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KYLAND



Products at a Glance

www.kyland.ru

Vision

To be a leading solution provider for

Industrial Networking & Control Systems



Strategic Direction

- Industrial Ethernet communications technologies
- IP-based industrial Fieldbus technologies
- Network-based field controller technologies
- Cloud-based industrial controlling server technologies
- Network-based precise time/clock technologies
- Control message communication security technologies



Content

2	Industrial Communication Solutions
4	● Layer 3 Backbone Ethernet Switches
5	● Rack Mount Ethernet Switches
6	● Multi-function Switching Platform
8	● DIN Rail Managed Ethernet Switches
12	● Unmanaged Ethernet Switches
14	● EN50155 Ethernet Switches
18	● ITS Ethernet Switches
19	● PoE Ethernet Switches
20	● Video Surveillance Ethernet Switches
21	● PROFINET Ethernet Switches
21	● Serial Device Servers
22	● Intrinsic Safety Ethernet Switches
23	● Network Management System
24	● Optical Fiber Convertors
25	● SFP Modules & Accessories
26	Precise Timing Solutions
28	Intelligent Gateways

Overview of Industrial Communication Solutions

		Page	Management		Layer			
			Managed	Unmanaged	Layer 3	Layer 2	10 Gigabit	Full Gigabit
Layer 3 Backbone Ethernet Switches	SICOM6448G	4	●		●		●	●
	SICOM6432G	4	●		●		●	●
	SICOM6024G	4	●		●			●
	SICOM6000A	4	●		●			●
Rack Mount	SICOM3024P	5	●			●		
	SICOM3432G	5	●			●	●	●
	SICOM3024G	5	●			●		
	SICOM3024	5	●			●		
	SICOM2024M	5	●			●		
Multi-function Switching Platform	SICOM3028GPT	6	●		●	●		●
DIN Rail Managed	SICOM3000A	8	●			●		●
	Ruby3A	10	●			●		●
	SICOM3010G	10	●			●		●
	SICOM3016B	10	●			●		
	SICOM3216	10	●			●		
	SICOM3016	10	●			●		
	SICOM3306	10	●			●		
	SICOM3000	11	●			●		
	SICOM3009A	11	●			●		
	SICOM3000A-LITE	11	●			●		
	KIEN7009	11	●			●		
Unmanaged	KIEN3016A	12		●		●		
	KIEN1009	12		●		●		
	KIEN1008G	12		●		●		●
	KIEN1005G	12		●		●		●
	KIEN1005A	12		●		●		
	Opal20	13		●		●		
	Opal10G	13		●		●		●
	Opal10	13		●		●		
	Opal8A	13		●		●		
	Opal8	13		●		●		
	Opal5G	13		●		●		●
	Opal5	13		●		●		
EN50155	Aquam8628/8128	14	●		●	●		
	Aquam8620/8120	14	●		●	●		
	Aquam8612/8112	15	●		●	●		
	Aquam8512A/8012A	15	●		●	●		
	Aquam8512A-1U /Aquam8012A-1U	16	●		●	●		
	Aquam55/8S/9S	17		●		●		●
	Aquam5G/8G	17		●		●		●
	Aquam5/8	17		●		●		
	Aquam8A	17		●		●		
ITS	SICOM3170	18	●			●		
	SICOM3171	18	●			●		
	SICOM3172	18	●			●		
PoE	SICOM3307S	19	●			●		
	KIEN1005S	19		●		●		
	Opal5S/10S	19		●		●		
	Opal5GS/10GS	19		●		●		●
Video Surveillance	SICOM3014GV	20	●			●		●
	SICOM3008GV	20	●			●		●
	Opal8GV	20		●		●		●
PROFINET	SICOM3008PN	21	●			●		●
Serial Device Server	SICOM3005A	21	●			●		
	KPS2204	21		●		●		
Intrinsic Safety	SICOM3016BA	22	●			●		
	SICOM3009BA	22	●			●		
	SICOM3000BA	22	●			●		
	KIEN1008BA	22		●		●		
Optical Fiber Converter	KOM300M	24	●			●		
	KOM300A	24		●		●		
	KOM300F	24		●		●		
	KOM600G	24		●		●		●
	KOM600	24		●		●		
	KOM200	24		●		●		

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Industrial Communication Solutions >

Layer 3 Backbone Ethernet Switches



SICOM6448G

48G+4 10G ports Layer 3 managed rack mountable switch

- Supports combo gigabit ports with option of 1000 Base-T(X) RJ45 or 1000 Base-X Fiber,
- Supports maximum four 10 gigabit ports, 48 gigabit RJ45 ports or 16 gigabit RJ45 ports and 32 gigabit SFP ports
- Supports DT-Ring ,STP/RSTP/MSTP and VRRP for network redundancy
- Supports Layer 3 Static routing and routing protocols such as RIP v1/v2 and OSPF
- Supports Qos,VLAN, SNMP v1/v2/v3, RMON(1,2,3,9 Group)
- Supports SFP Digital Diagnostics Monitoring
- IP40 protection class
- Supports dual redundant power supplies: HV(220VAC/DC), L2(24-48VDC)
- CE, FCC



SICOM6432G

32G/24G+4*10G ports Layer 3 managed rack mountable switch

- Supports combo gigabit ports with option of 1000 Base-T(X) RJ45 or 1000 Base-X Fiber
- Supports maximum four 10 gigabit ports, 32 gigabit ports
- Supports DRP/DHP ,STP/RSTP/MSTP,ERPS(G.8032) and VRRP for network redundancy
- Supports Layer 3 Static routing and routing protocols such as RIP v1/v2 and OSPF
- Supports Qos,VLAN, SNMP v1/v2/v3, RMON(1,2,3,9 Group)
- Supports SFP Digital Diagnostics Monitoring
- Supports NAT
- Supports P2Pv2
- IP40 protection class
- Supports dual redundant power supplies: HV(220VAC/DC), L2(24-48VDC)
- CE(Pending),FCC(Pending)



SICOM6024G

24G ports Layer 3 managed rack mountable switch

- Supports DT-Ring , RSTP/MSTP and VRRP for network redundancy
- Supports Layer 3 Static routing and RIP v1/v2 and OSPF v2
- Supports QoS, VLAN, SNMP v1/v2c/v3, RMON (1,2,3,9 Group)
- Supports SFP Digital Diagnostics Monitoring
- IP40 protection class
- Supports dual redundant power supplies: HV(220VAC/DC), L2(24-48VDC)
- CE, FCC



SICOM6000A

12G/8+4G port layer 3 managed DIN-Rail switch

- 4 Gigabit SFP slots, 8 10/100/1000Base-T(X) ports or 8 10/100Base-T(X) ports
- Supports DT-Ring, DRP and RSTP/MSTP protocols
- VRRP, OSPF, RIP, IGMP, PIM, static routing
- Supports dual power inputs: L2(24-48VDC)
- CE (Pending), FCC (Pending)

Industrial Communication Solutions >

Rackmount Ethernet Switches

SICOM3024P

KEMA certified 24+4G port layer 2 managed rack mountable switch with flexible fiber/copper options

- Supports maximum 4 gigabit fiber/copper ports and 24 fast Ethernet fiber/copper ports
- Supports IEC 61850 MMS management (special version)
- Supports DT-Ring, DRP, RSTP for network redundancy
- Supports dual redundant power supplies: HV(100-240VAC/110-220VDC), L3(24VDC), L1(48VDC)
- IEC 61850-3 and IEEE1613 (KEMA certified)
- CE (HV), FCC (HV), UL508 (HV, L1, L3), Class I Div 2 (HV, L1, L3), NEMA-TS2



SICOM3432G

32G/24G+4*10G ports Layer 2 managed rack mountable switch

- Supports combo gigabit ports with option of 1000 Base-T(X) RJ45 or 1000 Base-X Fiber
- Supports maximum four 10G ports, 32 gigabit ports
- Supports DRP/DHP, STP/RSTP/MSTP, ERPS(G.8032) for network redundancy
- Supports QoS, VLAN, SNMP v1/v2/v3, RMON(1,2,3,9 Group)
- Supports SFP Digital Diagnostics Monitoring
- Supports PTPv2
- IP40 protection class
- Supports dual redundant power supplies: HV(220VAC/DC), L2(24-48VDC)
- CE(Pending), FCC(Pending)



SICOM3024G

24 full Gigabit ports Layer 2 managed rack mountable switch

- Supports maximum 24 Gigabit ports, include 12 combo ports
- Supports DT-Ring, DRP, RSTP/MSTP for network redundancy
- Supports dual redundant power supplies: HV(100-240VAC/110-220VDC)
- EMC Level 3
- IP30 protection
- CE, FCC



SICOM3024

24+4G port cost-effective layer 2 managed rack mountable switch

- Supports maximum 4 gigabit SFP ports, 16 fast Ethernet RJ45 ports and 8 fast Ethernet fiber/copper ports
- Supports DT-Ring, RSTP for network redundancy
- Supports dual redundant power supplies: HV(100-240VAC/110-220VDC), L3(24VDC), L1(48VDC)
- Complies with IEC 61850-3 and IEEE1613
- CE (HV), FCC (HV)



SICOM2024M

28 port cost-effective layer 2 managed rack mountable switch

- Supports maximum 4 fast Ethernet fiber ports and 24 fast Ethernet RJ45 ports
- Supports dual redundant power supplies: HV(100-240VAC/110-220VDC), L3(24VDC), L1(48VDC)
- Complies with IEC 61850-3 and IEEE1613
- CE (HV), FCC (HV)



Industrial Communication Solutions >

Multi-function Switching Platform



SICOM3028GPT

KEMA certified 28G port multi-function layer 2/3 switching platform supports IEEE1588v2, GPS, IRIG-B, HSR/PRP, serial device server

- Flexible modular design for easy expansion, supports maximum 28 gigabit fiber/copper ports.
- Supports DT-Ring, DRP, MSTP and VRRP for network redundancy.
- Supports Layer 3 routing protocols such as RIP and OSPF.
- Supports IEEE1588 v2, the accuracy of synchronization reaches $\pm 100\text{ns}$
- Supports ITU-T.G.8261/G.8262 synchronous Ethernet, the accuracy of synchronization reaches $\pm 50\text{ns}$
- Supports GPS module, IRIG-B module, TMS-trigger module, serial server module, hot-swappable power module, HSR/PRP module, time server module
- Supports IEC61850 MMS data modeling
- Supports hot swappable dual redundant power supplies: HV(100-240VAC/110-220VDC), L3(24VDC), L1(48VDC)
- IEC61850-3 & IEEE1613 (KEMA certified)
- CE, FCC, EN50155/50121 (HV), NEMA-TS2

GPT-Ethernet/Fiber Modules

Ethernet Module for SICOM3028GPT



SM6.6-4M-FC05-0.5U
SM6.6-4S-FC40-0.5U



SM6.6-4GX-1U

SM6.6-2GX2M-SC05-0.5U
SM6.6-2GX2S-SC40-0.5U
SM6.6-2GX2S-SC60-0.5U
SM6.6-2GX2S-SC80-0.5U



SM6.6-4GE-1U

SM6.6-2GX2M-ST05-0.5U
SM6.6-2GX2S-ST40-0.5U



SM6.6-2GX2GE-1U

SM6.6-2GX2M-FC05-0.5U
SM6.6-2GX2S-FC40-0.5U



SM6.6-4GX-0.5U

SM6.6-2M2T-SC05-0.5U
SM6.6-2S2T-SC40-0.5U
SM6.6-2S2T-SC60-0.5U
SM6.6-2S2T-SC80-0.5U



SM6.6-2GX2GE-0.5U



SM6.6-4GE-0.5U
SM6.6-4T-0.5U

SM6.6-2M2T-ST05-0.5U
SM6.6-2S2T-ST40-0.5U



SM6.6-4M-SC05-0.5U
SM6.6-4S-SC40-0.5U
SM6.6-4S-SC60-0.5U
SM6.6-4S-SC80-0.5U

SM6.6-2M2T-FC05-0.5U
SM6.6-2S2T-FC40-0.5U



SM6.6-4M-ST05-0.5U
SM6.6-4S-ST40-0.5U

GPS Module

- 14 channels GPS C/A coding receiver
- High precision stable crystal oscillator with excellent time keeping performance
- One PPS +5V TTL level output with BNC connector
- Supports one 5M/10M frequency input. (optional)



IRIG-B Module

- PTP to IRIG-B high precision clock converting
- 2 IRIG-B(DC), 2 IRIG-B(AC), and 1 PPS outputs
- Supports IRIG-B000, B001, B002, B003, B004, B005, B006, B007, B120, B121, B122, B123, B124, B125, B126, B127 output



Serial Module

- 4 RS232/422/485 serial ports, one 100M interface (backplane)
- Supports VLAN, white list, data mirror, configuration import/export.
- Reset button for easy module reset without need to reboot the device
- $\pm 15\text{kV}$ ESD protection circuit for each serial port



TMS-Trigger Module

- Internal time synchronized as PTP slave with SICOM3028GPT chassis
- Supports GOOSE publish and MMS report
- Supports optical/electrical signal input/output



HSR/PRP Module

- Plug-in Redbox module for reliable industrial networking in SICOM3028GPT series.
- Full FPGA hardware solution with low switching latency
- Compliant implementation of HSR (IEC62439-3-5) and PRP (IEC62439-3-4)
- Supports hot-swap for easy maintenance



Time Server Module

- High Precision Reference Clock as Absolute Time Source (GPS, BDS, GLONASS)
- Relative Reference Time and External Time Synchronization (PTP, IRIG-B)
- High precision stable OCXO oscillator with excellent time keeping performance
- Supports PTP, NTP, SNTP, IRIG-B, PPS output
- Report time status by SNMP, IEC61850 MMS, IEC60870-5-104, DNP over TCP etc.
- Supports Web, SNMP etc. management system
- Designed for the SICOM3028GPT-L2GT, SICOM3028GPT-L2FT, SICOM3028GPT-L3GT, SICOM3028GPT-L3FT chassis
- Supports hot-swap for easy maintenance



Industrial Communication Solutions >

DIN Rail Managed Ethernet Switches

SICOM3000A

New Series of Layer 2 Managed DIN-Rail Industrial Ethernet Switches

>Rich Product Choices

>Enhanced Product Performance

>Suitable for All the Industrial Communication Scenarios


- A Rich Product Port Portfolio
 - 6/8/10/12/16/18/20 ports, 100/1000M SFP ports, DDM (SFP port)
- A Variety of Input Voltage
 - 110/220VAC & 12/24/48/110/220VDC power input
- Supports EtherNet/IP and Modbus/TCP protocols
- Supports Automatic Configuration Backup and Restoration (KyACB-USB-RS232)
 - Easy Plug-n-Play configuration backup and restoration while device exchanges are needed
 - Enables easy update of the switch configuration by attaching the device to the switch and cycling power
- Supports Hardware-based IEEE1588 PTPv2
 - BC, P2P TC, E2E TC Clock Modes
 - Synchronization Precision ± 100 ns
- Supports IPv4/IPv6
- Supports Multiple Network Security Functions
 - IEEE 802.1x, HTTPs/SSL, SSH, RADIUS, TACACS+, User Classification, MAC Address Binding
- Supports Rich Redundancy Protocols
 - MSTP/ RSTP/ STP, DT-Ring, DRP/DHP(recovery time<20ms)
- Stable and reliable in harsh environment
 - Wide Operating Temperature Range -40 +75°C
 - IP40 Protection Class
 - Strong Vibration-resistant Mounting Kit for DIN-Rail Installation
- CE, FCC, UL61010 (Pending)
- IEC61850-3 and IEEE1613 tested by TUV
- PROFINET Conformance Class B (-PN model) (Pending)

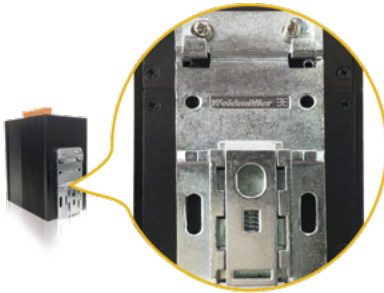


SICOM3000A Series



KyACB-USB-RJ45

		100/1000M SFP	10/100/1000M RJ45	100M SFP	10/100M RJ45
 66mmx135mmx106.5mm	6T				6
	8T				8
	2SFP8T			2	8
	2GX8T	2			8
	4SFP8T			4	8
	4GX8T	4			8
 88mmx135mmx137mm	8GE		8		
	2GX8GE	2	8		
	4GX8GE	4	8		
 102mmx135mmx137mm	16T				16
	16GE		16		
	2GX16T	2			16
	2GX16GE	2	16		
	4SFP16T			4	16
	4GX16T	4			16
 102mmx135mmx137mm	4GX16GE	4	16		
	8SFP8T			8	8
	8GX8T	8			8
	8GX8GE	8	8		
	12GX8GE	12	8		



Robust DIN Rail Mounting Kit

Industrial Communication Solutions >

DIN Rail Managed Ethernet Switches



HSR/PRP

Ruby3A

Managed Redundancy Box

- Compliant implementation of both PRP (IEC62439-3-4) and HSR (IEC62439-3-5)
- Dual power inputs: L2(24-48VDC), Single power supply: HV(100-240VAC, 110-220VDC)
- Supports combo ports as HSR/PRP port
- Supports hardware based IEEE1588v2
- Supports Modbus/TCP, EtherNet/IP
- Supports reset button
- Out of Band Management Port
- IEC61850-3 and IEEE1613 (TUV Certified)



SICOM3010G

10xG port layer 2 full Gigabit managed DIN-Rail switch

- 2 Gigabit Combo ports, 2 Gigabit SFP slots, 6 10/100/1000Base-TX ports
- Supports DT-Ring protocols, DRP and RSTP
- Dual power inputs: L2(24-48VDC), L5(12-24VDC)
- CE (L2), FCC (L2), UL508 (L2), Class I Div 2 (L2)



SICOM3016B

16+4G port layer 2 IEC61850 managed DIN-Rail switch

- 4 Gigabit Combo ports, 16 10/100Base-T(X) ports
- Dual power inputs: L3 (24VDC), L1 (48VDC), single power supply: H1 (100-240VAC, 220VDC)
- CE (L3), FCC (L3)



SICOM3216

16+2G port layer 2 managed DIN-Rail switch

- 2 Gigabit Combo ports, 2 fast Ethernet fiber/RJ45 optional ports, 14 10/100Base-T(X) ports
- Supports DT-Ring, DRP and RSTP protocols
- Dual power inputs: L2(24-48VDC), L5(12-24VDC)
- CE (L2), FCC (L2), UL508 (L2, L5), Class I Div 2 (L2, L5)



SICOM3016

20 port layer 2 managed DIN-Rail switches

- 4 100Base-FX ports, 16 10/100Base-T(X) ports
- Supports DT-Ring and RSTP protocols
- Dual power inputs: L3 (24VDC), single power supply: H1(100-240VAC, 220VDC), H2(110VDC)
- CE (L3), FCC (L3)



SICOM3306

6+3G port layer 2 managed DIN-Rail switch

- 3 Gigabit SFP slots, 6 10/100Base-T(X) ports
- Supports DT-Ring, DRP and RSTP protocols
- Dual power inputs: L2(24-48VDC), L5(12-24VDC)
- CE (L2), FCC (L2), UL508 (L2), Class I Div 2 (L2)

SICOM3000

8+2G port layer 2 IEC61850 managed DIN-Rail switches support full range of AC/DC power supplies

- 2 Gigabit SFP slots, 2 Fast Ethernet fiber/RJ45 optional ports and 6 10/100Base-TX ports
- Supports DT-Ring protocols, DRP and RSTP
- Dual power inputs: L2(24-48VDC), L5(12-24VDC). Single power supply: HV(100-240VAC, 110-220VDC)
- IEC61850-3 & IEEE1613 (KEMA Certified)
- CE (L2, L5), FCC (L2, L5), UL508 (L2), Class I Div 2 (L2)

SICOM3009A

KEMA certified 9 port layer 2 IEC61850 managed DIN-Rail switches support full range of AC/DC power supplies

- 3 fast Ethernet fiber/RJ45 optional ports, 6 10/100Base-T(X) ports
- Supports DT-Ring, DRP and RSTP protocols
- Dual power inputs: L2(24-48VDC), L5(12-24VDC). Single power supply: HV(100-240VAC, 110-220VDC)
- IEC61850-3 & IEEE1613 (KEMA certified)
- CE (L2, L5, HV), FCC (L2, L5, HV), UL508 (L2, L5), Class I Div 2 (L2, L5)

SICOM3000A-LITE

8+2G Port Layer 2 Managed DIN-Rail Switches

- 2 100Base-FX, 1000Base-X SFP ports and 8 10/100Base-T(X) RJ45 ports
- Supports DT-Ring, DRP/DHP and STP/RSTP/MSTP
- Supports EtherNet/IP and Modbus/TCP protocols
- Supports DDM
- Dual power inputs: L2(18-72VDC), L3(18-36VDC)
- CE, FCC

KIEN7009

9 Port Layer 2 Simple Managed DIN-Rail Switches support full range of AC/DC power supplies

- 3 fast Ethernet fiber/RJ45 optional ports, 6 10/100Base-T(X) ports
- Supports DT-Ring and DRP protocols
- Dual power inputs: L2(24-48VDC), L5(12-24VDC). Single power supply: HV(100-240VAC, 110-220VDC)
- CE (L2, L5, HV), FCC (L2, L5, HV), UL508 (L2), Class I Div 2 (L2)



KEMA



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Industrial Communication Solutions >

Unmanaged Ethernet Switches



KIEN3016A

16 port unmanaged DIN-Rail switch

- 2 Fast Ethernet fiber/RJ45 optional ports, 14 10/100Base-T(X) ports
- Dual power inputs: L2(24-48VDC), L5(12-24VDC)
- CE (L2), FCC (L2), UL508 (L2), Class I Div 2 (L2)



KIEN1009

9 port unmanaged DIN-Rail switches support full range of AC/DC power supplies

- 1 optional uplink Gigabit SFP port, 2 fast Ethernet fiber/RJ45 optional ports, 6 10/100Base-T(X) ports
- Dual power inputs: L2(24-48VDC), L5(12-24VDC). Single power supply: HV(100-240VAC, 110-220VDC)
- CE (L2, L5), FCC (L2, L5), UL508 (L2), Class I Div 2 (L2)



KIEN1008G

8G port full Gigabit unmanaged DIN-Rail switch

- 2 Gigabit Combo ports and 6 10/100/1000Base-TX ports
- Dual power inputs: L2(24-48VDC), L5(12-24VDC).
- CE (L2), FCC (L2), UL508 (L2), Class I Div 2 (L2)



KIEN1005G

5G port full Gigabit unmanaged DIN-Rail switch

- Green Ethernet solution with full load power consumption as low as 3.4W
- 5 Gigabit RJ45 ports
- Dual power inputs: L2(24-48VDC), L5(12-24VDC).
- CE (L2), FCC (L2)



KIEN1005A

5 port unmanaged DIN-Rail switches support full range of AC/DC power supplies

- 1 Fast Ethernet fiber/RJ45 optional port, 4 10/100Base-T(X) ports
- Dual power inputs: L2(24-48VDC), L5(12-24VDC). Single power supply: HV(100-240VAC, 110-220VDC)
- CE (L2, HV), FCC (L2, HV)

Opal20

18+2G port entry-level unmanaged DIN-Rail switches

- Flexible port combinations, supporting maximum 2 10/100/1000 Base-TX ports, 2 100Base-FX ports, 16 10/100Base-TX ports
- Dual power inputs: LV(12-48VDC/18-30VAC)
- UL61010, Class I Div 2, ATEX Zone 2, IECEx, CE, FCC



Opal10G

10xG port entry-level full Gigabit unmanaged DIN-Rail switch

- 2 Gigabit SFP slots, 8 10/100/1000Base-T(X) ports
- Setting jumbo frame transmission function (up to 9.6KB) by DIP-Switch
- Dual power inputs: LV(12-48VDC/18-30VAC)
- UL61010, Class I Div 2, ATEX Zone 2, IECEx, CE, FCC



Opal10

6+4G port entry-level unmanaged DIN-Rail switch

- Supports 2 10/100/1000Base-TX ports, 2 Gigabit SFP ports and 6 10/100Base-TX ports
- Setting SFP port speed (100M/1000M) by DIP Switch
- Dual power inputs: LV(12-48VDC/18-30VAC)
- UL61010, Class I Div 2, ATEX Zone 2, IECEx, CE, FCC



Opal8

8 port entry-level unmanaged DIN-Rail switches

- 2 Fast Ethernet fiber/RJ45 optional ports, 6 10/100Base-T(X) ports
- Dual power inputs: LV(12-48VDC/18-30VAC)
- UL61010, Class I Div 2, ATEX Zone 2, IECEx, CE, FCC



Opal5G

5G port entry-level full Gigabit unmanaged DIN-Rail switch

- Supports 5 10/100/1000Base-TX RJ45 ports
- Setting jumbo frame transmission function (up to 10KB) by DIP-Switch
- Dual power inputs: LV(12-48VDC/18-30VAC)
- UL61010, Class I Div 2, ATEX Zone 2, IECEx, CE, FCC



Opal5

5 port entry-level unmanaged DIN-Rail switches

- 1 Fast Ethernet fiber/RJ45 optional port, 4 10/100Base-T(X) ports
- Dual power inputs: LV(12-48VDC/18-30VAC)
- UL61010, Class I Div 2, ATEX Zone 2, IECEx, CE, FCC



Opal8A

8 port entry-level unmanaged DIN-Rail switches

- Supports 8 10/100Base-T(X) ports
- Supports broadcast storm protection and QoS
- Dual power inputs: LV(12-48VDC/18-30VAC)
- UL61010 (Pending), CE (Pending), FCC (Pending), EN50121 (Pending)



Industrial Communication Solutions >

EN50155 Ethernet Switches



Aquam8628/8128

24+4G Port Layer 3/2 Managed PoE IP65 Switches

- Supports X-coded M12 Gigabit ports and D-coded M12 fast Ethernet ports
- Supports PushPull Connector (by request)
- 4 Gigabit ports support optional 2 pairs of Bypass functions
- Supports maximum 24 802.3af/802.3at PoE ports, maximum 15/30W each port
- Dual power inputs: H6 (72-110VDC), L2 (24-48VDC)
- Integrated power supply provides 80/120W PoE output
- Additional 120W can be increased by adding isolated external power supply
- Supports RSTP,DRP ring network redundancy protocols and VRRP
- Supports Layer 3 routing protocols such as static Routing, OSPF, RIP
- Supports NAT and NAPT
- Complies with IEC61375 standard, supports TTDP, TRDP, ESCP, TTDB Manager
- CE(H6), FCC(H6), EN50121(H6), EN50155(H6) and EN45545(H6)



Aquam8620/8120

16+4G Port Layer 3/2 Managed PoE IP65 Switches

- Supports X-coded M12 Gigabit ports and D-coded M12 fast Ethernet ports
- Supports PushPull Connector (by request)
- 4 Gigabit ports support optional 2 pairs of Bypass functions
- Supports maximum 16 802.3af/802.3at PoE ports, maximum 15/30W each port
- Dual power inputs: H6 (72-110VDC), L2 (24-48VDC)
- Integrated power supply provides 80/120W PoE output
- Additional 120W can be increased by adding isolated external power supply
- Supports RSTP,DRP ring network redundancy protocols and VRRP
- Supports Layer 3 routing protocols such as static Routing, OSPF, RIP
- Supports NAT and NAPT
- Complies with IEC61375 standard, supports TTDP, TRDP, ESCP, TTDB Manager
- CE(H6), FCC(H6), EN50121(H6), EN50155(H6) and EN45545(H6)

Aquam8612/8112

8+4G Port Layer 3/2 Managed PoE IP65 Switches

- Supports X-coded M12 Gigabit ports and D-coded M12 fast Ethernet ports
- Supports PushPull Connector (by request)
- 4 Gigabit ports support optional 2 pairs of Bypass functions
- Supports maximum 8 802.3af/802.3at PoE ports, maximum 15/30W each port
- Dual power inputs: H6 (72-110VDC), L2 (24-48VDC)
- Integrated power supply provides 80/120W PoE output
- Additional 120W can be increased by adding isolated external power supply
- Supports RSTP,DRP ring network redundancy protocols and VRRP
- Supports Layer 3 routing protocols such as static Routing, OSPF, RIP
- Supports NAT and NAPT
- Complies with IEC61375 standard, supports TTDP, TRDP, ESCP, TTDB Manager (pending)
- CE(H6), FCC(H6), EN50121(H6), EN50155(H6) and EN45545(H6)



KyACB-USB-M12

Configuration Backup Tool / M12

- Automatic configuration backup & restoration
- Manual export and import
- Operates without additional power supply





Aquam8512A/Aquam8012A

8+4G/9+3G port compact layer 3/2 managed PoE IP65/67 switches support TTDP and 24-110VDC universal PoE power input

- Supports maximum 3 10/100/1000Base-TX and 9 10/100Base-TX ports or 4 10/100/1000Base-TX and 8 10/100Base-TX ports, and supports maximum 9 PoE ports.
- Supports X-coded M12 connector with Gigabit ports, and D-coded M12 connector with 100M Ethernet ports
- Supports optional bypass function
- Supports maximum 9 802.3af/802.3at PoE ports, maximum 15/30W each port
- None PoE models: dual power inputs: H6(72-110VDC), L14(48VDC), L13(24VDC). PoE models: dual power inputs: WV(24-110VDC)
- Supports a total of 61.6W for the whole PoE ports
- Supports DT-Ring protocols and RSTP/MSTP, DRP ring network redundancy protection and VRRP
- Complies with IEC61375 standard, supports TTDP (Train Topology Discovery Protocol)
- CE, LVD, EN50155, EN50121, EN45545



Aquam8512A-1U/8012A-1U

8T+2G/10T/8P+4G port layer 3/2 managed rack mountable EN50155 Ethernet switch

- Supports maximum 10 10/100Base-TX ports or 2 10/100/1000Base-TX and 8 10/100Base-TX ports or 4 10/100/1000Base-TX and 8 10/100Base-TX PoE ports in M12 connector
- Supports maximum 8 802.3af/802.3at PoE ports, maximum 15/30W each port
- Supports dual redundant power supplies: H2(110VDC)
- Supports a total of 61.6W for the whole PoE ports
- Supports DT-Ring protocols and RSTP/MSTP, DRP ring network redundancy protection
- Supports OSPF layer 3 routing protocol and VRRP for Layer 3 Switch
- Complies with EN50155 and EN50121

Aquam9S/8S/5S

9/8/5 Port Unmanaged IP65 M12 PoE Switches

- Supports maximum 8/5 10/100Base-TX M12 ports or 1Gigabit+8 10/100Base-TX ports
- Supports maximum 5/8 802.3af/802.3at PoE ports, maximum 15/30W for each port
- Supports dual power inputs: WV(24-110VDC)
- Supports a total of 80W for the whole PoE ports
- CE, FCC, EN50121, EN50155, EN45545, E mark



Aquam8G/5G

8G/5G Port Unmanaged IP65 M12 Switches

- Supports maximum 8/5 10/100/1000Base-T(X) M12 (X-coded) ports
- Supports dual power inputs: H6(72-110VDC), L12(24VDC)
- Complies with the requirements of EN50155 and EN50121 industrial standards
- CE, FCC, EN50121, EN50155, EN45545, E mark



Aquam8/5

8/5 port unmanaged IP65/67 M12 switches

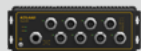
- Supports maximum 8/5 10/100Base-TX ports in M12 connector
- Dual power inputs: LV (12-48VDC/18-30VAC), H6(72-110VDC)
- CE, FCC, EN50121, EN50155, EN45545
- E mark and UL61010 for LV model



Aquam8A

8 port smart unmanaged IP65 M12 switch

- Supports 8 10/100Base-T(X) ports in M12 connector
- Supports broadcast storm protection and QoS
- Dual power inputs: LV(12-48VDC/18-30VAC)
- Supports PushPull Connector (by request)
- UL61010 (Pending), CE (Pending), FCC (Pending), EN50121 (Pending)



Industrial Communication Solutions >

ITS Ethernet Switches



SICOM3170

7+3G port layer 2 managed traffic Ethernet switches

- 2 Gigabit SFP slots, one 10/100/1000Base-TX port and seven 10/100Base-TX ports
- Dual slots width in the traffic signal cabinet
- Specially designed to slide into an open Detector Chassis Slot of signal cabinet mainly used in North America market
- Rear panel provides PCB Golden Finger for power input of L5(12-24VDC)
- CE, FCC



SICOM3171

5 port managed traffic serial device server

- 1 10/100Base-TX port, 4 RS232/422/485 serial ports
- One slot width in the traffic signal cabinet
- Specially designed to slide into an open Detector Chassis Slot of signal cabinet mainly used in North America market
- Rear panel provides PCB Golden Finger for power input of L5(12-24VDC)



SICOM3172

EoVDSL2 & serial device server integrated traffic Ethernet switches

- 2 EoVDSL2 ports, 4 10/100Base-TX RJ45 ports and 2 RS232/RS485 serial ports
- Dual slots width in the traffic signal cabinet
- Specially designed to slide into an open Detector Chassis Slot of signal cabinet mainly used in North America market
- Rear panel provides PCB Golden Finger for power input of L5(12-24VDC)

Industrial Communication Solutions >

PoE Ethernet Switches

SICOM3307S

7+3G port layer 2 managed DIN-Rail PoE switch

- 2 Gigabit Combo ports, 7 10/100Base-T(X) PoE ports compliant with 802.3af/at
- Supports PD detection and PD classification
- Supports PoE power limit, PD fault detection, PoE status display
- Supports DT-Ring, DRP and RSTP protocols
- Dual power inputs L10(48VDC)
- CE,FCC



KIEN1005S

5 port unmanaged DIN-Rail PoE switches

- 1 Fast Ethernet fiber/RJ45 optional port and 4 10/100Base-TX PoE ports compliant with 802.3af
- Supports PD detection and PD classification
- Dual power inputs L10(48VDC)
- Operating temperature: -40 to 70°C
- IP40 protection class



Opal5S

5 Port Entry-level Unmanaged DIN-Rail PoE Switches

- 1 100MSFP/Copper port and 4 10/100Base-TX PoE ports compliant with IEEE802.3at/af
- Supports PD detection and PD classification
- Dual power inputs: 24VDC(12-36VDC), 48VDC(12-57VDC)
- Operating temperature is -40 to 75°C
- IP30 protection class
- CE, FCC



Opal10S

8/10 Port Entry-level Unmanaged DIN-Rail PoE Switch

- 8 10/100Base-TX PoE ports compliant with IEEE802.3at/af, 2 1000MSFP ports which are optional
- Supports PD detection and PD classification
- Dual power inputs: 24VDC(12-36VDC), 48VDC(12-57VDC)
- Operating temperature is -40 to 75°C
- IP30 protection class
- CE, FCC



Opal5GS

5 Port Entry-level Unmanaged DIN-Rail PoE Switch

- 1 Gigabit SFP/Copper port and 4 10/100/1000Base-TX PoE ports compliant with IEEE802.3at/af
- Supports PD detection and PD classification
- Dual power inputs: 24VDC(12-36VDC), 48VDC(12-57VDC)
- Operating temperature is -40 to 75°C
- IP30 protection class
- CE, FCC



Opal10GS

8/10 Port Entry-level Unmanaged DIN-Rail PoE Switch

- 8 10/100/1000Base-TX PoE ports compliant with IEEE802.3at/af, and 2 1000MSFP ports which are optional
- Supports PD detection and PD classification
- Dual power inputs: 24VDC(12-36VDC), 48VDC(12-57VDC)
- Operating temperature is -40 to 75°C
- IP30 protection class
- CE, FCC



Video Surveillance Ethernet Switches



SICOM3014GV

14G port layer 2 managed DIN-Rail full Gigabit Ethernet switch

- 4 Gigabit SFP ports, 10 100/1000Base-TX ports
- Dual power inputs: L15(24/48VDC)
- Operating temperature: -40 to 75°C
- IP30 protection class
- EMC industrial level 3
- CE, FCC



SICOM3008GV

8G port layer 2 managed DIN-Rail full Gigabit Ethernet switch

- 2 Gigabit SFP ports, 6 100/1000Base-TX ports
- Dual power inputs: L15(24/48VDC)
- Operating temperature: -40 to 75°C
- IP30 protection class
- EMC industrial level 3
- CE, FCC



Opal8GV

8G port unmanaged DIN-Rail full Gigabit Ethernet switch

- 2 Gigabit SFP ports, 6 100/1000Base-TX ports
- Dual power inputs: L15(24/48VDC)
- Operating temperature: -40 to 75°C
- IP30 protection class
- EMC industrial level 3
- CE, FCC

Industrial Communication Solutions > PROFINET Ethernet Switches

SICOM3008PN

8G port layer 2 managed DIN-Rail full Gigabit PROFINET Ethernet switch

- 8 100/1000Base-TX ports
- Supports PROFINET v2.32, CC-B
- Supports IEC62439-2 PROFINET MRP (MRM&MRC), PNIO system redundancy
- Dual power inputs: L15(24/48VDC)
- Operating temperature: -40 to 75°C
- IP30 protection class
- EMC industrial level 3
- CE, FCC, PROFINET certification



Industrial Communication Solutions > Serial Device Server

SICOM3005A

6 switching ports + 4 serial ports managed serial device servers support full range of AC/DC power supplies

- 2 100Base-FX ports, 4 or 6 10/100Base-TX ports and 4 serial ports
- Supports protocol exchange between TCP/UDP and serial protocols such as RS232/RS485/RS422.
- Dual power inputs: L2(24-48VDC), L5(12-24VDC). Single power supply HV(100-240VAC/110-220VDC)
- Supports API interface for user program.
- Flow control by software, serial-security, serial-static route
- Supports Ethernet security management, ring-redundancy, broadcast protocol



KPS2204

6 Port Managed DIN-Rail Programmable Serial Device Servers

- 2 10/100Base-T(X) RJ45 ports and 4 RS232/422/485 serial ports
- Dual power inputs: L1(48VDC), L3(24VDC)
- Supports Reset button
- Serial ports have 15KV ESD protection circuit
- Supports secondary development on Linux system
- Interfaces and power cable offer surge protection
- EMC performance reaches industrial level 4
- IP40 protection class



Industrial Communication Solutions >

Intrinsic Safety Ethernet Switches



SICOM3016BA

12+4G port layer 2 managed switch

- 3 or 4 Gigabit SFP slots, 6 Fast Ethernet fiber/RJ45 optional ports and 6 100Base-FX ports
- Supports ring protocol such as DT-Ring, STP, supports auto topology
- Dual power inputs: L6(12VDC), L7(5VDC)
- Comply with explosive atmospheres standard IEC60079-11(GB3836.4).
- Supports both housing and embedded switching board versions



SICOM3009BA

9 ports embedded layer 2 managed switch

- 3 100Base-FX ports, 6 10/100Base-T(X) ports with RJ45 connectors.
- Full load power consumption is as low as 3.9W.
- Dual power inputs: L9(3-5.5VDC)
- Comply with explosive atmospheres standard IEC60079-11(GB3836.4).
- Supports both housing and embedded switching board versions



SICOM3000BA

6+3G port layer 2 managed DIN-Rail switch

- 3 Gigabit SFP slots, 6 10/100Base-T(X) RJ45 ports
- Full load power consumption is as low as 5.2W
- Housing version: dual power inputs L5(12-24VDC), L6(12VDC)
- Non housing version: dual power inputs L6(12VDC), single power supply L4(18VDC), L7(5VDC)
- Comply with explosive atmospheres standard IEC60079-11(GB3836.4).
- Supports both housing and embedded switching board versions



KIEN1008BA

8 port unmanaged switch supports maximum 8 fiber ports

- 8 fast Ethernet fiber/copper ports
- Dual power inputs: L2(24-48VDC), L6(12VDC)
- CE (L2), FCC (L2), UL508 (L2), UL Class I Div 2 (L2)
- Comply with explosive atmospheres standard IEC60079-11(GB3836.4).
- Supports both housing and embedded switching board versions

Industrial Communication Solutions >

Network Management System

Kyvision 3.0

Element Management Software

- High performance network management software, supports 10 users at the same time and can monitor up to 1000 devices
- Supports Kyland network devices and provide the functions of auto-detection of devices, auto-generation of network topology, abnormal alarm, operation diary record etc.
- Display the monitored devices with high quality images
- Being able to check the real traffic statistics of operating port
- Network devices real status checking. Alarms through Emails or SMS are available.
- Supports manual locking and timing automatic locking to prevent malicious access to the management interface through logging with present user's identity.
- Supports the function to lock specified users. Locked users cannot login the system with their identities.
- Supports record and query of operation and system logs
- Batch upload and download of configuration files, along with multiple simultaneous software upgrades by built-in FTP server
- Provides Socket and OPC interfaces for user secondary development



Kyview 2.0

Large Scale Network Management Software

- Distributed deployment, large-capacity monitoring of the system, system capacity up to 10,000 switches (can be expanded)
- Supports B / S architecture and HTML5, easy to deploy, web page visual management
- Supports to add third-party devices through template configuration quickly
- Supports topology management (automatic topology, device identification, automatic connection), which is dynamic visual topology with intuitive image device panel and WYSIWYG
- Supports device management (device information query, device panel, configuration information import and export)
- Supports alarm management (real-time alarm, historical alarm, alarm experience)
- Supports performance monitoring (CPU and memory utilization, port traffic)
- Supports statistical reports (alarm statistics, performance statistics)
- Supports system management (network management data backup, recovery, cleanup, user-role-permission, log, self-monitoring)
- Supports configuration management (VLAN, ring network, port, performance threshold setting, graphical configuration) acquisition mode SNMP/TRAP, SNMP Supports V1, V2C, V3



Industrial Communication Solutions >

Optical Fiber Convertor



KOM300M

3 port managed DIN-Rail copper to fiber media converter

- 1 100Base-FX port and 2 10/100Base-T(X) RJ45 ports
- Supports SNMPv1/v2c/V3, LLDP
- Dual power inputs: L2(24-48VDC), L5(12-24VDC)
- IP40 protection class
- CE (L2), FCC (L2)



KOM300A

3 port DIN-Rail copper to fiber media converter supports full range of AC/DC power supplies

- 1 100Base-FX port and 2 10/100Base-T(X) RJ45 ports
- Dual power inputs: L2(24-48VDC), L5(12-24VDC), single power supply: HV(100-240VAC/110-220VDC)
- IP40 protection class
- CE (L2, HV), FCC (L2, HV)



KOM300F

3 port DIN-Rail copper to fiber media converter supports AC/DC power supplies

- 1 100Base-FX port and 2 10/100Base-T(X) RJ45 ports
- Single power supply L3(24VDC), L5(12-24VDC), H1(100-240VAC/220VDC)
- IP30 protection class
- CE (L3), FCC (L3)



KOM600G

2G port DIN-Rail LFP copper to fiber media converter

- 1 1000Base-X SFP port and 1 10/100/1000Base-T(X) RJ45 port
- Supports LFP (Link Fault Pass-Through)
- Dual power inputs: L2(24-48VDC), L5(12-24VDC)
- IP40 protection class
- CE (L3), FCC (L3)



KOM600

2 port DIN-Rail LFP copper to fiber media converter

- 1 100Base-FX port and 1 10/100Base-T(X) RJ45 port
- Supports LFP (Link Fault Pass-Through)
- Dual power inputs: L2(24-48VDC), L5(12-24VDC)
- IP40 protection class
- CE (L2), FCC (L2)



KOM200

DIN-Rail serial to fiber media converter supports AC/DC power supplies

- One fiber port, three types of serial ports (RS232/RS422/RS485)
- Single power supply L3(24VDC), L5(12-24VDC), H1(100-240VAC/220VDC)
- IP30 protection class
- FCC (L3)

Industrial Communication Solutions > SFP Modules & Accessories

SFP-10G

- Industrial 10Gb/s SFP+ Optical Transceiver Module

SFP-1G

- Industrial Gigabit SFP Optical Transceiver Module

SFP-1G to FX

- Industrial Gigabit to 100M SFP Optical Transceiver Module

SFP-1G to RJ45

- Industrial Gigabit SFP Copper Transceiver Module

SFP-1FX

- Industrial 100M SFP Optical Transceiver Module

SFP-1FE

- Industrial Fast Ethernet SFP Copper Transceiver Module

DT-XL-Mini USB-USB-2m

- USB Console Cable

M16-A-5P-F

- M16 A-Coding 5 Pin female screw clamp connection cable connector

M12-X-8P-M

- M12 X-Coding 8 Pin male screw clamp connection cable connector

M12-D-4P-M

- M12 D-Coding 4 Pin male screw clamp connection cable connector

M12-B-4P-F

- M12 B-Coding 4 Pin female screw clamp connection cable connector

M12-A-8P-M

- M12 A-Coding 8 Pin male screw clamp connection cable connector

M12-A-4P-M

- M12 A-Coding 4 Pin male screw clamp connection cable connector

M12-A-4P-F

- M12 A-Coding 4 Pin female screw clamp connection cable connector

KyACB-USB-M12-A-4P-M

- Configuration Backup and Restoration Tool with M12 connector

KyACB-USB-RJ45

- Configuration Backup and Restoration Tool with RJ45 connector



Precise Timing Solutions



PTS10/10A/30

High-precision Time Servers

- GPS, BDS, GLONASS, IRIG-B, PTP etc., can be used as time source
- TCXO, OCXO or Rubidium features
- Safety and reliable multiple source selection algorithm
- 1PPS/1PPM/1PPH output
- IRIG-B Demodulated and Modulated output
- Idle Contact time output
- 1PPS+TOD time output
- RS-232/485 serial time output
- NTP/SNTP output
- PTP V2 output
- Screen display (3U-Touch Screen/1U-LCD Screen)
- Monitoring(IEC61850/IEC60870/DNP/SNMP)
- Alarm contact output
- Dual redundant power supplies of 85-264VAC, or 48VDC
- CE



ePT-100

High-precision Timing Test Analyzer

- GPS, BDS, GLONASS etc. external time sources
- PTP, IRIG-B, TOD etc. external time sources
- Rubidium for hold performances
- PPS, IRIG-B(Demodulated and Modulated), TOD, NTP, PTP etc. time output
- PPS, IRIG-B(Demodulated and Modulated) etc. timing test
- NTP, PTP etc. network timing test
- 1PPS+TOD, serial code etc. timing test
- Pulse frequency, pulse width, SOE etc. timing test
- IRIG-B code and decode monitoring and storage
- IEC61850 SV/GOOSE time performance test
- Switch PTP message resident time performance test
- Multiple Merge Units IEC61850 time performance test
- Network protocol capturing and storage(PCAP/CSV)
- Idle contact input/output SOE measurement
- Time performance analyzer software
- Digital scope feature
- Screen capture feature
- Built-in battery
- CE



PTC1000

PTP clock supports all IRIG-B format and full range of AC/DC power supplies

- Supports 1 100Base-FX SC/ST/FC or 1 10/100Base-TX RJ45 IEEE1588 input
- Supports PPS output, IRIG-B TTL outputs, and IRIG-B AM modulation.
- Supports IRIG-B000, B001, B002, B003, B004, B005, B006, B007, B120, B121, B122, B123, B124, B125, B126, B127.
- Dual power inputs: H2(110VDC), L2(24-48VDC). Single power supply: HV(100-240VAC/110-220VDC)
- Complies with IEC 61850-3 and IEEE1613.
- CE (L2), UL508 (L2)

PTS-DR200

- Compact DIN-Rail installation design
- High Precision Reference Clock as Absolute Time Source (GPS, BDS, GLONASS)
- Relative Reference Time and External Time Synchronization (PTP, IRIG-B, NTP/SNTP)
- High precision stable OCXO oscillator with excellent time keeping performance
- Single power supply: 220VAC/DC(85-264VAC/85-300VDC); 24VDC(18-36VDC); 48VDC(36-72VDC)
- Supports PTP, NTP/SNTP,IRIG-B,PPS,TOD output
- Report time status by SNMP, IEC61850 MMS, IEC60870-5-104, and DNP over TCP etc.
- Supports Web, SNMP etc. management system
- CE, FCC



ePT-100s

- GPS, BDS, GLONASS etc. external time sources
- PTP, NTP, PPS, IRIG-B, 1PPS+TOD etc. external time sources
- Rubidium for hold performances
- PPS, IRIG-B, TOD, NTP, PTP etc. time output
- PPS, IRIG-B(DC/AC) etc. timing test
- NTP, PTP etc. network timing test
- Pulse frequency, pulse width etc. timing test
- IRIG-B code and decode monitoring and storage
- Network protocol capturing and storage(PCAP/CSV)
- Screen capture feature



PTC2000

- Compact DIN-Rail installation design
- Single power supply: HV(100-240VAC/110-220VDC), L3(24VDC), L1(48VDC)
- Supports PTP, IRIG-B time input
- Supports PTP,NTP/SNTP,IRIG-B,PPS,TOD time output
- Supports Web management system
- Optional high performance OCXO with excellent time keeping performance



PTD-10

- Maximum 2 inputs as redundancy time source for Best Time Source selection
- Maximum 16 output ports can connect more IEDs
- Supports BNC, Terminal, Optical interface
- Supports IRIG-B signal with B000, B001, B002, B003, B004, B005, B006 and B007
- Cable delay compensation can be set by manual
- Alarm contact indicate device status
- LCD time display



Intelligent Gateways



DG-A2/A4

Industrial DIN-Rail protocol gateway for Smart Grid

- DG-A2: 1 10/100M IEEE 802.3 Ethernet ports, 2 dual-mode of RS232/RS485 isolated serial ports
- DG-A4: 2 10/100M IEEE 802.3 Ethernet ports, 4 dual-mode of RS232/RS485 isolated serial ports
- Special designing based on ARM Cortex-A8 architecture
- Configurable MMS (IEC 61850-8-1) server & client application
- Full functional NTP for time synchronization
- Supports 3G GPRS wireless communication
- Complied with IEC 61850-3, IEEE 1613 standards
- Power supply of 85-265VAC/100-375VDC or 12-24VDC
- Built-in SoftPLC calculating task
- Supports IEC-101/103/104, Modbus/RTU, Modbus/TCP, DNP3
- Supports Vport
- CE



DG-A8/A16

Industrial rack mountable protocol gateway for Smart Grid

- 4 10/100M IEEE 802.3 Ethernet ports
- 8 RS232/485 serial ports and optional extra 8 RS485 serial ports
- Special designing based on ARM Cortex-A8 architecture
- Configurable MMS (IEC 61850-8-1) server & client application
- Configurable hardware watchdog
- Full functional NTP for time synchronization
- Supports IRIG-B DC time synchronization
- Dual mode of RS232/RS485 isolated serial ports
- Complied with IEC 61850-3, IEEE 1613 standards
- Power supply of 85-265VAC/100-375VDC
- Built-in SoftPLC calculating task
- Supports IEC-101/103/104, Modbus/RTU, Modbus/TCP, DNP3
- Supports Vport
- CE



DGCOM3000

Gateway & Switch All-in-One

- Supports 1000M/100M SFP ports, 100M copper ports
- Supports Layer 2 switching, redundant ring protocol (DRP, STP/RSTP, DT-Ring), multicast, QoS service
- Supports broadcast storm control
- Supports RS232/422/485 serial ports
- Supports DI/DO input & output, SOE reaches 1ms
- Single power supply: HV(100-240VAC/110-220VDC); L2(24-48VDC)
- Supports IEC61850 MMS server or client application
- Supports IEC61850 GOOSE publishing and subscribing
- Supports advanced online calculation function
- Supports real-time online communication diagnostics and maintenance of acquisition/forward protocol communication
- Supports NTP/SNTP
- Configurable hardware watchdog



KGW3101/3102/3204

1, 2, 4- Serial port DIN-Rail Modbus gateway

- 1 or 2 Ethernet port and 1, 2, or 4 RS-232/422/485 ports
- 128 devices per serial port, Master or Slave
- 16 TCP devices per Ethernet port, Client or Server
- Convert between Modbus TCP and Modbus RTU/ASCII
- Supports both Transparent & Agent mode transmission
- Dual power inputs: L17(12-48 VDC)
- Built-in 2KV serial Isolation protection
- Metal housing with wide temperature rating (-40 to +75°C)
- UL61010, Class I Div 2, CE, FCC, RoHS

Appendix

Power Supply Range

Power Supply	Description	Power Voltage Range
HV	100-240VAC,50/60Hz;110-220VDC	85-264VAC/77-300VDC
H1	100-240VAC,50/60Hz;220VDC	85-264VAC/120-300VDC
H2	110VDC	77-154VDC
H3	220VAC	85-264VAC
H4	220VDC	120-300VDC
H5	110VDC	40-160VDC
LV	24VAC/DC(18-30VAC/12-48VDC)	18-30VAC/9-60VDC
L1	48VDC	36-72VDC
L2	24-48VDC	18-72VDC
L3	24VDC	18-36VDC
L4	18VDC	9-21VDC
L5	12-24VDC	9-36VDC
L6	12VDC	9-18VDC
L7	5VDC	4.5-5.5VDC
L8	3.3VDC	3.15-3.45VDC
L9	3.3-5VDC	3-5.5VDC
L10	48VDC	45-57VDC
L11	7VDC	6.5-7.5VDC
L12	24VDC	22-36VDC
WV	24-110VDC	16.8-154VDC
L13	24VDC	16.8-30VDC
L14	48VDC	33.6-60VDC
L15	24/48VDC	12-58VDC
L17	24VDC	12-48VDC
H6	72-110VDC	50.4-137.5VDC

Technical Expertise



Rugged Design & Manufacturing Capability



International Certificates

