

LANactive Industry 28 Port Managed 10G Switch

- 28 SFP ports in total, 4x SFP+ ports
- Layer-3
- Integrated RELAY
- Isolated redundant power inputs
- Fanless



Description

Aginode managed Industrial Ethernet XiGigaSwitch 2804 is part of Aginode *LANactive Industry* product portfolio and designed for installing robust and reliable networks in harsh environments. *LANactive Industry* XiGigaSwitch 2804 is designed to provide maximum network availability, security, longest lifetime in harsh environments and making the network maintenance easier. The XiGigaSwitch 2804 provides great flexibility in network design - it has 24 Gigabit ports including 4 SFP+ ports. The XiGigaSwitch is designed for 19-inch Rack mounting and comes with an isolated redundant power supply to operate in the needed power range.

Interfaces

XiGigaSwitch 2804 is equipped with 24x 100/1000/2500BaseX SFP Ports and 4x 100/1000/2500/10000 BaseX SFP+ Ports, making it ideal for large-scale industrial networks

Housing

Standard 19-inch Rack Mount and 1U Height. IP40 Protection Class.
Dimensions (W x H x D): 442mm×43.8mm×335mm

IEC 61850

Aginode XiGigaSwitch family complies with IEC 61850-3 requirements for power utility automation. This functionality is critical for Smart grid and allows to use standardized equipment to ensure correct and reliable communication of all networked devices of Smart grid infrastructure (including switches, PLCs, different controllers, sensors etc.) with each other and with central SCADA.

Mechanical Characteristics

Aginode XiGigaSwitch is compliant with:
Vibration: IEC 60068-2-6
Shock: IEC 60068-2-27
Freefall: IEC 60068-2-31
Circuit Board: Approved by IPC

Art. Nr. 1327882

LANactive

Standards (extract)

IEEE 802.3
IEEE 802.3u
IEEE 802.3z
IEEE 802.3x
IEEE 802.1D
IEEE 802.1Q
IEEE 802.1X
IEEE 802.1p
IEEE 802.3ad
RFC 1058
RFC 2328
RFC 2338

IEC 61850-3, IEEE1613 (C37.90.x)



Designed for harsh environ-



Compact Design



Interoperability



Easy Maintenance



Redundancy



Security and Reliability



High Availability

Hardware Features

Ordering Information	XiGigaSwitch 2804
Article Number	1327882
Interfaces	
SFP Ports	24x 100/1000/2500BaseX
SFP+ Ports	4x 100/1000/2500/10000BaseX
RJ45 Ports	Auto-Negotiation, MDI/MDI-X Auto-Cross Over and Auto-Polarity
Digital Diagnostics Monitoring Inter-	Yes
Relay	Yes
Switch Properties	
Power Consumption	35W (Max)
Weight	4000g
PoE Mode	30W per Port, Mode A, Pin 1-2/3-6
General	
Dimensions [WxHxD]	442mm x 43,8mm x 335mm
IP Protection Class	IP40 (EN 60529)
Mounting	Standard 19-inch Rack Mount and 1U Height
Circuit Board:	Approved by IPC
Storage Temperature	-40 ... 85°C
Operating Temperature	-40 ... 75°C
Ambient Relative Humidity	20 - 95% (non-condensing)
MTBF	>800,000 hours
Power Supply	
Connection	5-pin terminal block
Input Voltage	100...240 VAC / 100...240 VDC, Dual inputs
Overload Current Protection	Supported
Reverse Polarity Protection	Supported

Software Features

Switching Parameters

Switching Type	Store-and-Forward, self-learning
Switching Capacity	160Gbps, non-blocking
Exchange Rate:	148,800 pps/100M ports; 1,488,000 pps/1000M ports; 14,880,000 pps/10000M ports
Max. Frame Size	9,600 Bytes (Support of Jumbo frames)
Packet Buffer	32Mbits
Packet Forwarding	Layer 2 and Layer 3 Forwarding
MAC-Address Table	32KMAC-Addresses
VLANs	IEEE802.1q with up to 256 Groups
Quality of Service Layer 2	IEEE802.1p Class of Service (8 Queues per Port)
Quality of Service Layer 3	RFC2474/3168 DSCP (8 Queues per Port)
Bandwidth Limitation	Bitrate and Number of Packets
Flow Control	IEEE802.3x

Management

On-Board High-Performance Management

LEDs	SYS, PWR, PWR1, PWR2
Zero-Touch Configuration	Via LANactive Manager Controller
IP-Address	IPv4, IPv6
DHCP-Client	DHCP, DHCPv6
DHCP Relay Agent	Yes
File Transfer	SCP
Console Port	V.24 with Aginode Console Cable
Web-Interface	HTTP, HTTPS
Command Line Interface	SSH, Telnet
Scripting	Yes
SNMP	SNMPv1, v2c, v3
Further Management Protocols	Syslog, LLDP, LLDP-MED, CDP
Time Synchronisation	SNTP, NTP, PTP v2
Port Statistics	Detailed per Port

Redundancy

Redundancy Protocols	STP, RSTP, MSTP, MRP, ERPS
Link Aggregation	LACP

Security

Password Protection	Two Access Levels (R/W or R/O)
Authentication via Radius and TACACS+	CLI and LANactive Manager
Access Control List	Layer 2 and Layer 3
ACL for Management Interface	Up to 16 Access Control Lists
Portsecurity via MAC-Address	Up to 3 predefined MAC-Addresses
Portsecurity via Radius	IEEE802.1x
DHCP Snooping	Yes
Loop and Broadcast Limiter	Yes
Firmware Update	Dual Firmware Image
Configuration-/Reset Button	Yes / Yes (can be configured)

Routing

Routing Protocols	RIPv2, OSPFv3
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Technical Specification

Supported Standards

IEEE 802.3 CSMA/CD method and	RFC 1403 BGP OSPF Interaction
IEEE 802.1p Priority Queuing	RFC 1587 OSPF NSSA
IEEE 802.1q VLAN tagging	RFC 1765 OSPF Database Overflow
IEEE 802.1d Spanning Tree Algorithm	RFC 1812 Requirements for IP Version 4 Routers
IEEE 802.1w Rapid Spanning Tree	RFC 1851 The ESP Triple DES Transform ESP
IEEE 802.1s Multiple Spanning Tree	
IEEE 802.3ac VLAN Tagging	RFC 1994 PPP Challenge Handshake Authentication Proto-
IEEE 802.1x Authentication	RFC 2068 HTTP
IEEE 802.3ad Link Aggregation	RFC 213 DHCP Server
IEEE 802.3x Flow Control	RFC 2138 RADIUS
IEEE 802.3 Ethernet	RFC 2139 RADIUS Accounting
IEEE 802.3u Fast Ethernet	RFC 2236 IGMPv2
IEEE 802.3z Gigabit Ethernet	RFC 2328 OSPFv2
IEEE 802 Networks	RFC 2338 VRRP
RFC 768 UDP	RFC 2362 PIM-SM/DM
RFC 791 IP	RFC 2370 The OSPF Opaque LSA Option
RFC 792 ICMP	RFC 2865 Remote Authentication Dial In User Service
RFC 793 TCP	RFC 2474 DiffServ Precedence
RFC 826 ARP	RFC 2475 DiffServ Core and Edge Router Functions
RFC 854 Telnet Client & Server	RFC 2597 DiffServ Assured Forwarding
RFC 904 Exterior Gateway Protocol	RFC 2598 DiffServ Expedited Forwarding
RFC 1027 Using ARP to Implement	RFC 2644 Directed Broadcasts
RFC 1058 RIP	RFC 3046 DHCP Relay Agent Information Option
RFC 1059, 1119 NTPv1/2	RFC 3222 Forwarding Information Base (FIB)
RFC 1112 IGMP	GMRP GARP
RFC 1191 Path MTU Discovery	GVRP GARP
RFC 1256 ICMP Router discovery protocol	SSH2 Secure Shell 2
RFC 1267 A Border Gateway Protocol 3 (BGP-3)	IGMP snooping
RFC 1388 RIP Version 2 Carrying Additional Information	SNMP v3
RFC 1519 CIDR (Classless Inter-domain Routing)	

Standards

CE - Conformity

Electromagnetic interference

FCC 47 CFR Part 15 Class A, EN55032 Class A, EN55035 Class A

Low Voltage Directive

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Product Safety:

CE.CB.IEC.IECEE , IEC/EN62368-1, FCC Part 15 Subpart B Class A

Engineering Standards

EN 62368-1, IEC (EN)61000-4-2, Class 4, IEC (EN)61000-4-3, Class 3, IEC (EN)61000-4-4, Class 4, IEC (EN)61000-4-5, Class 4, IEC (EN)61000-4-6, Class 3, IEC (EN)61000-4-9, Class 5, IEC 61850-3, IEEE1613 (C37.90.x)

Dimensions

