-
Max. Port PoE Budget	30W	30W	90W	90W	30W
Total PoE Budget	240W	360W	360W	360W	120W/240W
<b>Layer 3 Features</b>					
IPv4, IPv6	✓	✓	✓	✓	✓
Inter-VLAN Routing, Static Routing, OSPFv2, VRRP	✓	✓	✓	-	-
<b>Multicast</b>					
IPv4 PIM-DM/SM	✓	✓	✓	-	-
IGMPv1/v2/v3, IGMP Snooping	✓	✓	✓	✓	✓
<b>Layer 2 Features</b>					
VLAN, LACP	✓	✓	✓	✓	✓
STP/RSTP/MSTP, ERPSv1/v2, SW-Ring	✓	✓	✓	✓	✓
MRP	-	✓	✓	-	-
<b>Management</b>					
Telnet/SSH, HTTP/HTTPS, Console	✓	✓	✓	✓	✓
SNMPv1/v2c/v3, SNMP Trap, RMON	✓	✓	✓	✓	✓
DHCP Server/Client, DHCP Relay	✓	✓	✓	✓	✓
LLDP, QoS	✓	✓	✓	✓	✓
Port Mirroring, DDM	✓	✓	✓	✓	✓
NTP Client	✓	✓	✓	✓	✓
<b>Security</b>					
IEEE 802.1X, RADIUS	✓	✓	✓	✓	✓
DHCP Snooping	✓	✓	✓	-	-
Access Control Lists	✓	✓	✓	✓	✓
<b>Power Supply</b>					
Dual 50-55VDC	-	-	✓	✓	-
Dual 48VDC (45-55VDC)	✓	✓	-	-	✓
Single 100-240VAC/DC	-	✓	-	-	-
<b>Environmental Limits</b>					
Operating Temperature	-40-75°C	-40-75°C	-40-75°C	-40-75°C	-40-75°C
IP Rating	IP30	IP30	IP30	IP40	IP40
Installation	Rack mounting			DIN-Rail mounting	
<b>Certification</b>					
CE, FCC, RoHS	✓	✓	✓	✓	✓
UL 61010-1	✓	✓	✓	✓	✓



IES6300SL-16GP4GS



IES6300SL-8GP4GS



IES6300SL-4GP2GS

Interface			
Number of Main Ports	20	12	6
100/1000Base-X SFP Slot	4	4	2
10/100/1000Base-T(X) PoE RJ45	16	8	4
Console	✓	✓	✓
Relay	✓	✓	✓
Switch Properties			
MAC Address Table	8K	8K	8K
Buffer	4.1Mbit	4.1Mbit	4.1Mbit
Switching Fabric	56G	56G	20G
Jumbo Frame Size	10K	10K	10K
Power over Ethernet			
802.3 AF/AT (PoE+)	✓	✓	✓
Power Pin Assignment	1/2+, 3/6-	1/2+, 3/6-	1/2+, 3/6-
Max. Port PoE Budget	30W	30W	30W
Total PoE Budget	240W	240W	120W
Multicast			
IGMPv1/v2/v3	✓	✓	✓
IGMP Snooping	✓	✓	✓
Layer 2 Features			
VLAN, LACP	✓	✓	✓
Smart-link	✓	✓	✓
STP/RSTP/MSTP	✓	✓	✓
ERPSv1/v2	✓	✓	✓
MRP	✓	✓	✓
SW-Ring	✓	✓	✓
Management			
IPv4, IPv6	✓	✓	✓
Telnet/SSH, HTTP/HTTPS, Console	✓	✓	✓
SNMPv1/v2c/v3, SNMP Trap, RMON	✓	✓	✓
DHCP Server/Client	✓	✓	✓
QoS, LLDP	✓	✓	✓
DDM, Port Mirroring	✓	✓	✓
NTP Client	✓	✓	✓
Security			
IEEE 802.1X, RADIUS	✓	✓	✓
DHCP Snooping	✓	✓	✓
Access Control Lists	✓	✓	✓
Power Supply			
Dual Power Supply	✓	✓	✓
44-57VDC	✓	✓	✓
Environmental Limits			
Operating Temperature	-40-75°C	-40-75°C	-40-75°C
IP Rating	IP40	IP40	IP40
Installation (DIN-Rail mounting)	✓	✓	✓
Certification			
CE, FCC, RoHS	✓	✓	✓
UL 61010-1	✓	✓	✓



IES6220-16P4GS



IES6220-8P8T4GS



IES6210-8P2GC



IES6210-4P2GC

Interface				
Number of main ports	20	20	10	6
1G Combo (RJ45 or SFP)	-	-	2	2
1000Base-X SFP Slot	4	4	-	-
10/100Base-T(X) PoE RJ45	16	8	8	4
10/100Base-T(X) RJ45	-	8	-	-
Console	✓	✓	✓	✓
Relay	✓	✓	✓	✓
Switch Properties				
MAC Address Table	8K	8K	8K	8K
Buffer	3Mbit	3Mbit	1Mbit	1Mbit
Switching Fabric	12.8G	12.8G	7.6G	7.6G
Power over Ethernet				
802.3 AF/AT (PoE+)	✓	✓	✓	✓
Power Pin Assignment	1/3+, 2/6-	1/3+, 2/6-	1/3+, 2/6-	1/3+, 2/6-
Max. Port PoE Budget	30W	30W	30W	30W
Total PoE Budget	120W/200W	120W/200W	120W/240W	60W/120W
Multicast				
Static Multicast	✓	✓	✓	✓
IGMPv1/v2, IGMP Snooping	✓	✓	✓	✓
Layer 2 Features				
VLAN	✓	✓	✓	✓
Link Aggregation	✓	✓	✓	✓
STP/RSTP	✓	✓	✓	✓
SW-Ring	✓	✓	✓	✓
Management				
IPv4	✓	✓	✓	✓
IPv6	-	-	-	-
Telnet/SSH, HTTP, Console	✓	✓	✓	✓
SNMPv1/v2c, SNMP Trap	✓	✓	✓	✓
DHCP Server/Client	✓	✓	✓	✓
LLDP	✓	✓	✓	✓
Port Mirroring	✓	✓	✓	✓
SNTP Client	✓	✓	✓	✓
Security				
802.1X, RADIUS	-	-	✓	✓
IP/MAC filtering, Static MAC	✓	✓	-	-
Power Supply				
Dual Power Supply	✓	✓	✓	✓
48VDC (45-55VDC)	✓	✓	✓	✓
24VDC (18-36VDC)	✓	✓	✓	✓
Environmental Limits				
Operating Temperature	-40-75°C	-40-75°C	-40-75°C	-40-75°C
IP Rating	IP40	IP40	IP40	IP40
DIN-Rail or wall mounting	✓	✓	✓	✓
Certification				
CE, FCC, RoHS	✓	✓	✓	✓
UL 61010-1	✓	✓	✓	✓

# ITxPT Switch



TNS5800B-16P4GT



TNS5800B-16T4GT



TNS5800B-8P4GT

Interface			
Number of main ports	20	20	12
10/100/1000Base-T(X) Bypass M12	4	4	4
10/100Base-T(X) PoE M12	16	-	8
10/100Base-T(X) M12	-	16	-
Console	✓	✓	✓
Relay	✓	✓	✓
Switch Properties			
MAC Address Table	16K	16K	16K
Buffer	12Mbit	12Mbit	12Mbit
Switching Fabric	128G	128G	128G
Jumbo Frame Size	10K	10K	16K
Power over Ethernet			
802.3 AF/AT (PoE+)	✓	-	✓
Power Pin Assignment	1/2+, 3/4-	-	1/3+, 2/4-
Max. Port PoE Budget	30W	-	30W
Total PoE Budget	100W	-	60W
ITxPT			
Ignition wake-up, delayed shutdown	✓	✓	✓
Inventory Service	✓	✓	✓
Layer 3 Features			
IPv4, IPv6	✓	✓	✓
Inter-VLAN Routing, Static Routing RIPv1/v2, OSPFv2, VRRP, NAT	✓	✓	✓
Multicast			
IPv4 PIM-DM/SM	✓	✓	✓
IGMPv1/v2/v3, IGMP Snooping, SSM Mapping	✓	✓	✓
Layer 2 Features			
VLAN, LACP	✓	✓	✓
STP/RSTP/MSTP, ERPSv1/v2, SW-Ring	✓	✓	✓
Management			
Telnet/SSH, HTTP/HTTPS, Console	✓	✓	✓
SNMPv1/v2c/v3, SNMP Trap, RMON	✓	✓	✓
DHCP Server/Client	✓	✓	✓
LLDP, QoS	✓	✓	✓
Port Mirroring	✓	✓	✓
NTP Client	✓	✓	✓
Security			
IEEE 802.1X, RADIUS	✓	✓	✓
DHCP Snooping	✓	✓	✓
Access Control Lists	✓	✓	✓
Power Supply			
Single 24VDC (14-36VDC)	✓	✓	✓
Environmental Limits			
Operating Temperature	-40-75°C	-40-75°C	-40-75°C
IP Rating	IP67	IP67	IP67
Wall mounting	✓	✓	✓
Certification			
CE, FCC, RoHS	✓	✓	✓
ITxPT Labeling	✓(Pending)	✓(Pending)	✓(Pending)
E-mark (R10, R118)	✓(Pending)	✓(Pending)	✓(Pending)

# Unmanaged POE Switch

Interface			
Number of main ports	20	10	6
1G Combo (RJ45 or SFP)	-	2	2
1000Base-X SFP Slot	4	-	-
1000Base-X SC/FC/ST	-	-	-
10/100/1000Base-T(X) RJ45	-	-	-
10/100/1000Base-T(X) PoE RJ45	-	-	-
100Base-X SC/FC/ST	-	-	-
10/100Base-T(X) RJ45	-	-	-
10/100Base-T(X) PoE RJ45	16	8	4
Switch Properties			
MAC Address Table	8K	8K	8K
Buffer	3Mbit	1Mbit	1Mbit
Switching Fabric	12.9G	7.6G	7.6G
Power over Ethernet			
Power Pin Assignment	1/2+, 3/4-	1/2+, 3/4-	1/2+, 3/4-
Max. Port PoE Budget	30W	30W	30W
Total PoE Budget	120W/200W	120W/200W	60W/120W
Power Supply			
Dual Power Supply	✓	✓	✓
48VDC (45-55VDC)	✓	✓	✓
24VDC (18-36VDC)	✓	✓	-
Environmental Limits			
Operating Temperature	-40-75°C	-40-75°C	-40-75°C
IP Rating	IP40	IP40	IP40
DIN-Rail mounting	✓	✓	✓
Certification			
CE, FCC, RoHS	✓	✓	✓
UL 61010-1	✓	✓	✓



IES2220-16P4GS



IES2210-8P2GC



IES2210-4P2GC



IES2305-4GP1GT



IES2305-4GP1GS



IES2305-4GP1GF



IES2105-4P1T



IES2105-4P1F

# EN50155 Switch



	TNS5800D-16GP4GT	TNS5800D-16P4GT	TNS5800D-8GP4GT	TNS5800D-8P4GT
<b>Interface</b>				
Number of main ports	20	20	12	12
10/100/1000Base-T(X) Bypass M12	4	4	4	4
10/100/1000Base-T(X) PoE M12	16	-	8	-
10/100Base-T(X) PoE M12	-	16	-	8
Console	✓	✓	✓	✓
Relay	✓	✓	✓	✓
<b>Switch Properties</b>				
MAC Address Table	16K	16K	16K	16K
Buffer	12Mbit	12Mbit	12Mbit	12Mbit
Switching Fabric	56G	56G	56G	56G
Jumbo Frame Size	16K	16K	16K	16K
<b>Power over Ethernet</b>				
802.3 AF/AT (PoE+)	✓	✓	✓	✓
Power Pin Assignment	1/2+, 3/4-	1/3+, 2/4-	1/3+, 2/4-	1/3+, 2/4-
Max. Port PoE Budget	30W	30W	30W	30W
Total PoE Budget	100W	100W	100W	100W
<b>Layer 3 Features</b>				
IPv4, IPv6	✓	✓	✓	✓
Inter-VLAN Routing, Static Routing RIPv1/v2, OSPFv2, VRRPv2, NAT	✓	✓	✓	✓
<b>Multicast</b>				
IPv4 PIM-DM/SM	✓	✓	✓	✓
IGMPv1/v2/v3, IGMP Snooping, SSM Mapping	✓	✓	✓	✓
<b>Layer 2 Features</b>				
VLAN, LACP	✓	✓	✓	✓
STP/RSTP/MSTP, ERPSv1/v2, SW-Ring	✓	✓	✓	✓
<b>Management</b>				
Telnet/SSH, HTTP/HTTPS, Console	✓	✓	✓	✓
SNMPv1/v2c/v3, SNMP Trap, RMON	✓	✓	✓	✓
DHCP Server/Client, DHCP Relay, DHCP option82	✓	✓	✓	✓
LLDP, QoS	✓	✓	✓	✓
Port Mirroring	✓	✓	✓	✓
NTP Client	✓	✓	✓	✓
<b>Security</b>				
IEEE 802.1X, RADIUS	✓	✓	✓	✓
DHCP Snooping	✓	✓	✓	✓
Access Control Lists	✓	✓	✓	✓
<b>Power Supply</b>				
110VDC (66-156VDC)	✓	✓	✓	✓
24VDC (18-36VDC)	✓	✓	✓	✓
<b>Environmental Limits</b>				
Operating Temperature	-40~75°C	-40~75°C	-40~75°C	-40~75°C
IP Rating	IP67	IP67	IP67	IP67
Wall mounting	✓	✓	✓	✓
<b>Certification</b>				
CE, FCC, RoHS	✓	✓	✓	✓
UL 61010-1	✓	✓	✓	✓
EN 50155, EN 50121, IEC 61373, EN 45545	✓	✓	✓	✓
SFT (Salt Fog Test)	✓	✓	✓	✓
IEC 62443	✓	✓	✓	✓



	TNS5500D-16GP4GT	TNS5500D-16P4GT	TNS5500D-8GP4GT	TNS5500D-8P4GT
<b>Interface</b>				
Number of main ports	20	20	12	12
10/100/1000Base-T(X) Bypass M12	4	4	4	4
10/100/1000Base-T(X) PoE M12	16	-	8	-
10/100Base-T(X) PoE M12	-	16	-	8
Console	✓	✓	✓	✓
Relay	✓	✓	✓	✓
<b>Switch Properties</b>				
MAC Address Table	16K	16K	16K	16K
Buffer	12Mbit	12Mbit	12Mbit	12Mbit
Switching Fabric	56G	56G	56G	56G
Jumbo Frame Size	16K	16K	16K	16K
<b>Power over Ethernet</b>				
802.3 AF/AT (PoE+)	✓	✓	✓	✓
Power Pin Assignment	1/2+, 3/4-	1/3+, 2/4-	1/3+, 2/4-	1/3+, 2/4-
Max. Port PoE Budget	30W	30W	30W	30W
Total PoE Budget	100W	100W	100W	100W
<b>Multicast</b>				
IGMPv1/v2/v3, IGMP Snooping, SSM Mapping	✓	✓	✓	✓
<b>Layer 2 Features</b>				
VLAN, LACP	✓	✓	✓	✓
STP/RSTP/MSTP, ERPSv1/v2, SW-Ring	✓	✓	✓	✓
<b>Management</b>				
IPv4, IPv6	✓	✓	✓	✓
Telnet/SSH, HTTP/HTTPS, Console	✓	✓	✓	✓
SNMPv1/v2c/v3, SNMP Trap	✓	✓	✓	✓
RMON	✓	✓	✓	✓
DHCP Server/Client	✓	✓	✓	✓
DHCP Relay, DHCP option82	✓	✓	✓	✓
LLDP	✓	✓	✓	✓
QoS	✓	✓	✓	✓
Port Mirroring	✓	✓	✓	✓
NTP Client	✓	✓	✓	✓
<b>Security</b>				
IEEE 802.1X, RADIUS	✓	✓	✓	✓
DHCP Snooping	✓	✓	✓	✓
Access Control Lists	✓	✓	✓	✓
<b>Power Supply</b>				
110VDC (66-156VDC)	✓	✓	✓	✓
24VDC (18-36VDC)	✓	✓	✓	✓
<b>Environmental Limits</b>				
Operating Temperature	-40~75°C	-40~75°C	-40~75°C	-40~75°C
IP Rating	IP67	IP67	IP67	IP67
Wall mounting	✓	✓	✓	✓
<b>Certification</b>				
CE, FCC, RoHS	✓	✓	✓	✓
UL 61010-1	✓	✓	✓	✓
EN 50155, EN 50121, IEC 61373, EN 45545	✓	✓	✓	✓
SFT (Salt Fog Test)	✓	✓	✓	✓

# IEC 61850 Switch



	MES5300-28GS	MES5300-24GT4GS	MES5200-16GT8F-4GS	MES6400PHR-8GT4XS
<b>Interface</b>				
Number of main ports	28	28	28	12
1G/2.5G/10GBase-X SFP Slot	-	-	-	4
100/1000Base-X SFP Slot	28	4	4	-
10/100/1000Base-T(X) RJ45	-	24	16	8
100Base-X SC/FC/ST	-	-	8	-
Console	✓	✓	✓	✓
Relay	✓	✓	✓	✓
<b>Switch Properties</b>				
MAC Address Table	32K	8K	8K	32K
Buffer	32Mbit	4.1Mbit	4.1Mbit	3Mbit
Switching Fabric	90G	56G	56G	96G
Jumbo Frame Size	10K	10K	10K	10K
<b>Multicast</b>				
IGMPv1/v2/v3, IGMP Snooping	✓	✓	✓	✓
<b>Layer 2 Features</b>				
VLAN, LACP	✓	✓	✓	✓
STP/RSTP/MSTP, ERPSv1/v2, MRP, SW-Ring	✓	✓	✓	✓
HSR/PRP	-	-	-	✓
<b>Management</b>				
IPv4, IPv6, NTP Client	✓	✓	✓	✓
Telnet/SSH, HTTP/HTTPS, Console, Modbus TCP	✓	✓	✓	✓
SNMPv1/v2c/v3, SNMP Trap, RMON	✓	✓	✓	✓
DHCP Server/Client, DHCP Relay	✓	✓	✓	✓
LLDP, QoS, Port Mirroring	✓	✓	✓	✓
IEEE 1588v2 (PTPv2)	-	-	-	✓
MMS Server	√(Pending)	√(Pending)	√(Pending)	✓
<b>Security</b>				
IEEE 802.1X, RADIUS, DHCP Snooping	✓	✓	✓	✓
Access Control Lists	✓	✓	✓	✓
<b>Power Supply</b>				
Dual Power Supply, 18-72VDC	✓	✓	✓	✓
85-264VAC (77-300VDC)	✓	✓	✓	✓
<b>Environmental Limits</b>				
Operating Temperature	-40~85°C	-40~85°C	-40~85°C	-40~75°C
IP Rating	IP40	IP40	IP40	IP40
DIN-Rail mounting	-	-	-	✓
Rack mounting	✓	✓	✓	-
<b>Certification</b>				
CE, FCC, RoHS	✓	✓	✓	✓
IEC 61850-3, IEC 1613	✓	✓	✓	√(Pending)

# PROFINET Switch



	PROFINET CC-B	PROFINET CC-B	PROFINET CC-A	PROFINET CC-A
<b>Interface</b>				
Number of main ports	10	20	8	5
1000M/2.5GBase-X SFP Slot	2	-	-	-
1000Base-X SFP Slot	-	4	-	-
10/100/1000Base-T(X) RJ45	8	-	-	-
10/100Base-T(X) RJ45	-	16	8	5
Console	✓	✓	-	-
Relay	✓	✓	-	-
<b>Switch Properties</b>				
MAC Address Table	16K	8K	2K	2K
Buffer	2Mbit	3Mbit	0.75Mbit	0.75Mbit
Switching Fabric	20G	12.8G	1.6G	1G
Jumbo Frame Size	10K	-	-	-
<b>Multicast</b>				
IGMPv1/v2/v3	✓	✓	-	-
IGMP Snooping	✓	✓	-	-
<b>Layer 2 Features</b>				
802.1Q VLAN	✓	✓	-	-
LACP	✓	✓	-	-
STP/RSTP/MSTP, ERPS	✓	✓	-	-
SW-Ring	✓	✓	-	-
MRP (MRM/MRC)	✓	✓	-	-
<b>Management</b>				
Telnet/SSH, HTTP/HTTPS, Console	✓	✓	-	-
SNMPv1/v2c/v3, SNMP Trap	✓	✓	-	-
DHCP Server/Client	✓	✓	-	-
LLDP, QoS	✓	✓	-	-
Port Mirroring	✓	✓	-	-
NTP Client	✓	✓	-	-
<b>Security</b>				
IEEE 802.1X, RADIUS	✓	✓	-	-
Access Control Lists	✓	✓	-	-
<b>Power Supply</b>				
Dual Power Supply	✓	✓	-	-
12-48VDC	✓	✓	✓	✓
<b>Environmental Limits</b>				
Operating Temperature	-40~75°C	-40~75°C	-40~75°C	-40~75°C
IP Rating	IP40	IP40	IP40	IP40
DIN-Rail mounting	✓	✓	✓	✓
<b>Certification</b>				
CE, FCC, RoHS	✓	✓	✓	✓

# Embedded Switch Module



	ICM7428G	IEM6300-20G	IEM6300-12G	IEM6400TSN-8GT4XS
<b>Interface</b>				
Number of main ports	28	20	12	12
1G/2.5G/10GBase-X	-	-	-	4
QSGMII	8	-	-	-
1000Base-X	4	4	4	-
10/100/1000Base-T(X)	16	16	8	8
UART (Console)	✓	✓	✓	✓
<b>Switch Properties</b>				
MAC Address Table	16K	8K	8K	32K
Buffer	12Mbit	4Mbit	4Mbit	3mbit
Switching Fabric	128G	40G	24G	50G
Jumbo Frame Size	16K	9K	9K	10K
<b>TSN Features</b>				
IEEE 1588v2 (PTPv2), 802.1 AS	-	-	-	✓
802.1 CB/QBV/QBU	-	-	-	✓
<b>Layer 3 Features</b>				
IPv4, IPv6	✓	✓	✓	✓
Inter-VLAN Routing, Static Routing RIPv1/v2, OSPFv2, VRRPv2, NAT	✓	-	-	-
<b>Multicast</b>				
IPv4 PIM-DM/SM	✓	-	-	-
IGMPv1/v2/v3, IGMP Snooping	✓	✓	✓	✓
<b>Layer 2 Features</b>				
802.1Q VLAN, LACP	✓	✓	✓	✓
STP/RSTP/MSTP, ERPSv1/v2, SW-Ring	✓	✓	✓	✓
<b>Management</b>				
Telnet/SSH, HTTP/HTTPS, Console	✓	✓	✓	✓
SNMPv1/v2c/v3, SNMP Trap, RMON	✓	✓	✓	✓
DHCP Server/Client, DHCP Relay	✓	✓	✓	✓
LLDP	✓	✓	✓	✓
QoS	✓	✓	✓	✓
Port Mirroring	✓	✓	✓	✓
NTP Client	✓	✓	✓	✓
<b>Security</b>				
IEEE 802.1X, RADIUS	✓	✓	✓	✓
DHCP Snooping	✓	✓	✓	✓
Port Security	✓	✓	✓	✓
Access Control Lists	✓	✓	✓	✓
<b>Power Supply</b>				
3.3VDC±5%	✓	✓	✓	✓
<b>Environmental Limits</b>				
Operating Temperature	-40~75°C	-40~75°C	-40~75°C	-40~75°C
Installation (Embedded mounting)	✓	✓	✓	✓
Dimension(W*H*D)	90mm×72mm×14.6mm	90mm×72mm×14.6mm	90mm×10.4mm×72mm	90mm×18.1mm×72mm
<b>Certification</b>				
CE, FCC, RoHS	✓	✓	✓	✓



	IEM6200-7T3G	IEM6200-8T2G-4D2C	IEM6100-8T-4D2C	IEM615-2D
<b>Interface</b>				
Number of main ports	10	10	8	5
10/100/1000Base-T(X)	3	2	-	-
1000Base-X or 10/100/1000Base-T(X)	-	-	-	-
100Base-X or 10/100Base-T(X)	7	8	8	5
UART (Console)	✓	✓	✓	✓
UART	-	✓ (4)	✓ (4)	✓ (2)
CAN	-	✓ (2)	✓ (2)	-
<b>Switch Properties</b>				
MAC Address Table	4K	4K	16K	2K
Buffer	2Mbit	2Mbit	4Mbit	0.5Mbit
Switching Fabric	9.6G	9.6G	5.6G	1.2G
<b>UART Features</b>				
RS-232/422/485 Optional	-	✓	✓	✓
Baud Rate	-	300bps~115200bps	600bps~921600bps	300bps~115200bps
Data Bit	-	5, 6, 7, 8	5, 6, 7, 8	8
Parity Bit	-	None, Even, Odd, Space, Mark	None, Even, Odd, Space, Mark	None, Even, Odd
Stop Bit	-	1, 1.5, 2	1, 1.5, 2	1, 2
Operating Mode	-	Realcom, TCP Server, TCP Client, UDP, TCP Auto		
<b>CAN Features</b>				
CAN 2.0A/B	-	✓	✓	✓
CAN-H, CAN-L	-	✓	✓	✓
Baud Rate	-	5-1000kbps		
Operating Mode	-	TCP Server/Client, UDP, TCP Auto		
<b>Multicast</b>				
Static Multicast	✓	✓	✓	✓
IGMPv1/v2, IGMP Snooping	✓	✓	✓	✓
<b>Layer 2 Features</b>				
VLAN, Link Aggregation	✓	✓	✓	✓
STP/RSTP, SW-Ring	✓	✓	✓	✓
<b>Management</b>				
Telnet/SSH, HTTP, Console	✓	✓	✓	✓
SNMPv1/v2c, SNMP Trap	✓	✓	✓	✓
DHCP Server/Client	✓	✓	✓	✓
LLDP	✓	✓	✓	✓
Port Mirroring	✓	✓	✓	✓
SNTP Client	✓	✓	✓	✓
<b>Power Supply</b>				
3.3VDC±5%	✓	✓	✓	✓
<b>Environmental Limits</b>				
Operating Temperature	-40~75°C	-40~75°C	-40~85°C	-40~75°C
Installation (Embedded mounting)	✓	✓	✓	✓
Dimension(W*H*D)	72mm×8.9mm×54mm	72mm×9.2mm×54mm	72mm×9.5mm×54mm	55mm×9.7mm×40mm
<b>Certification</b>				
CE, FCC, RoHS	✓	✓	✓	✓

# Media Converter Chassis & Card



RACK2100-R



RACK2000D

Media Converter Slot		
MC Slot	18	16
NMU Slot	1	-
Adapted Media Converter Card	ECU100 series, ECU100M series	
<b>Management</b>		
SNMPv1/v2c	✓	-
Web(HTTP)	✓	-
DHCP Client	✓	-
NTP Client	✓	-
SMTP Alarm	✓	-
<b>Power Supply</b>		
Dual Power Supply	✓	✓
85-264VAC/DC	✓	-
100-260VAC	-	✓
<b>Environmental Limits</b>		
Operating Temperature	-40-75°C	-20-60°C
Storage Temperature	-40-85°C	-20-60°C
Relative Humidity	5% - 95% (no condensation)	5% - 95% (no condensation)
Installation	Rack mounting	
Dimension(W*H*D)	432.04mm×88.1mm×278mm	483.4mm×90.5mm×291.2mm
<b>Certification</b>		
CE, FCC, RoHS	✓	✓



ECU100M-1GT2GS



ECU100M-2GT1GF



ECU100M-1GT1GF



ECU100M-2T1F



ECU100M-1T1F

Interface					
Number of main ports	3	3	2	3	2
1000Base-X SFP	2	-	-	-	-
1000Base-X SC/FC/ST	-	1	1	-	-
10/100/1000Base-T(X) RJ45	1	2	1	-	-
100Base-X SC/FC/ST	-	-	-	1	1
10/100Base-T(X) RJ45	-	-	-	2	1
<b>Transmission Distance</b>					
Ethernet	100M				
Single-mode Fiber	20/40/80KM@1310NM or 1550NM				
Multi-mode Fiber	2KM@1310NM				
<b>Switch Properties</b>					
MAC Address Table	8K	8K	8K	2K	2K
Buffer	1Mbit	1Mbit	1Mbit	0.75Mbit	0.75Mbit
Switching Fabric	14G	14G	14G	0.8G	0.8G
<b>Environmental Limits</b>					
Operating Temperature	-40-75°C				
Embedded Mounting	✓	✓	✓	✓	✓
<b>Certification</b>					
CE, FCC, RoHS	✓	✓	✓	✓	✓



MODEL3012-C



MODEL1100-C

Interface		
Number of main ports	2	2
1000Base-X SFP	-	-
1000Base-X SC/FC/ST	1	-
10/100/1000Base-T(X) RJ45	1	-
100Base-X SC/FC/ST	-	1
10/100Base-T(X) RJ45	-	1
<b>Transmission Distance</b>		
Ethernet	100M	
Single-mode Fiber	20/40/80KM@1310NM or 1550NM	
Multi-mode Fiber	2KM@1310NM	
<b>Switch Properties</b>		
MAC Address Table	1K	1K
Buffer	12KB	1Mbit
Switching Fabric	4G	0.4G
<b>Environmental Limits</b>		
Operating Temperature	-10-60°C	
Installation	Embedded Mounting	
<b>Certification</b>		
CE, FCC, RoHS	✓	✓



ECU100-1GT2GS



ECU100-2GT1GF



ECU100-1GT1GF



ECU100-2T1F



ECU100-1T1F

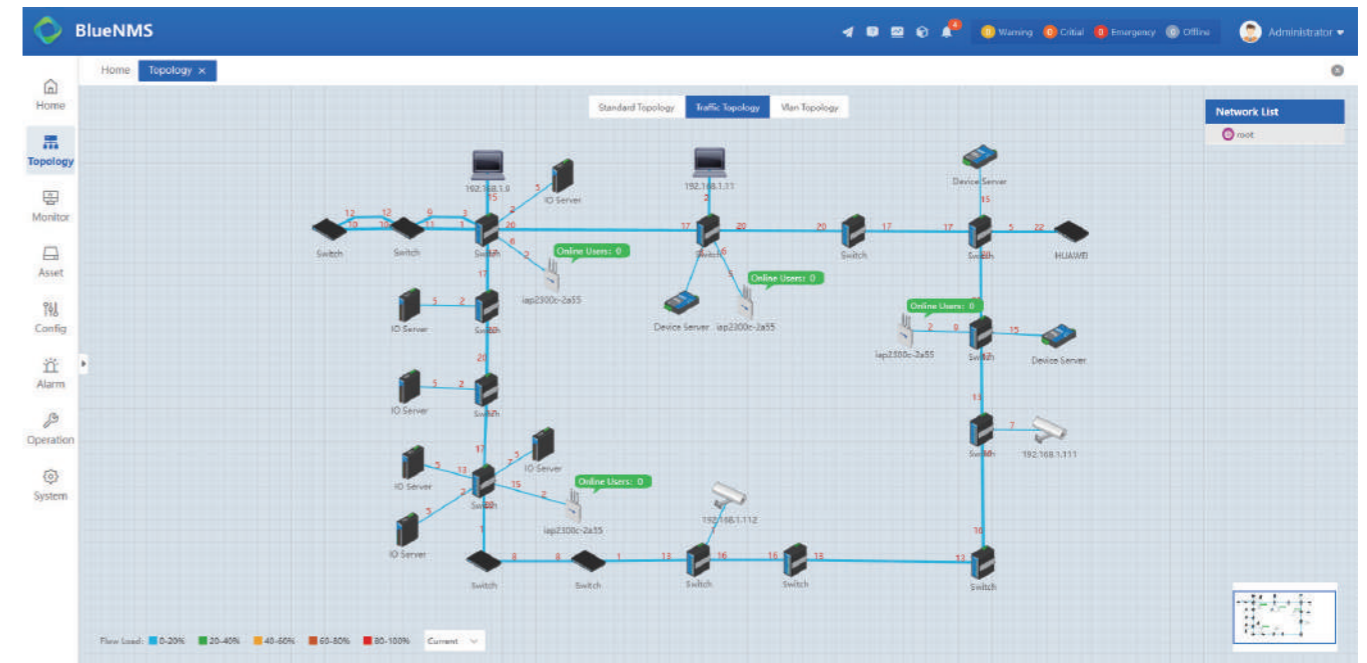
Interface					
Number of main ports	3	3	2	3	2
1000Base-X SFP	2	-	-	-	-
1000Base-X SC/FC/ST	-	1	1	-	-
10/100/1000Base-T(X) RJ45	1	2	1	-	-
100Base-X SC/FC/ST	-	-	-	1	1
10/100Base-T(X) RJ45	-	-	-	2	1
<b>Transmission Distance</b>					
Ethernet	100M				
Single-mode Fiber	20/40/80KM@1310NM or 1550NM				
Multi-mode Fiber	2KM@1310NM				
<b>Switch Properties</b>					
MAC Address Table	8K	8K	8K	2K	2K
Buffer	1Mbit	1Mbit	1Mbit	0.75Mbit	0.75Mbit
Switching Fabric	14G	14G	14G	0.8G	0.8G
<b>Environmental Limits</b>					
Operating Temperature	-40-75°C				
Embedded Mounting	Embedded Mounting				
<b>Certification</b>					
CE, FCC, RoHS	✓	✓	✓	✓	✓



# Network Management Software



Operating System	
Windows	Windows Server 2016, Windows 7/10/11 64-bit OS
Linux	Linux 64-bit OS
Performance	
Device Quantity	Max. of nodes: 2000
Connected Users	Max. of web concurrent user number: 100
Response Speed	Second-level
Topology Management	
Device Discovery	3onedata NMS protocol discovery, IP address range discovery, 3rd-party device smart discovery
Topology View	Standard network topology, traffic topology, VLAN topology, GIS map topology, server room rack topology, wireless connection topology
Network Management	Topology link, subnet and device cluster management
Panel Management	Visual management of physical panel and logical panel
Monitor Management	
Device Details	Provide real-time device details dashboard to show all static and dynamic indicators of devices and ports
Monitoring Analysis	device availability analysis, network bandwidth utilization analysis, device packet loss analysis, device Syslog
Asset Management	
Asset List	Asset overview, asset type list, wireless device list, camera list, unknown device list
Asset Management	Device manufacturer management, device type management, device model management, device icon management
Device Configuring	
Device Configuring	Support basic configuration, remote access (Telnet, SSH), SNMP query, network diagnostics, configuration backup, configuration recovery, remote upgrade
Wireless Configuring	Support wireless group configuration and maintenance, wireless user list, wireless user log
Alarm Management	
Alarm Configuring	Alarm Configuration (Level, Alarm Reason, Solution, Business Impact); Notification Configuration (SMS, Email, Sound); Frequent Alarm Configuration, Trap Receiving Configuration
Alarm List	Eeal-time alarm list, historical alarm list, and events reported by equipment
Alarm Playback	Network-wide alarm playback, AP history user playback, wireless topology playback
Alarm Statistics	Device alarm statistics, current alarm statistics, historical alarm statistics



## Media Converter

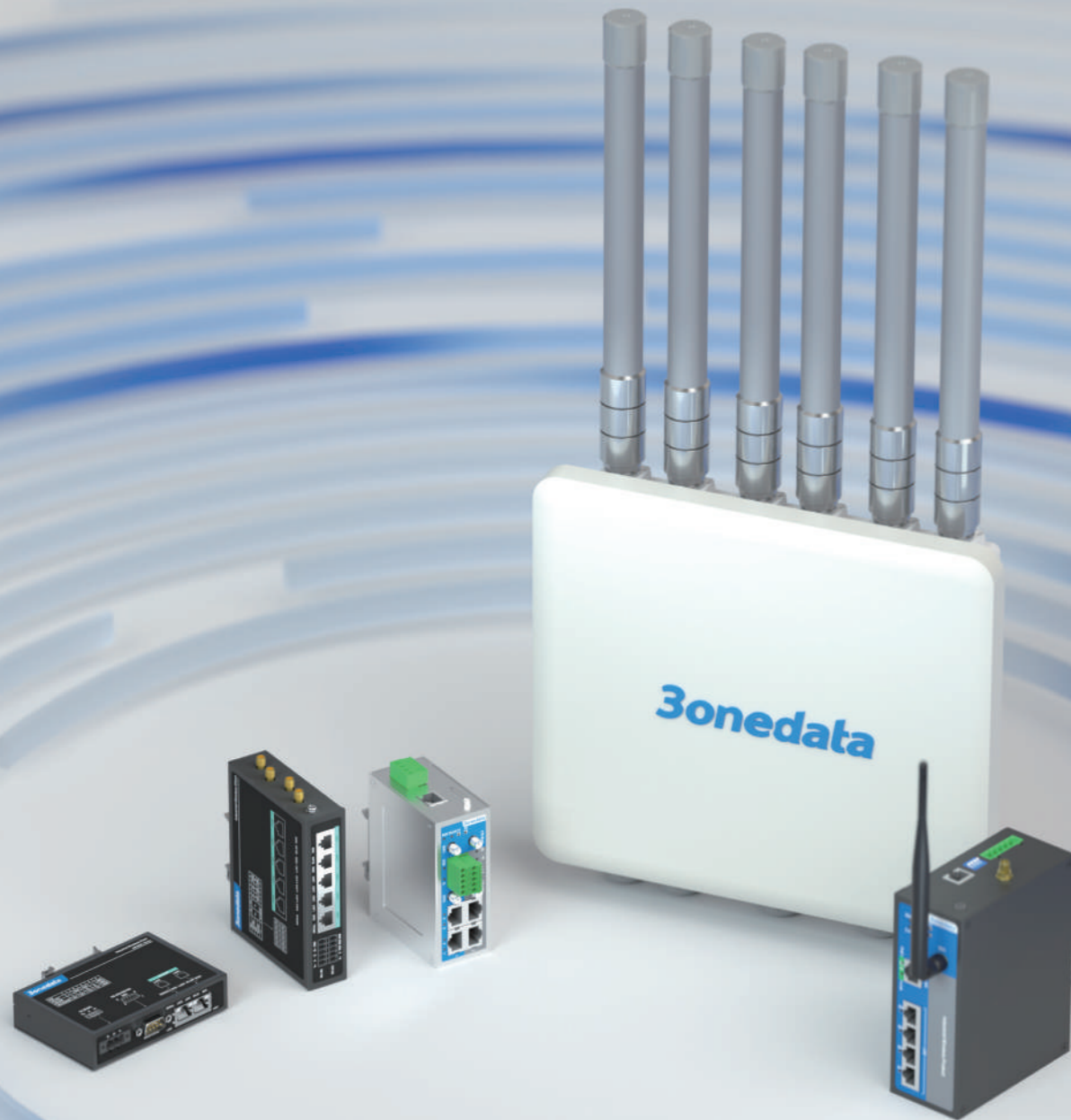


INDUSTRIAL ETHERNET SWITCHES



Interface	Number of main ports	100M	100M	100M	100M	100M	100M	100M	100M
1000Base-X SFP	2	3	2	3	2	2	2	3	2
1000Base-X SFP	1	1	-	1	-	1	-	-	-
1000Base-X SC/FC/ST	-	-	-	-	1	-	-	1	-
10/100/1000Base-T(X) RJ45	-	-	-	2	2	1	1	-	-
10/100/1000Base-T(X) PoE RJ45	1	2	-	-	-	-	-	-	-
100Base-X SC/FC/ST	-	-	1	-	-	-	-	1	1
10/100Base-T(X) RJ45	-	-	-	-	-	-	-	2	1
10/100Base-T(X) PoE RJ45	-	-	1	-	-	-	-	-	-
Transmission Distance		100M							
Ethernet		100M							
Single-mode Fiber		20/40/80KM@1310NM or 1550NM							
Multi-mode OM3 Fiber		2KM@1310NM							
Switch Properties		14G	14G	1.6G	18.2G	18.2G	18.2G	18.2G	1G
MAC Address Table	8K	8K	2K	2K	2K	2K	2K	2K	
Power Supply		-	-	-	✓	✓	✓	✓	✓
12-48VDC	-	-	-	-	✓	✓	✓	✓	
100-240VAC/DC	-	-	-	✓	✓	✓	✓	✓	
45-55VDC	✓	✓	✓	-	-	-	-	-	
Environmental Limits		-40~75°C							
Operating Temperature	-40~80°C	-40~80°C	-40~75°C	-40~75°C	-40~75°C	-40~75°C	-40~75°C	-40~75°C	-40~75°C
DIN-Rail mounting	✓	✓	✓	✓	✓	✓	✓	✓	
Certification		✓	✓	✓	✓	✓	✓	✓	✓
CE, FCC, RoHS	✓	✓	✓	✓	✓	✓	✓	✓	

# INDUSTRIAL WIRELESS NETWORKING



## Wireless AP



	IAP3600S-2225-2GT	IAP3300L-2E-4GT1GP	IAP2300-2N2-5T
<b>Interface</b>			
10/100/1000Base-T(X) LAN/WAN RJ45	1	1	-
10/100/1000Base-T(X) LAN RJ45	1	4	-
10/100Base-T(X) WAN RJ45	-	-	1
10/100Base-T(X) LAN RJ45	-	-	4
5G Wi-Fi Antenna Interface	2	-	-
2.4G Wi-Fi Antenna Interface	2	-	2
2.4G/5G Wi-Fi Antenna Interface	-	2	-
<b>WLAN Feature</b>			
WLAN Standard	IEEE 802.11 a/b/g/n/ac/ax	IEEE 802.11 a/b/g/n/ac/ax	IEEE 802.11 a/b/g/n
Radio Frequency	802.11b/g/n/ax: 2.412GHz-2.4835GHz 802.11a/n/ac/ax: 5.18GHz-5.825GHz	802.11b/g/n/ax: 2.412GHz-2.4835GHz 802.11a/n/ac/ax: 5.18GHz-5.825GHz	802.11 b/g/n: 2.412GHz-2.4835GHz
RF Power	20dBm	27dBm	23dBm
Encryption Type	WPA/WPA2/WPA3/RADIUS	WPA/WPA2/WPA3/RADIUS	WPA/WPA2/WPA3/RADIUS
<b>Management</b>			
Operating Mode	Router, AP, Bridge, Client	Router, AP, Bridge, Client, Dual-link	Router, AP, Bridge, Client
Web (HTTP/HTTPS)	✓	✓	✓
SSH	✓	✓	✓
SNMPv1/v2c, SNMP Trap	✓	✓	✓
AC Management	✓	✓	✓
Wireless User white list	✓	✓	✓
Wireless User Black list	✓	✓	✓
IP filtering	✓	✓	✓
MAC filtering	✓	✓	✓
URL filtering	✓	✓	✓
Port Forwarding	✓	✓	✓
Port Redirection	✓	✓	✓
QoS (Traffic Shaping)	✓	✓	✓
Syslog	✓	✓	✓
NTP Client	✓	✓	✓
<b>Power Supply</b>			
48VDC PoE Input	✓	✓	✓
12-36VDC	-	-	✓
12-48VDC	✓	✓	-
<b>Environmental Limit</b>			
Operating Temperature	-40~75°C	-40~55°C	-40~75°C
Storage Temperature	-40~85°C	-40~85°C	-40~85°C
Relative Humidity	5% ~ 95% (no condensation)	5% ~ 95% (no condensation)	5% ~ 95% (no condensation)
IP Rating	IP68	IP40	IP30
Installation	Wall/Pole mounting	DIN-Rail or wall mounting	DIN-Rail mounting
Dimension(W*H*D)	275mm×245mm×76mm	53mm×138mm×110mm	53mm×138mm×110mm
<b>Certification</b>			
CE, FCC, RoHS	✓	✓	✓

# Wireless Roaming Client



Interface	IAP2300C 2E-2T-1D	IAP2300C 2E2E-2T-1D	IAP2300C 2E-5T-1D	IAP2300C 2E2E-5T-1D	IAP2200PRO 2525-5GT-1D
10/100/1000Base-T(X) LAN RJ45	-	-	-	-	5
10/100Base-T(X) WAN RJ45	1 (WAN/LAN)	1 (WAN/LAN)	1	1	-
10/100Base-T(X) LAN RJ45	1	1	4	4	-
5G Wi-Fi Antenna Interface	-	-	-	-	4
2.4G/5G Wi-Fi Antenna Interface	2	4	2	4	-
RS-232/422/485	1	1	-	-	-
RS-232/485	-	-	1	1	-
RS-485	-	-	-	-	1
<b>Serial Interface Feature</b>					
Baud Rate	300bps-115200bps	300bps-115200bps	300bps-115200bps	300bps-115200bps	9600/115200 bps
Data Bit	8	8	8	8	8
Parity Bit	None, Even, Odd	None, Even, Odd	None, Even, Odd	None, Even, Odd	None
Stop Bit	1	1	1	1	1
Interface Form	DB9 Male	DB9 Male	Terminal Block	Terminal Block	Terminal Block
<b>WLAN Feature</b>					
WLAN Standard	IEEE 802.11a/b/g/n				IEEE 802.11 a/b/g/n/ac
Radio Frequency	802.11B/g/n: 2.412GHz-2.4835GHz				802.11 a/b/g/n/ac: 4.920GHz-6.060GHz
RF Power	20dBm				27dBm
Encryption Type	WPA/WPA2/WPA3/RADIUS				WPA/WPA2
Fast Roaming	✓	-	✓	-	-
Seamless Roaming	-	✓	-	✓	✓
<b>Management</b>					
Operating Mode	Router, AP, Bridge, Client	Router, AP, Bridge, Client, Dual-link	Router, AP, Bridge, Client	Router, AP, Bridge, Client, Dual-link	Bridge, Client
Web (HTTP/HTTPS), SSH	✓	✓	✓	✓	✓
SNMPv1/v2c, SNMP Trap	✓	✓	✓	✓	-
AC Management	✓	✓	✓	✓	-
Serial Device Server	RealCom Mode, TCP Server Mode, TCP Client Mode, UDP Server Mode, UDP Client operating mode				TCP Server Mode, TCP Client Mode, UDP operating mode
Modbus Conversion	RTU Master, RTU Slave, ASCII Master, ASCII Slave operating mode				RTU Slave mode
Wireless User Black/white list	✓	✓	✓	✓	-
IP/MAC/URL filtering	✓	✓	✓	✓	-
Syslog	✓	✓	✓	✓	✓
NTP Client	✓	✓	✓	✓	-
<b>Power Supply</b>					
Dual Power Supply	-	-	✓	✓	-
12-36VDC	✓	✓	✓	✓	-
12-48VDC	-	-	-	-	✓
<b>Environmental Limit</b>					
Operating Temperature	-40~75°C				-20~55 °C
Storage Temperature	-40~85°C				-40~85 °C
Relative Humidity	5% - 95% (no condensation)				5% - 95% (no condensation)
IP Rating	IP30				IP41
Installation	DIN-Rail or wall mounting				DIN-Rail or wall mounting
Dimension(W*H*D)	26mm×114mm×77mm		30mm×124mm×96mm		90mm×32mm×140mm
<b>Certification</b>					
CE, FCC, RoHS	✓	✓	✓	✓	✓

# Cellular Router



Interface	ICPET200-A-2GT-1D	ICPET200-R-2GT-1D	IRT1300-2A-3T1D	IRT1300-2A-3T1D-22	IRT5300L-5T2D
10/100/1000Base-T(X) WAN RJ45	1	1	-	-	-
10/100/1000Base-T(X) LAN RJ45	1	1	-	-	-
10/100Base-T(X) WAN RJ45	-	-	1	1	1
10/100Base-T(X) LAN RJ45	-	-	2	2	4
RS-232/422/485	1	1	1 (RS-232/485)	1 (RS-232/485)	1
SIM Card Slot	1 (Nano-SIM)	1 (Nano-SIM)	2 (Nano-SIM)	2 (Nano-SIM)	2 (Micro-SIM)
<b>Cellular Network</b>					
5G-NR (5ANSA)	N1/N28/N41/N77/N78/N79	N1/N3/N5/N8/N28/N41/N77/N78/N79	-	-	-
LTE-FDD	B1/B2/B3/B5/B7/B8/B20/B28	B1/B3/B5/B8	B1/B3/B5/B8	B1/B3/B5/B8	B1/2/3/4/5/7/8/12/13/18/19/20/26/28/66
LTE-TDD	B34/B38/B39/B40/B41	B34/B38/B39/B40/B41	B34/B38/B39/B40/B41	B34/B38/B39/B40/B41	B34/38/39/40/41
WCDMA	B1/2/5/8	B1/B5/B8	B1/B5/B8	B1/B5/B8	B1/2/4/5/6/8/19
<b>VPN Tunnel</b>					
GRE, PPTP, L2TP, IPSec, OpenVPN	✓	✓	✓	✓	✓
<b>Management</b>					
Web (HTTP/HTTPS), SSH, SNMP, Syslog	✓	✓	✓	✓	✓
IP/MAC/URL filtering, Port Forwarding/Redirection	✓	✓	✓	✓	✓
RIP, OSPF, VRRP, NAT	✓	✓	✓	✓	✓
<b>Power Supply</b>					
Single 9~36VDC	✓	✓	✓	✓	✓
Dual 12~36VDC	-	-	-	-	✓
<b>Environmental Limit</b>					
Operating Temperature	-40~75°C				-40~75°C
IP Rating	IP30				IP40
Installation (DIN-Rail mounting)	✓	✓	✓	✓	✓
<b>Certification</b>					
CE, FCC, RoHS	✓	✓	✓	✓	✓

# INDUSTRIAL DEVICE NETWORKING



# Secure Serial Device Server



Serial Interface	NP5000 series(RS-485)	NP5000 series(3IN1)	NP5100 series(3IN1)	NP5200 series(3IN1)
Quantity	4/8	1/2/4/8	8/16/32	1/2/4
RS-232	-	✓	✓	✓
RS-422	-	✓	✓	✓
RS-485	✓	✓	✓	✓
Baud Rate	110bps-115200bps (customizable 110bps-921600bps)		110bps-921600bps	110bps-115200bps
Data Bit	5, 6, 7, 8		5, 6, 7, 8	5, 6, 7, 8
Parity Bit	None, Even, Odd, Space, Mark		None, Even, Odd, Space, Mark	None, Even, Odd, Space, Mark
Stop Bit	1, 1.5, 2		1, 1.5, 2	1, 1.5, 2
Serial Interface Form	Terminal Block	DB9 Male, 8-pin RJ45	8-pin RJ45	DB9 Male
<b>Ethernet Interface</b>				
10/100Base-T(X) RJ45	2	1/2	2	2
Dual IPs & MACs	✓	✓	✓	✓
Single IP	✓	✓	✓	✓
<b>Management</b>				
OLED Display	-	-	✓	-
Web (HTTP/HTTPS), Telnet, SSH, Console	✓	✓	✓	✓
SNMPv1/v2c/v3	✓	✓	✓	✓
SMTP Alarm	✓	✓	✓	✓
NTP Client	✓	✓	✓	✓
Operating 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 and DRDAS TCP Server			
Encrypted Socket Transmission	✓	✓	✓	✓
<b>Power Supply</b>				
Dual Power Supply	-	-	✓	✓
9-48VDC	-	-	-	-
12-48VDC	✓	✓	-	✓
85-265VAC	-	-	✓	-
<b>Environmental Limit</b>				
Operating Temperature	-40-75°C		-40-75°C	-40-75°C
Storage Temperature	-40-85°C		-40-85°C	-40-85°C
Relative Humidity	5% - 95% (no condensation)		5% - 95% (no condensation)	5% - 95% (no condensation)
Installation	Desktop/wall mounting		Rack mounting	DIN-Rail mounting
Dimension(W*H*D)	1/2-port model: 97mm×25mm×110mm 4/8-port model: 170mm×30mm×110mm		440mm×44mm×265.6mm	1/2-port model: 33mm×138mm×110mm 4-port model: 53mm×138mm×110mm
<b>Certification</b>				
CE, FCC, RoHS	✓	✓	✓	✓
UL 62368-1	✓	✓	✓	✓
UL 61010-1	-	-	✓	-
IEC 62443	-	-	✓	-

# Serial Device Server



Serial Interface	NP301	NP302T-2D(RS-232)	NP302T-2D(RS-485)	NP314T-4D(RS-485)	NP314T-4D(3IN1)	NP318T-8D(RS-485)	NP318T-8D(3IN1)	NP316T-16D(RS-485)	NP316T-16D(3IN1)
Quantity	1	2	2	4	4	8	8	16	16
RS-232	✓	✓	-	-	✓	-	✓	-	✓
RS-422	✓	-	-	-	✓	-	✓	-	✓
RS-485	✓	-	-	✓	✓	✓	✓	✓	✓
Baud Rate	300bps-115200bps		110bps-115200bps (customizable 110bps-921600bps)		110bps-115200bps (customizable 110bps-921600bps)		110bps-115200bps (customizable 110bps-921600bps)		✓
Data Bit	5, 6, 7, 8		5, 6, 7, 8		5, 6, 7, 8		5, 6, 7, 8		✓
Parity Bit	None, Even, Odd, Space, Mark		None, Even, Odd, Space, Mark		None, Even, Odd, Space, Mark		None, Even, Odd, Space, Mark		✓
Stop Bit	1, 1.5, 2		1, 1.5, 2		1, 1.5, 2		1, 1.5, 2		✓
Serial Interface Form	Terminal Block, DB9 Male	8-pin RJ45	8-pin RJ45	Terminal Block	8-pin RJ45	Terminal Block	8-pin RJ45	Terminal Block	8-pin RJ45
<b>Ethernet Interface</b>									
10/100Base-T(X) RJ45	1	1	1	2	2	2	2	2	2
Dual IPs & MACs	-	-	-	✓	✓	✓	✓	✓	✓
Single IP	✓	✓	✓	✓	✓	✓	✓	✓	✓
<b>Management</b>									
Web (HTTP), Telnet, SSH	✓ (No SSH)		✓		✓		✓		✓
<b>Power Supply</b>									
Dual Power Supply	-	-	-	-	-	-	-	-	✓
9-48VDC	✓	✓	✓	-	-	-	-	-	-
12-48VDC	-	-	-	✓	✓	✓	✓	✓	-
85-265VAC	-	-	-	-	-	-	-	-	✓
<b>Environmental Limit</b>									
Operating Temperature	-40-75°C		-40-75°C		-40-75°C		-40-75°C		-40-75°C
Wall/DIN-Rail Mounting	✓	✓	✓	-	-	-	-	-	-
Desktop/wall mounting	-	-	-	✓	✓	✓	✓	✓	-
Rack Mounting	-	-	-	-	-	-	-	✓	✓
<b>Certification</b>									
CE, FCC, RoHS	✓	✓	✓	✓	✓	✓	✓	✓	✓
UL 62368-1	✓	✓	✓	✓	✓	✓	✓	✓	✓
UL 61010-1	-	-	-	✓	✓	✓	✓	✓	-
IEC 62443	-	-	-	✓	✓	✓	✓	✓	-

# CAN Server



CP202-2CI



ICP222-1T2F-2CI



CP300-W0-1T-2CI

CAN Interface	CP202-2CI	ICP222-1T2F-2CI	CP300-W0-1T-2CI
Quantity	2	2	2
CAN 2.0A, CAN 2.0B Protocol	✓	✓	✓
Standard Baud Rate	5kbps-1000kbps	5kbps-1000kbps	5kbps-1000kbps
Interface Form	Terminal Block	Terminal Block	Terminal Block
Ethernet Interface			
10/100Base-T(X) RJ45	1	1	1
100Base-X SC/FC/ST	-	2	-
Ring (SW-Ring)	-	✓	-
WLAN Feature			
Wi-Fi4 (802.11b/g/n)	-	-	✓
Operating Mode	-	-	AP, STA
Management			
Web (HTTP/HTTPS), Telnet/SSH	✓	✓	✓
Operating Mode	TCP Server, TCP Client, UDP Server, UDP Client, UDP Rang and UDP Multicast		
Power Supply			
12-48VDC	✓	✓	✓
Environmental Limits			
Operating Temperature	-40~75°C	-40~75°C	-40~75°C
Installation	Wall Mounting	DIN-Rail mounting	Wall Mounting
Certification			
CE, FCC, RoHS	✓	✓	✓
UL 62368-1	✓	✓	✓

# Fieldbus Modem



MC201



IPB200



IPB201

Fieldbus Interface	MC201	IPB200	IPB201
Quantity	1	1	1
CAN	✓	-	-
Profibus	-	✓	✓
Interface Form	Terminal Block	DB9 Female	DB9 Female
Baud Rate	2.5kbps-1000kbps	9600bps-12Mbps	9600bps-12Mbps
Fiber Optic			
Quantity	1	1	2
Interface Form	SC/FC/ST	SC/ST	SC/ST
Single-mode	15KM@1310NM or 1550NM	20/40/60KM@1310NM or 1550NM	20/40/60KM@1310NM or 1550NM
Multi-mode	2KM@1310NM	2KM@1300NM	2KM@1300NM
Link Type	P2P	P2P	P2P, Ring
Power Supply			
5VDC	✓	-	-
12-48VDC	-	-	-
18-32VDC	-	✓	✓
Environmental Limits			
Operating Temperature	-40~75°C	-20~70 °C	-20~70 °C
Storage Temperature	-40~85°C	-40~85°C	-40~85°C
Relative Humidity	5% ~ 95% (no condensation)	5% ~ 95% (no condensation)	5% ~ 95% (no condensation)
Installation	Wall Mounting	DIN-Rail mounting	DIN-Rail mounting
Dimension(W*H*D)	69mm×22mm×100mm	30mm×120mm×80mm	30mm×120mm×80mm
Certification			
CE, FCC, RoHS	✓	/	/

# Modbus Gateway



Serial Interface	Quantity	1	1	2	2	4	4	8	8	1	2	4	
RS-232	-	✓	-	-	✓	-	✓	-	✓	✓	✓	✓	
RS-422	✓	✓	✓	✓	✓	-	✓	-	✓	✓	✓	✓	
RS-485	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Baud Rate		110bps-115200bps				110bps-115200bps				110bps-15200bps (customizable 110bps-921600bps)			
Data Bit		7, 8				7, 8				7, 8			
Parity Bit		None, Even, Odd, Space, Mark				None, Even, Odd, Space, Mark				None, Even, Odd, Space, Mark			
Stop Bit		1, 2				1, 2				1, 2			
Ethernet Interface													
10/100Base-T(X) RJ45	1	1	1	1	2	2	2	2	2	2	2	2	
Dual IPs & MACs	-	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	
Single IP	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Management													
Web (HTTP/HTTPS), Telnet, SSH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Console	-	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	
Operating Mode		RTU Master, RTU Slave, ASCII Master and ASCII Slave				RTU Master, RTU Slave, ASCII Master and ASCII Slave				RTU Master, RTU Slave, ASCII Master and ASCII Slave			
Power Supply													
Dual Power Supply	-	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓	
12-48VDC	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Environmental Limits													
Operating Temperature		-40~75°C				-40~75°C				-40~75°C			
Installation		Wall Mounting				Desktop/Wall Mounting				DIN-Rail mounting			
Certification													
CE, FCC, RoHS	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
UL 62368-1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	

# Protocol Gateway



IGW3300-2T-DB-P  
(24VDC)



IGW3200-2T1D-TB-P  
(24VDC)



IGW3500-2T1D-TB-P  
(24VDC)



IGW3800-2T1D-TB-P(RS485)-P  
(24VDC)

Serial Interface				
Quantity	1	1	1	1
RS-485	✓	✓	✓	✓
Baud Rate	All, mostly 12Mbit/s	1200bps-115200bps	1200bps-115200bps	1200bps-115200bps
Interface Type	DB9	3-digit wiring terminal	3-digit wiring terminal	4-digit wiring terminal
Protocol Conversion	Profibus to Profinet	Modbus RTU to Profinet	Modbus RTU to Ethernet/IP	Modbus RTU to EtherCAT
Master-Slave	Profibus master	Modbus RTU master-slave optional		
Protocol conversion time	< 15ms	< 15ms	< 15ms	< 15ms
Node scale	125	32	32	32
Ethernet Interface				
10/100Base-T(X) RJ45	2	2	2	2
Support Protocol	Profinet	Profinet	Ethernet/IP	EtherCAT
Support Ring	✓	✓	-	-
Single IP	✓	✓	✓	✓
Input Bytes	1440	1440	1500	512
Output Bytes	1440	1440	1500	512
Configuration Tool				
3onedata Configuration Studio	-	✓	✓	✓
Profibus Configuration Studio	✓	-	-	-
Configuration Interface	RJ45	RJ45	RJ45	RJ45
Power Supply				
24 VDC ± 10%	✓	✓	✓	✓
Interface Type	3-PIN	3-PIN	3-PIN	3-PIN
Environmental Limits				
Protection Grade	IP20	IP20	IP20	IP20
Weight	330g	330g	330g	330g
Operating Temperature	-20-70°C	-20-70°C	-20-70°C	-20-70°C
Storage Temperature	-40-85°C	-40-85°C	-40-85°C	-40-85°C
Relative Humidity	5% - 95% (no condensation)	5% - 95% (no condensation)	5% - 95% (no condensation)	5% - 95% (no condensation)
Installation	DIN-rail Mounting	DIN-rail Mounting	DIN-rail Mounting	DIN-rail Mounting
Dimension(W*H*D)	33mm×110mm×75mm	33mm×110mm×75mm	33mm×110mm×75mm	33mm×110mm×75mm
Certification				
CE, FCC, RoHS	✓	✓	✓	✓



IGW3200-4T-RJ-P(24VDC)



IGW3500-4T-P(24VDC)

Modbus TCP Interface		
Quantity	2	2
Maximum Modbus TCP Server connections	16	16
Configurable Commands	32	32
Maximum Simultaneous Connections	10	10
Protocol Conversion	Modbus TCP to Profinet	Modbus TCP to EtherNet/IP
Protocol Conversion Time	< 15ms	< 15ms
Support Speed	10/100M full duplex	10/100M full duplex
Mode	Client/Server optional	Client/Server optional
Ethernet Interface		
10/100Base-T(X) RJ45	2	2
Support Protocol	Profinet	Ethernet/IP
Support Ring	✓	-
Single IP	✓	✓
Input Bytes	1440	1500
Output Bytes	1440	1500
Configuration Tool		
3onedata Configuration Studio	✓	✓
Configuration Interface	RJ45	RJ45
Power Supply		
Dual Power Supply	-	-
24 VDC ± 10%	✓	✓
Interface Type	3-PIN	3-PIN
Environmental Limits		
Protection Grade	IP20	IP20
Weight	330g	330g
Operating Temperature	-20-70°C	-20-70°C
Storage Temperature	-40-85°C	-40-85°C
Relative Humidity	5% - 95% (no condensation)	5% - 95% (no condensation)
Installation	DIN-rail Mounting	DIN-rail Mounting
Dimension(W*H*D)	33mm×110mm×75mm	33mm×110mm×75mm
Certification		
CE, FCC, RoHS	✓	✓

## Serial-to-Fiber Modem



MODEL277



MODEL277A



MODEL277B

Fieldbus Interface			
Quantity	1	1	1
RS-232	✓	✓	-
RS-422	✓	✓	✓
RS-485	✓	✓	✓
Interface Form	Terminal Block	Terminal Block	Terminal Block
Baud Rate	300bps-115200bps	300bps-115200bps	300bps-115200bps
Fiber Optic			
Quantity	1	1	1
Interface Form	SC/FC/ST	SC/FC/ST	SC/FC/ST
Single-mode	20/40/60/80/100/120KM@1310NM or 1550NM		
Multi-mode	2KM@1310NM		
Link Type	P2P	P2P	P2P
Power Supply			
5VDC	-	✓	✓
12-48VDC	✓	-	-
-48VDC	-	✓	✓
220VAC	-	✓	✓
Certification			
CE, FCC, RoHS	✓	✓	✓

## USB-to-Serial Converter



USB4232



USB4485



USB8232I



USB8485I

Serial Interface				
Conversion	USB to 4-port RS-232	USB to 4-port RS-422/485	USB to 8-port RS-232	USB to 8-port RS-422/485
RS-232	✓	-	✓	-
RS-422	-	✓	-	✓
RS-485	-	✓	-	✓
USB	✓	✓	✓	✓
Baud Rate	300bps-115200bps	300bps-230400bps	300bps-115200bps	300bps-115200bps
Interface Form	DB9 Male, USB	DB9 Male, USB	DB9 Male, USB	DB9 Male, USB
Surge Protection	1500W	1500W	-	-
Electrostatic Protection	15kV	15kV	15kV	15kV
Power Supply				
External Power Supply	5VDC	5VDC	9VDC	9VDC
Power over USB	✓	✓	-	-
Environmental Limits				
Operating Temperature	-20-60°C	-20-60°C	-40-75°C	-40-75°C
Storage Temperature	-40-85°C	-40-85°C	-40-85°C	-40-85°C
Relative Humidity	5% - 95% (no condensation)	5% - 95% (no condensation)	5% - 95% (no condensation)	5% - 95% (no condensation)
Installation	Desktop mounting	Desktop mounting	Desktop mounting	Desktop mounting
Dimension(W*H*D)	160mm×28mm×94mm	160mm×28mm×94mm	230mm×40mm×148mm	230mm×40mm×148mm
Certification				
CE, FCC, RoHS	✓	✓	✓	✓

## Interface Converter/Hub/Repeater



IMF204



IMF208



IMF2100

Fieldbus Interface			
Quantity	4	8	1
RS-232	-	-	✓
RS-422	-	-	✓
RS-485	✓	✓	✓
Interface Form	Terminal Block	Terminal Block	Terminal Block
Baud Rate	0-115200bps	0-115200bps	300bps-115200bps
Fiber Optic			
Quantity	2	2	1/2
Interface Form	SC/FC/ST	SC/FC/ST	SC/FC/ST
Single-mode	20KM@1310NM or 1550NM	20KM@1310NM or 1550NM	20/40/60KM@1310NM or 1550NM
Multi-mode	2KM@1310NM	2KM@1310NM	2KM@1310NM
Link Type	Ring	Ring	P2P or Ring
Power Supply			
5VDC	-	-	-
12-48VDC	✓	✓	✓
220VAC	✓	-	✓
Certification			
CE, FCC, RoHS	✓	✓	✓



MODEL485P



SW485GI

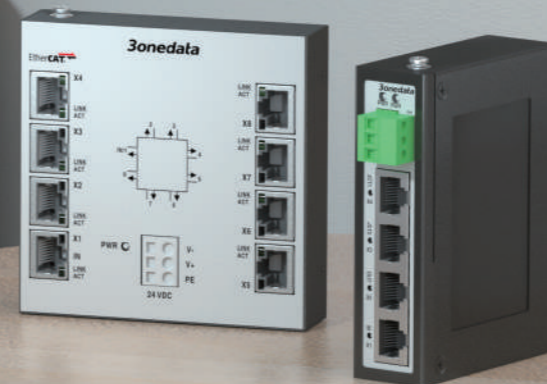
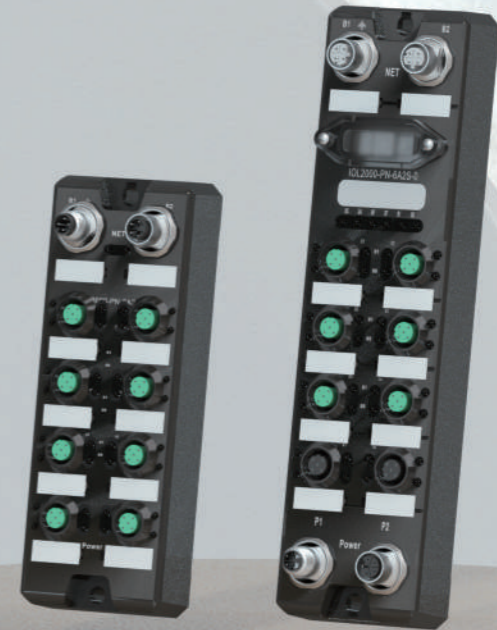
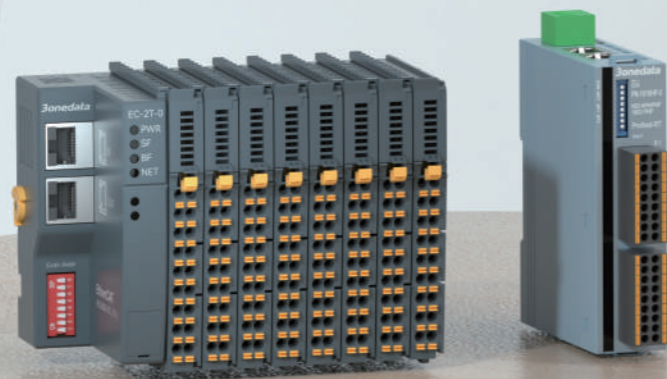


SW4485I

Serial Interface			
Conversion	RS-232 to RS-422/485	RS-232 to RS-422/485, RS-485 Repeater	4-port RS-485 Hub
RS-232	✓	✓	✓
RS-422	✓	✓	✓
RS-485	✓	✓	✓
Baud Rate	110bps-115200bps	300bps-115200bps	300bps-115200bps
Interface Form	DB9 Female, Terminal Block	DB9 Female, Terminal Block	Terminal Block
Surge Protection	1500W	1500W	-
Electrostatic Protection	15kV	15kV	15kV
Photoelectric Isolation	2500V	3000V	-
Power Supply			
9VDC	✓	-	-
12-36VDC	-	✓	-
12-48VDC	-	-	✓
Environmental Limits			
Operating Temperature	-20-75°C	-10-75°C	-40-75°C
Storage Temperature	-25-85°C	-40-75°C	-40-85°C
Relative Humidity	5% - 95%(no condensation)	5% - 95%(no condensation)	5% - 95%(no condensation)
Installation	Wall Mounting	Wall Mounting	DIN-Rail mounting
Certification			
CE, FCC, RoHS	✓	✓	✓



# INDUSTRIAL CONTROL



# EtherCAT Coupler



GW7000-4T



GW7000-8T

Basic parameters		
EtherCAT input	1 Road	1 Road
EtherCAT output	3 Road	7 Road
Power waste	1.3w@24VDC (4T)	5.5W@24VDC (8T)
Support topology structure	Line, Tree, Star, etc	Line, Tree, Star, etc
Hot swapping	✓	✓
Supports maximum expansion of EtherCAT slave count	3	7
Power indicators		
Input voltage	24V DC	24V DC
Anti reverse connection and short circuit protection	✓	✓
Work environment		
Working temperature	-25~60°C	-25~60°C
Relative humidity	5%-95% (No condensation)	5%-95% (No condensation)
Mechanical Properties		
Protection level	IP40	IP40
Installation	DIN-Rail	DIN-Rail
Dimension(W*H*D)	28mm×103mm×78mm	100mm×26mm×99.4mm

# IO Coupler



RIO3000-EC-2T-0



RIO3000-PN-2T-0

Basic parameters		
Bus interface	2*RJ45	2*RJ45
Consumption	100mA@24V DC	101mA@24V DC
Bus+5VDC current capacity	<2A (2000mA)	<2A (2000mA)
Is the CPU connected	Yes (independent as slave)	Yes (independent as slave)
Support agreement	Ethercat	Profinet-RT
Ring network redundancy	Support ring network redundancy	Support RT ring network redundancy
Support expanding the number of IO modules	32	32
Slave settings		
Address setting	Configure by dip switch or main station	Programming software configuration, or allocation through the main station
Maximum of stations per segment	255	255
Protective isolation		
Between channel and bus	✓	✓
Between power supply and bus	✓	✓
Power indicators		
Input Voltage	24V DC	24V DC
Power diagnosis and warning	✓	✓
Work environment		
Operation temperature	-20~60°C	-20~60°C
Relative humidity	5%-90% (No condensation)	5%-90% (No condensation)
Mechanical properties		
Protection grade	IP20	IP20
Installation	DIN-Rail	DIN-Rail
Dimension(W*H*D)	50mm×103mm×82mm	50mm×103mm×82mm

# IO-Link Master



IOL2000-PN-6A2S-0



IOL2000-EC-6A2S-0

Bus parameters		
Bus protocol	Profinet-RT	EtherCAT
Working mode	Automatic negotiation mechanism, automatic flipping function	
Transmission speed	10/100 Mbps	10/100 Mbps
Address allocation	Profinet standard, DCP	Automatic system allocation or dialing settings
Topology function	✓	✓
Ring network redundancy	✓	-
Electrical parameters		
Interface signal type	DI/DO/IO Link software configurable	DI/DO/IO Link software configurable
IO Link channel count	6	6
Edition	V1.1	V1.1
Interface type	6*Class-A	6*Class-A
Transmission speed	COM1 (4.8kbps) 、 COM2 (38.4kbps) 、 COM3 (230.4kbps)	
Number of input channels (DI)	Maximum 12	Maximum 12
Input signal type (DI)	PNP	PNP
Maximum load current (DI, DO)	200 mA	200 mA
Output maximum number of channels (DO)	Maximum 6	Maximum 6
Output signal type (DO)	PNP/NPN (configurable)	PNP/NPN (configurable)
Output switch frequency (DO)	Resistive load 100Hz, inductive load 5Hz	Resistive load 100Hz, inductive load 5Hz
Output power supply current (Pin1&Pin3)	IO Link interface up to 1.6A, ordinary signal interface up to 200mA	
Power indicators		
Working voltage	24 VDC (18V ~ 30V)	24 VDC (18V ~ 30V)
Module consumes current	Maximum 200mA	Maximum 200mA
System and input signal power supply	Us less than 8A	Us, less than 8A
Auxiliary power supply	Ua less than 8A	Ua, less than 8A
Electrical isolation	Us/Ua: 24V isolation, 0V isolation	Us/Ua: 24V isolation, 0V isolation
Diagnosis		
Communication status	LED indication, communication message	LED indication, communication message
Power supply monitoring	Low voltage alarm	Low voltage alarm
Short circuit and overload protection	LED indication	LED indication
Work environment		
Working temperature	-20~80°C	-20~80°C
Relative humidity	95% (no condensation)	95% (no condensation)
Mechanical properties		
Protection level	IP67	IP67
Installation	2 holes, fixed with screws	2 holes, fixed with screws
Dimension(W*H*D)	60mm×225mm×40mm	60mm×225mm×40mm

# IO Expansion Module



Technical specifications			
Input points	16	4	4
Input Type	PNP/NPN	Voltage mode	Current mode
24VDC consumption(fully loaded)	20mA	-	-
Bus 5VDC consumption(fully loaded)	60mA	60mA	60mA
Cable length	Max:500m(STP);Max:300m(USTP)	Max:100m(STP)	Max:100m(STP)
Range			
Voltage (unipolar)	-	0-10V, 0-5V	-
Voltage (Bipolar)	-	±10V, ±5V	-
Current	-	-	0-20mA, 4-20mA
Unipolar (Date word)	-	0-32000, full range	0-32000, full range
Bipolar (Date word)	-	-32000-32000, full range	-
Input voltage			
Rating	24V DC	-	-
"0" signal	Maximum 5V DC, 1mA	-	-
"1" signal	Minimum 15V DC, 2.5mA	-	-
Input delay			
From 0 to 1, minimum	4-6ms (typical values for extending 32 modules)	-	-
From 1 to 0, minimum	4-6ms (typical values for extending 32 modules)	-	-
Allow static current	1mA	-	-
Insulation test voltage	500V DC	-	-
Analog input characteristics			
Input Type	-	differential input	differential input
Accuracy	-	16Bit	16Bit
Maximum sustainable voltage	-	30V DC	30V DC
Isolation			
Between channel and bus	✓	✓	✓
Inter-channel	✓	✓	✓
Power indicators			
Input Voltage	24V DC	24V DC	24V DC
Power polarity protection	-	✓	✓
Power diagnosis and warning	✓	✓	✓
Work environment			
Operation temperature	-20-60°C	-20-60°C	-20-60°C
Relative humidity	5%-90% (No condensation)	5%-90% (No condensation)	5%-90% (No condensation)
Mechanical properties			
Protection grade	IP20	IP20	IP20
Installation	DIN-Rail	DIN-Rail	DIN-Rail
Dimension(W*H*D)	12×103×82mm	12×103×82mm	12×103×82mm



Technical specifications				
Output points	16	16	4	4
Output Type	PNP	NPN	Voltage mode	Current mode
24VDC consumption current(fully loaded)	37 mA	30 mA	-	-
Bus 5VDC consumes current (fully loaded)	57mA	84mA	47mA	46mA
Cable length (STP)	Maximum 500m	Maximum 500m	Maximum 100m	Maximum 100m
Maximum sustainable voltage	-	-	30V DC	30V DC
Cable length (USTP)	Maximum 150m	Maximum 150m	-	-
Output short-circuit protection	✓ (electronic)	✓ (electronic)	-	-
Output current "1"	0.5A	0.5A	-	-
Leakage current	<1mA	<1mA	-	-
Range				
Voltage (unipolar)	-	-	0-10V	-
Voltage (Bipolar)	-	-	±10V	-
Current	-	-	-	0-20mA, 4-20mA
Resolution				
Accuracy	-	-	16Bit	16Bit
Analog to digital conversion time	-	-	Less than 300us	Less than 300us
Output error	-	-	Usually ± 0.5%, maximum ± 2%	Usually ± 0.5%, maximum ± 2%
Common mode voltage	-	-	Signal voltage+common mode voltage (within ± 12V)	
Output load	-	-	Voltage output: 5000 Ω (minimum), Current output: 500 Ω (maximum)	
Switching frequency				
Resistive load, maximum	100HZ	100HZ	-	-
Inductive load, maximum	0.5HZ	0.5HZ	-	-
Lamp load, maximum	10HZ	10HZ	-	-
Isolation				
Between channel and bus	✓	✓	✓	✓
Inter-channel	✓	✓	-	-
Display indication	-	-	Green LED display for each channel input	
Power indicators				
Input Voltage	24V DC	24V DC	24V DC	24V DC
Power diagnosis and warning	✓	✓	✓	✓
Work environment				
Operation temperature	-20-60°C	-20-60°C	-20-60°C	-20-60°C
Relative humidity	5%-90%(No condensation)	5%-90%(No condensation)	5%-90%(No condensation)	5%-90%(No condensation)
Mechanical properties				
Protection grade	IP20	IP20	IP20	IP20
Installation	DIN-Rail	DIN-Rail	DIN-Rail	DIN-Rail
Dimension(W*H*D)	12×103×82mm	12×103×82mm	12×103×82mm	12×103×82mm

# IO-Link Slave



IOL2000-0101PL-0



IOL2000-0101NL-0

Electrical parameters		
IO Link interface type	Class-A	Class-A
IO Link version	V1.1	V1.1
Transmission speed	COM3(230.4kbps)	COM3(230.4kbps)
Process data bytes	2 input bytes, 2 output bytes	2 input bytes, 2 output bytes
Number of input channels	Maximum 16	Maximum 16
Input delay	13ms	13ms
Input signal type	PNP	NPN
Number of output channels	Maximum 16	Maximum 16
Output signal type	PNP	NPN
Output switch frequency	Resistive load 100Hz, inductive load 5Hz	
Output power supply current	Maximum 0.5A per channel, total not exceeding 8A	
Expansion capability and distance	No expansion	No expansion
Interface type		
IO Link interface type	1-channel M12 A-code 4pin, needle end	
Auxiliary power supply interface	1-channel M12 L-code 5pin, pin end, power supply 24V (does not support expansion)	
IO interface	8-way M12 A-code 5pin	8-way M12 A-code 5pin
Power indicators		
Working voltage	24 VDC (18V ~ 30V)	24 VDC (18V ~ 30V)
Module consumes current	Maximum 50mA	Maximum 50mA
Diagnosis		
Communication status	LED indication, communication message	LED indication, communication message
Power supply monitoring	Low voltage alarm	Low voltage alarm
Short circuit and overload protection	LED indication	LED indication
Work environment		
Working temperature	-20-80°C	-20-80°C
Relative humidity	95% (no condensation)	95% (no condensation)
Mechanical properties		
Protection level	IP67	IP67
Installation	2 holes, fixed with screws	2 holes, fixed with screws
Dimension(W*H*D)	60mm×160mm×35mm	60mm×160mm×35mm



IOL2000-0404IS-0



IOL2000-0404VS-0

Electrical parameters		
IO Link version	V1.1	V1.1
Process Data Byte	8 input bytes, 8 output bytes	8 input bytes, 8 output bytes
Number of input channels	4	4
Input impedance	≤500Ω	≥100kΩ
Input signal type	0-20mA, first 4 channels	±10V, first 4 channels
Number of output channels	4	4
Output impedance	≤33Ω	1kΩ
Output signal type	0-20mA, last 4 channels	±10V, last 4 channels
Resolving power	16bit	16bit
Conversion time	Less than 300us	Less than 300us
Expansion capability and distance	Can expand up to 3 WellBUS bus expansion modules (up to one analog or temperature module), with a total extension cable length of 60 meters	
Interface type		
IO Link interface type	Class-A,1-channel M12 A-code 4pin, needle end	
Power interface	IO Link port power supply 24V, 1.6A	
Expansion interface	1-channel M12 B-code 5pin hole end	
IO interface	8-way M12 A-code 5pin	8-way M12 A-code 5pin
Power indicators		
Working voltage	24 VDC (18V ~ 30V)	24 VDC (18V ~ 30V)
Module consumes current	Maximum 50mA	Maximum 50mA
Diagnosis		
Communication status	LED indication, communication message	LED indication, communication message
Power supply monitoring	Low voltage alarm	Low voltage alarm
Short circuit and overload protection	LED indication	LED indication
Work environment		
Working temperature	-20-80°C	-20-80°C
Relative humidity	95% (no condensation)	95% (no condensation)
Mechanical properties		
Protection level	IP67	IP67
Installation	2 holes, fixed with screws	2 holes, fixed with screws
Dimension(W*H*D)	60mm×160mm×35mm	60mm×160mm×35mm

## Vertical IO



RIO5000-EC-0400BU-0



RIO5000-EC-0004UB-0



RIO5000-PN-0400BU-0



RIO5000-PN-0004UB-0



RIO5000-EI-0400BU-0



RIO5000-EI-0004UB-0

Communication bus			
Bus protocol	EtherCAT	EtherCAT	EtherNet/IP
Bus communication interface	2-RJ45	2-RJ45	2-RJ45
<b>Input signal</b>			
Input channels	4	-	4
Delay (bus response time)	2ms	-	12ms
Signal type	Differential input, current, voltage	-	Differential input, current, voltage
Accuracy	16Bit	-	16Bit
<b>Output signal</b>			
Output channels	-	4	4
Delay (bus response time)	-	2.6ms	-
Signal type	-	current, voltage	-
Accuracy	-	16Bit	-
<b>Range</b>			
Voltage (Bipolar)	±10V	±10V	±10V,±5V
Electric current	0-20mA	0-20mA	0-20mA, 4-20mA
Bipolar (Data word)	-32000-32000	-32000-32000	-32000-32000
<b>Power indicators</b>			
Input voltage	24V DC (18 - 28V DC)	24V DC (18 - 28V DC)	24V DC (18 - 28V DC)
Module current consumption	55mA@24 V DC	140mA@24 V DC	130mA@24 V DC
Power polarity protection	✓	✓	✓
Power diagnosis and warning	✓	✓	✓
<b>Work environment</b>			
Working temperature	-20-60°C	-20-60°C	-20-60°C
Relative humidity	5%-90% (no condensation)	5%-90% (no condensation)	5%-90% (no condensation)
<b>Mechanical properties</b>			
Installation	DIN-Rail	DIN-Rail	DIN-Rail
Dimension(W*H*D)	27*114*94mm	27*114*94mm	27*114*94mm



RIO5000-EC-1616HN-0



RIO5000-EC-1616HP-0



RIO5000-PN-1616HP-0



RIO5000-PN-1601HP-0



RIO5000-EI-1616HN-0



RIO5000-EI-1616HP-0



RIO5000-MT-1616HP-0

Communication bus			
Bus protocol	EtherCAT	EtherCAT	Profinet-RT
Bus communication interface	2-RJ45	2-RJ45	2-RJ45
<b>Input signal</b>			
Input points	16	16	16
Signal type	PNP/NPN	PNP/NPN	PNP/NPN
Bus 5VDC consumption (fully loaded)	70mA	70mA	168mA
0-'1' signal threshold	≤11.6VDC; ≥11.7VDC	≤11.6VDC; ≥11.7VDC	≤11.6VDC; ≥11.7VDC
Bus response time	0.5ms	0.6ms	5ms
<b>Output signal</b>			
Output points	16	16	Maximum 16
Signal type	NPN	PNP	PNP
Maximum hardware response time	100us	100us	100us
Bus response time	0.31ms	0.3ms	3.5ms
<b>Output switch frequency</b>			
Resistive load, maximum	100HZ	100HZ	100HZ
Inductive load, maximum	0.5HZ	0.5HZ	0.5HZ
<b>Power indicators</b>			
Input voltage	24V DC (18 - 28V DC)	24V DC (18 - 28V DC)	24V DC (18 - 28V DC)
Module current consumption	65mA@24V DC	65mA@24V DC	4.2mA@24V DC
Power polarity protection	✓	✓	✓
Power diagnosis and warning	✓	✓	✓
<b>Work environment</b>			
Working temperature	-20-60°C	-20-60°C	-20-60°C
Relative humidity	5%-90% (no condensation)	5%-90% (no condensation)	5%-90% (no condensation)
<b>Mechanical properties</b>			
Installation	DIN-Rail	DIN-Rail	DIN-Rail
Dimension(W*H*D)	27*114*94mm	27*114*94mm	27*114*94mm