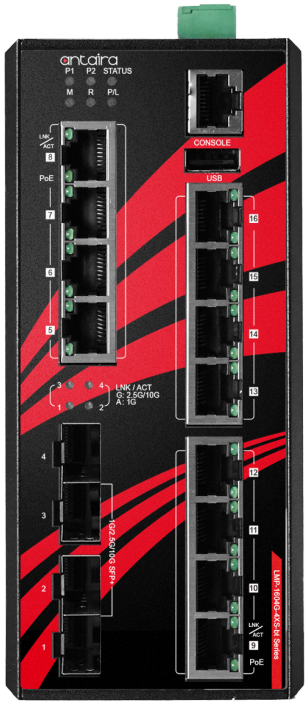
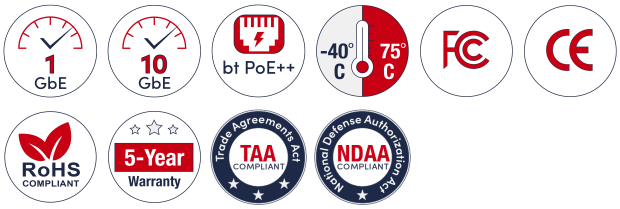
LMP-1604G-4XS-bt(-T)

MANAGED GIGABIT bt POE++ ETHERNET SWITCH WITH 10G SFP+ SLOTS





PORT CONFIGURATION

- Support 12*10/100/1000BASE-T Gigabit IEEE 802.3bt Compliant PoE++ Ports (90W/Port)
- Support 4*1G/2.5G/10G SFP+ Slots

MANAGEMENT

- ITU-T G.8032 Ethernet Ring Protection Switch (ERPS) Protocol
- IEEE 802.1D STP (Spanning Tree Protocol), IEEE 802.1w RSTP (Rapid Spanning Tree Protocol), IEEE 802.1s MSTP (Multiple Spanning Tree Protocol)
- Static Routes, ARP, NAT
- SNMPv1/v2c/v3, RMON, Modbus TCP, and HTTP/HTTPS

SECURITY

- RADIUS, TACACS+, 802.1X Authentication
- ACL, IP Source Guard
- VLAN, QoS,and, SNMPv3

RUGGED DESIGN

- IP30 Rugged Metal Case Design
- Redundant Power Input
- Fanless Operation
- Power Reverse Polarity Protection
- High EFT and ESD Protection
- Operating Temperature - STD: -10°C to 65°C, EOT: -40°C to 75°C
- NDAA and TAA Compliant
- 5-Year Warranty

INTRODUCTION

Antaira Technologies' LMP-1604G-4XS-bt(-T) is an 16-port managed Gigabit PoE++ Ethernet switch embedded with 12*10/100/1000T Ethernet ports that support IEEE 802.3bt for a maximum of 90W/port, and 4*1G/2.5G/10G SFP+ slots for fiber connection. It is a fully manageable light layer 3 Ethernet switch that is pre-loaded with a user-friendly web management console design. It supports the ring network redundancy function using the market's open standard ITU-T G.8032 Ethernet Ring Protection Switch (ERPS) protocol that has a <50ms network recovery time. The advanced network filtering and security functions, such as IGMP, VLAN, QoS, SNMP, RMON, Modbus TCP, and 802.1X/HTTPS/SSH/SSL increase determinism and improve network management for remote SCADA systems or control networks.

LMP-1604G-4XS-bt(-T) is IP30 rated and DIN-rail mountable. It supports extended operating temperature from -40°C to 75°C. It also provides high EFT and ESD protection for industrial networking applications, such as power/utility, water wastewater, oil/gas/mining, factory automation, security surveillance, ITS and any other outdoor or harsh environment. With a compact form and all connections facing the front of the Ethernet switch making it easy viewing of installations in a reserved space.

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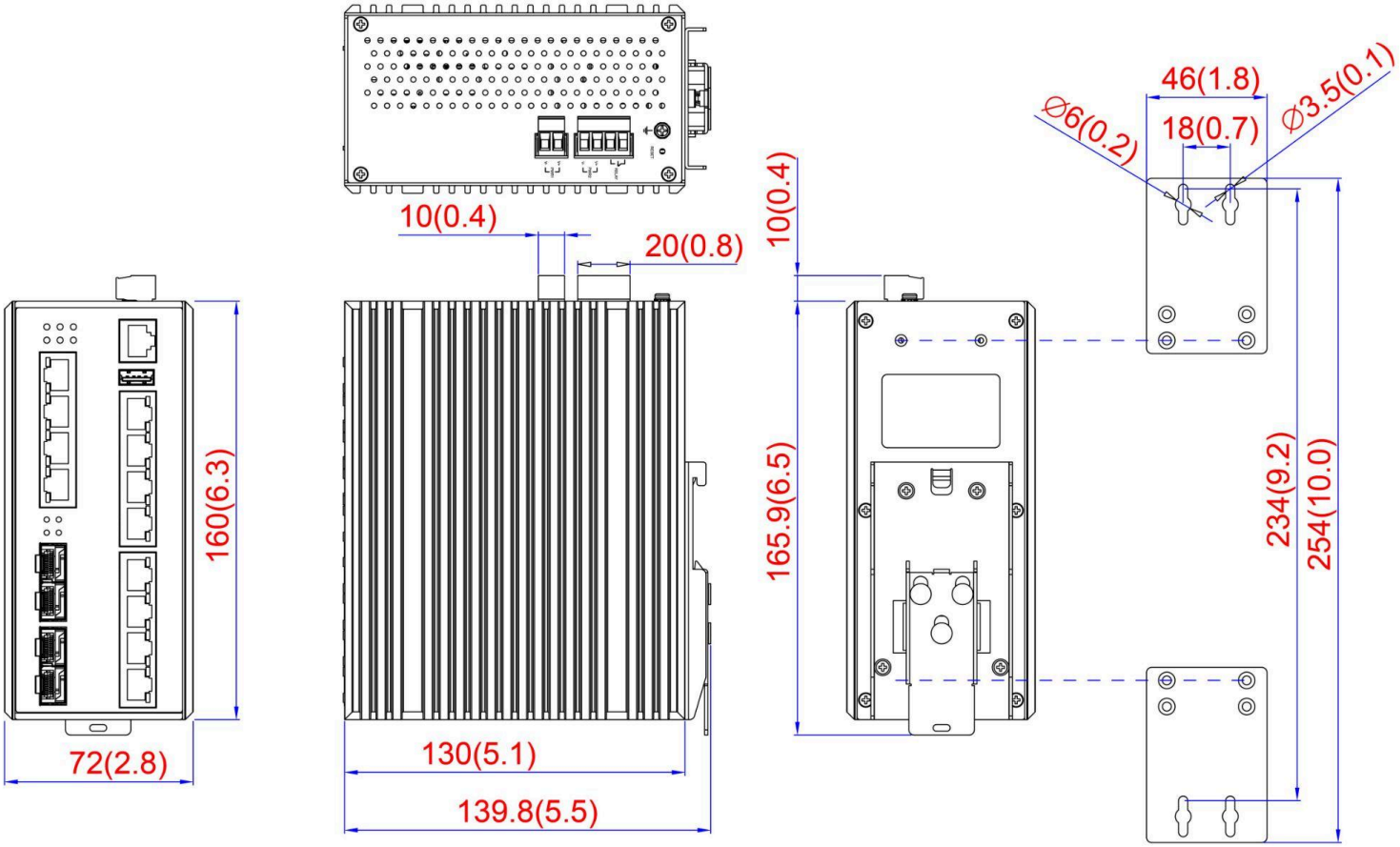
SPECIFICATIONS

Hardware Specifications

Part Number	Total Ports	RJ-45 GE	SFP 10G Fiber	90W PoE++	PoE Power Budget	System Power	Input Voltage	Operating Temp.
LMP-1604G-4XS-bt	16	12	4	12	360W	25W	48-55VDC	-10 to 65°C 14 to 149°F
LMP-1604G-4XS-bt-T	16	12	4	12	360W	25W	48-55VDC	-40 to 75°C -40 to 167°F

Physical Specifications

Part Number	Dimensions (W x H x D)	Weight (Unit)	Weight (Shipping)	Mounting	Housing	PoE LED Indicator	PoE Pin Assignment
LMP-1604G-4XS LMP-1604G-4XS-T	72 x 160 x 130mm 2.83 x 6.3 x 5.11in	2.158kg 4.76lb	2.622kg 5.78lb	DIN-Rail, Wall Mount	Metal, IP30	Yes	V+, V+, V-, V-, for pin 1, 2, 3, 6 (End-span, Mode A) V+, V+, V-, V-, for pin 4, 5, 7, 8 *Support Modes: Mode A, Mode B, 4-Pair Mode



Unit: mm (inch)

Din-rail

Wall-mount

Standards

Part Number	IEEE Standards	
LMP-1604G-4XS-bt LMP-1604G-4XS-bt-T	IEEE 802.3 10BASE-T Ethernet IEEE 802.3u 100BASE-TX Fast Ethernet IEEE 802.3ab 1000BASE-T Gigabit Ethernet IEEE 802.3z Gigabit Fiber IEEE 802.3ae 10Gigabit Fiber IEEE 802.3af Power over Ethernet IEEE 802.3at Power over Ethernet Plus IEEE 802.3bt Power over Ethernet Plus Plus	IEEE 802.3x Flow Control for Full Duplex IEEE 802.3ad for Port Trunk with LACP IEEE 802.1D STP (Spanning Tree Protocol) IEEE 802.1w RSTP (Rapid Spanning Tree Protocol) IEEE 802.1s MSTP (Multiple Spanning Tree Protocol) IEEE 802.1Q for VLAN Tagging IEEE 802.1X for Network Authentication IEEE 802.1p QoS/CoS Protocol for Traffic Prioritization ITU-T G.8032/Y.1344 ERPS (Ethernet Ring Protection Switch) IEEE 802.1AB Link Layer Discovery Protocol (LLDP)

Key Firmware Features

VLAN	Private VLAN Port-based VLAN IP Subnet-based VLAN GARP/GVRP Guest VLAN	MAC-based VLAN Protocol-based VLAN VLAN Trunking Voice VLAN
Layer 2 Switching	STP MSTP RSTP Port Mirror Loop Guard BPDU Guard	MEP G.8032 ESP v1/v2 Loop Detection LACP Error Disable Recovery
Layer 2 Multicast	IGMPv1/v2/v3 Snooping IGMP Filtering IPMC Filtering Leave Proxy	MLDv1/v2 Snooping IPMC Throttling
Layer 3 Switching	Static Route ARP NAT	OSPFv2, OSPFv3 (Under development) RIPv2, RIPng (Under development) VRRPv2, VRRPv3 (Under development)
QoS	802.1p Queueing Input Priority Mapping Port/Queue/ACL policer DiffServ (DSCP)	Port Egress Shaper Queue Egress Shaper Tag Remarking Scheduler Mode
Power Saving	ActiPHY PerfectReach IEEE 802.3az EEE power management	
PoE	Power Budget Protection PoE Alive Check PoE Output Scheduling Persistent PoE	
Security	SSHv2 Port-based 802.1X MAC-based Authentication QoS Assignment TACACS+ Web/CLI Authentication Port Security IP Source Guard DHCP Snooping Secure Copy Protocol (SCP)	IP Based Access Filter Access Control List (ACL) ACL for Filtering/Policing/Port Copy VLAN Assignment IP MAC Binding User Privilege (15 levels) RADIUS Authentication and Accounting ARP Inspection Broadcast/Multicast/Unicast Storm Control Secure FTP
Management	IPv4/IPv6 LLDP/LLDP-MED DHCP Client DHCP Server DNS Proxy Syslog Daylight Saving RMON Command Line Interface (CLI) Relay Trigger	SMTP SNMP v1/v2c/v3 HTTP/HTTPS DHCPv6 Client DNS Client ICMPv6 Time Zone NTP Client sFlow Power Lost Warning

	Telnet Server and Client Dual Image Protection Ping6 DDMI	DHCP Option 82 TFTP Ping USB Configuration Backup/Restore Modbus TCP

Switch Properties

Specification		Specification	
Switch Architecture	Back-Plane (Switching Fabric): 104Gbps	MAC Table Size	32K
Priority Queues	8	VLAN Group	4095
Processing Type	Store and Forward	IGMP Group	1024
Flow Control	IEEE 802.3x flow control, back pressure flow control	RS232 Serial Console	1*RS232 in RJ45
Packet Buffer	32Mbits	Relay Contact	24VDC, 1A resistive
Transfer Rate	77.37 Mpps	Overload Current Protection	Present
Jumbo Frame	9.6Kbytes	Reverse Polarity Protection	Present

Compliance Specifications

EMI	FCC Part 15 Subpart B Class A EN 61000-6-4 Class A CE EN55032
EMS	CE EN 55035 EN 61000-6-2 IEC 61000-4-2,3,4,5,6,8
Free Fall	IEC 60068-2-32
Shock	IEC 60068-2-27
Vibration	IEC 60068-2-6
Green	RoHS Compliant
Certifications	FCC, CE UL 61010-1 , UL 61010-2-201 (Pending) ISA12.12.01 (Pending)
Storage Temperature	-40 to 85°C (-40 to 185°F)
Ambient Relative Humidity	5% to 95%, (non-condensing)
Country of Origin	Made in Taiwan
Warranty	5 Years

Mean Time Between Failures (MTBF)

Part Number	MTBF (Telcordia SR-332, Issue 3)	Part Number	MTBF (Telcordia SR-332, Issue 3)
LMP-1604G-4XS-bt	258,072.0184 hrs.	LMP-1604G-4XS-bt-T	258,072.0184 hrs.

ORDERING INFORMATION

Switch Models

Part Number	Description
LMP-1604G-4XS-bt	16-Port Industrial Gigabit IEEE 802.3bt PoE++ Light Layer 3 Managed Ethernet Switch, with 12*10/100/1000BASE-T (90W/Port) and 4*1G/2.5G/10G SFP+ Slots, 48-55VDC Power Input
LMP-1604G-4XS-bt-T	16-Port Industrial Gigabit IEEE 802.3bt PoE++ Light Layer 3 Managed Ethernet Switch, with 12*10/100/1000BASE-T (90W/Port) and 4*1G/2.5G/10G SFP+ Slots, 48-55VDC Power Input; EOT: -40 to 75°C

Power Supply Options

Part Number	Wattage	Input Voltage	PoE/PoE+ Support	Operating Temperature
SDR-480-48	480W	90~264VAC	Yes, Voltage Adjust 48-55VDC	-25~70°C / -13~158°F
SDR-960-48	960W	180~264VAC	Yes, Voltage Adjust 48-55VDC	-30~70°C / -22~158°F
NDR-480-48	480W	90~264VAC	Yes, Voltage Adjust 48-55VDC	-20~70°C / -4~158°F
PWRCORD2-US	AC Power Cord NEMA 5-15P to ROJ 3-Wire Open End (US Plug) 18 AWG 6 feet			

SFP Modules with DDMI

Part Number	Speed	Mode	Distance	Connector	Wavelength	Operating Temperature	TAA Compliance
SFP-10G-S10	10Gbps	Single Mode	10km / 6.2mi	LC	1310nm	0~70°C / 32~158°F	-
SFP-10G-S10-T	10Gbps	Single Mode	10km / 6.2mi	LC	1310nm	-40~85°C / -40~185°F	-
SFP-10G-S10-T-TAA	10Gbps	Single Mode	10km / 6.2mi	LC	1310nm	-40~85°C / -40~185°F	Yes
SFP-10G-S40	10Gbps	Single Mode	10km / 6.2mi	LC	1550nm	0~70°C / 32~158°F	-
SFP-10G-S40-T	10Gbps	Single Mode	40km / 24.8mi	LC	1310nm	-40~85°C / -40~185°F	-
SFP-10G-S40-T-TAA	10Gbps	Single Mode	40km / 24.8mi	LC	1310nm	-40~85°C / -40~185°F	Yes
SFP-10G-S80	10Gbps	Single Mode	80km / 49.7mi	LC	1550nm	0~70°C / 32~158°F	-
SFP-10G-S80-T-TAA	10Gbps	Single Mode	80km / 49.7mi	LC	1550nm	-40~85°C / -40~185°F	Yes
SFP-S10-T	1.25Gbps	Single Mode	10km / 6.2mi	LC	1310nm	-40~85°C / -40~185°F	-
SFP-S10-T-TAA	1.25Gbps	Single Mode	10km / 6.2mi	LC	1310nm	-40~85°C / -40~185°F	Yes
SFP-S20-T	1.25Gbps	Single Mode	20km / 12.4mi	LC	1310nm	-40~85°C / -40~185°F	-
SFP-S20-T-TAA	1.25Gbps	Single Mode	20km / 12.4mi	LC	1310nm	-40~85°C / -40~185°F	Yes
SFP-S40-T	1.25Gbps	Single Mode	40km / 24.8mi	LC	1310nm	-40~85°C / -40~185°F	-
SFP-S40-T-TAA	1.25Gbps	Single Mode	40km / 24.8mi	LC	1310nm	-40~85°C / -40~185°F	Yes
SFP-S120-T	1.25Gbps	Single Mode	120km / 74.5mi	LC	1550nm	-40~85°C / -40~185°F	-
SFP-S120-T-TAA	1.25Gbps	Single Mode	120km / 74.5mi	LC	1550nm	-40~85°C / -40~185°F	Yes
SFP-M	1.25Gbps	Multi Mode	550m / 0.34mi	LC	850nm	0~70°C / 32~158°F	-
SFP-M-T	1.25Gbps	Multi Mode	550m / 0.34mi	LC	850nm	-40~85°C / -40~185°F	-
SFP-M-TAA	1.25Gbps	Multi Mode	550m / 0.34mi	LC	850nm	0~70°C / 32~158°F	Yes
SFP-M-T-TAA	1.25Gbps	Multi Mode	550m / 0.34mi	LC	850nm	-40~85°C / -40~185°F	Yes

SFP-10G-M	10Gbps	Multi Mode	300m / 0.19mi	LC	850nm	0~70°C / 32~158°F	-
SFP-10G-M-TAA	10Gbps	Multi Mode	300m / 0.19mi	LC	850nm	0~70°C / 32~158°F	Yes
SFP-10G-M-T-TAA	10Gbps	Multi Mode	300m / 0.19mi	LC	850nm	-40~85°C / -40~185°F	Yes
SFP-C	1Gbps	-	-	Copper	-	0~70°C / 32~158°F	-
SFP-C-TAA	1Gbps	-	-	Copper	-	0~70°C / 32~158°F	Yes
SFP-C-T-TAA	1Gbps	-	-	Copper	-	-40~85°C / -40~185°F	Yes
SFP-10G-C	10Gbps	-	-	Copper	-	0~70°C / 32~158°F	-
SFP-10G-C-T-TAA	10Gbps	-	-	Copper	-	-40~85°C / -40~185°F	Yes

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