16*10/100/1000Base-T + 4*1G/2.5G/10GBase-X SFP+

L3 Managed Industrial PoE Switch

LT-IS6520XGP-4XS16GT Series

Features:

➢ 16*10/100/1000Base-T RJ45 PoE,   4*1G/2.5G/10GBase-X SFP+

➢ DC/DC redundant power 44-57V supply with polarity reverse/over-voltage/over-current protection

➢ Complies with IEEE802.3af PoE and IEEE802.3at PoE+ standard

➢ Layer 3 features: Supports static and dynamic routing, RIP, OSPF, BGP4,ECMP, VRRP

➢ Support USB one key configuration and upgrading

➢ DI/DO/RS485 are optional

➢ Layer 2 features: VLAN; ERPS, STP/RSTP/MSTP; Link aggregation, IGMP snooping, port mirroring, QinQ, 802.1X, port isolation, RMON, NTP client, DHCP snooping/client, Ping/Tracert test, ACL, QoS and SFP DDM function

➢ Management and maintenance: IPv4 and IPv6 management; PoE management; Support Web, SNMP, CLI, Telnet/SSH management method; Support user management, system log, configuration upload/download through web interface, firmware upgrade via HTTP/TFTP/USB

➢ Support G.8032 ERPS protocol, recovery time ≤20ms

➢ Support 6KV surge protection and ESD: Air-15kV, Contact-8kV Protection

➢ IP40 fan-less and rack-mount hardware design

➢ Operation temperature: -40 ℃ ~+ 70 ℃

Overview

The SmartByte LT-IS6520XGP-4XS16GT is the highly reliable L3 managed industrial PoE switch with 16-port 10/100/1000-T RJ45, 4-port 1G/2.5G/10GBase-X SFP+ interfaces. It complies with IEEE802.3af, IEEE802.3at standard PoE protocol, the Max power consumption can reach 30W (PoE+) per port. It supports ERPS redundant network and the self-recovery mechanism is less than 20ms on full load which allows you to scheme a reliable Ethernet network by building a redundant ring topology as your back-up solution. LT-IS6520XGP-4XS16GT also supports Layer 3 static routing & dynamic routing features, powerful Layer 2 management and secure function, which all making them ideal for large-scale industrial networks.

LT-IS6520XGP-4XS16GT is a high cost-effective easy-to-use device, which provides essential industrial Ethernet networking function, including wide range power input 44-57VDC, redundant power design with polarity reverse/over-voltage/over-current protection, robust IP40 fan-less housing with Din-rail installation, wide operation temperature from -40°C to 75°C as well as high-level EMI/EMC capability. It is the best choice for heavy industrial factory, transportation, oil & gas, chemical, IP Surveillance and processing automation area where environmental conditions are harsh and critical.

Technical specification

Model No.	LT-IS6520XGP-4XS16GT / LT-IS6520XGP-4XS16GT-D	
Interface	Fiber ports	Copper RJ45 ports
	4	16
Ethernet	16*10/100/1000Base-T RJ45 4*1G/2.5G/10GBase-X SFP+	
Management port	1*RJ45 Console port (115200,8,N,1), 1*USB 2.0 for configuration and firmware update	
Data & Alarm channel (optional)	1 channel RS485 1 channel DI(digital input) 1 channel DO(digital output)	
Standard	IEEE 802.3 10Base-T Ethernet IEEE 802.3u 100Base-TX Ethernet IEEE 802.3ab 1000Base-T Ethernet IEEE 802.3z 1000Base-X Ethernet IEEE802.3x Flow Control and Back Pressure IEEE 802.1D Spanning Tree Protocol IEEE 802.1w Rapid Spanning Tree Protocol	

	IEEE 802.1Q VLAN	
	ITU-T G.8032 ERPS	
	IEEE 802.1X Port Authentication Network Control	
	IEEE 802.1ab LLDP	
	IEEE 802.3ad LACP	
	IEEE802.3af PoE	
	IEEE802.3at PoE+	
LED Indicators		
P1/P2 (Power indicator)	Off: the device is power off or failed	On: the device power on is normal
SYS(System status indicator)	Blinking: device initialization	On: device on normal operation
USB (USB status indicator) Green	Off: USB flash drive not insert or not detected by device	
	On: USB flash drive is detected by device	
	Blinking: the device is reading and writing the data from USB flash drive	
ALM(Fault status indicator) Red	Off: Device on normal working state	On: Fault alarm
Ring(Ring network indicator)	Off: Ring network disable	On: Ring network enable
1-16 (Copper ports indicators) Green	Off: ports link down	
	On: ports link up	
	Blinking: data on TX/RX	
1-16 (PoE status indicators) Yellow	Off: PoE not working	
	On: PoE working	
17-20 (Fiber ports indicators) Green	Off: ports link down	
	On: ports link up	
	Blinking: data on TX/RX	
Power parameter		
Input voltage	44-57VDC(802.3af) 52-57VDC(802.3at) redundant power input	
Input current	6A DC/DC input Max	
Total power consumption	Full loading without PoE ≤22W Single power input: PoE power budget ≤240W (-40℃~+ 70℃) Dual power input: PoE power budget ≤370W (-40℃~+ 60℃) *Dual power input must be the same as DC voltage	

Connector	Removable 2*2-pin terminal block
Reverse polarity protection	Support
Over-voltage protection	Support
Over-current protection	Support
Layer 2 functions	
Port aggregation	Support GE port aggregation Support 2.5GE aggregation Support 10GE aggregation Support static aggregation Support LACP dynamic aggregation Up to 64 aggregation groups and up to 8 ports per group
Port features	Support IEEE802.3x flow control, Support interface counters, Support port isolation, Port mirroring (One-to-One, Many-to-One) Support loop detection(Port-based; VLAN-based) Support broadcast storm suppression(broadcast; unknown multicast; unknown unicast)
Mac-address table management	Support static Mac-address management Support dynamic Mac-address Management Support filtering Mac-address Support MAC limit based on port and VLAN Support MAC flapping based on port and VLAN
VLAN	Support access mode Support trunk mode Support hybrid mode
VLAN classification	Mac Based VLAN IP Based VLAN Protocol Based VLAN
GVRP	Normal mode Fixed mode Forbidden mode
QinQ	Port-based QinQ VLAN-based QinQ (VLAN-stacking; VLAN-mapping) Flow-based QinQ
LLDP	LLDP (Link Layer Discovery Protocol)
Ring network protocol	Support IEEE802.1D-STP Support IEEE802.1W-RSTP

	Support IEEE802.1S-MSTP
	Support G.8032 ERPS protocol，single ring, sub Ring and major ring Recovery time ≤20ms
L2 Multicast	
IGMP snooping	Support IGMP snooping
Group address	Support group address
Security functions	
ACL	IP Standard ACL MAC extend ACL IP extend ACL IPv6 ACL
QoS	Support QoS Class, remarking Support SP, WRR queue scheduling Ingress port-based rate-limit Egress port-based rate-limit Support policy-based QoS
802.1x	Port access control Mac-address access control RADIUS server
Port-security	Port-security
IP source guard	IP Port/MAC binding
ARP-check	Support ARP-check and ARP packet filtering for illegal users
Access control	Support Telnet/SSH/HTTP/HTTPS user access control
Management & Maintenance functions	
User Management	Support password protection Support user authorization management
SNMP	Supporting SNMP V1/V2C/V3 version
Web Management	Web Management Support HTTP V1.1 Support HTTPS
CLI management	Console/Telnet command line management
RMON	Support RMON(Remote Monitoring) alarm
Firmware upgrade	Firmware upgrade

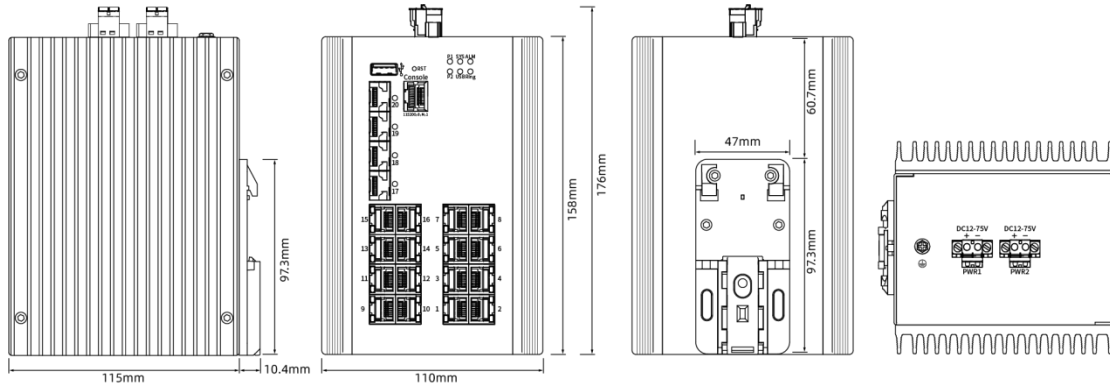| Fault Detection	Ping/Tracerout Dying gasp Support optical transceiver DDM function
Cable detection	Support copper port cable detection
PoE management	Support 802.3af/802.3at
	Support PD watchdog
	Support PoE priority management
	Support Max PoE power configuration for each port
	Support alarm waterline configuration
	Support reserved power configuration
NTP	Network Time Protocol
Syslog/Debug	Syslog/Debug Syslog send to three servers
Configuration import/export	Support FTP/TFTP remote import/export Support USB import/export
Dual partition management	Support dual partition switching
Application Protocol Functions	
DHCP Snooping	DHCP snooping trust port Support remote-id/circuit-id configuration DHCP option-82
DHCP client	Support DHCP client
Telnet server	Support telnet server
Telnet client	Support telnet client
SSH server	Support SSH server
TACACS	Support TACACS(the terminal access controller accesses the control system)
sflow	Support network traffic analysis
TFTP	Support TFTP Client
Layer 3 functions	
ARP	ARP table aging
DHCP server	
IPv4 / IPv6	static routing

ECMP	Support ECMP (Equal-cost multi-path routing)	
	Support the configuration of ECMP Max next-hop	
	Support capacity balanced configuration	
Route policy	IPv4 prefix-list	
VRRP	Virtual Router Redundancy Protocol	
Routing Protocol Specification		
RIP	RIPv1/v2	
OSPFv2	OSPFv2	
BGP4	BGP4	
	BGP Support Routing Recursive ECMP	
	Support to view the number of neighbors and up/down state	
IS-IS	IS-ISv4	
Routing entry	13K	
Switching features		
Switching capacity	112 Gbps	
Packet forwarding rate	166.6Mpps	
MAC address table	16K	
VLAN	4K	
Buffer	12Mbit	
Forwarding delay	<5us	
Jumbo Frame	Support 10Kbytes	
MDX/MIDX	Support	
Watchdog	Support	
Mechanical structure		
Case protection	IP40	
Installation method	Din-rail	
Dimension(W*D*H)mm	110 *115*158mm	

Weight	LT-IS6520XGP-4XS16GT: 2.1kg; LT-IS6520XGP-4XS16GT-D:2.2kg
Operating environment	
Operating temperature	-40℃~+70℃
Storage/transportation temperature	-40℃~+ 85℃
Relative humidity	Operation humidity: 10%-90%RH Storage humidity: 5%-95%RH
Industrial Standard	
EMS	Surge protection of power: IEC 61000-4-5 6KV/4KV（8/20us） Surge protection of Ethernet ports: IEC 61000-4-5 6KV/2KV（10/700us） RS：IEC 61000-4-3 80 MHz-1 GHz：10 V/m EFT：IEC 61000-4-4 4K/2K CS：IEC 61000-4-6 10V ESD：IEC 61000-4-2 Contact: 8K；Air: 15K
EMI	FCC Part 15B Class A
Shock	IEC 60068-2-27
Free fall	IEC 60068-2-32
Vibration	IEC 60068-2-6
Certification	CCC/CE/UKCA/RoHS/REACH/FCC
MTBF	> 200,000 hours
Warranty	5 years

Structure diagram

SmartByte
The Real Source Factory of Ethernet Switches

LT-IS6520XGP-4XS16GT

LT-IS6520XGP-4XS16GT-D
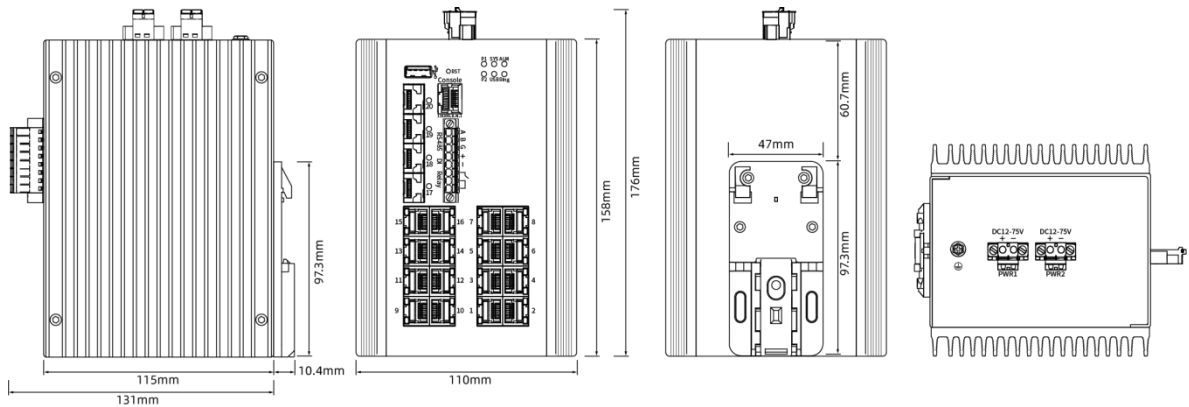
Order information

Model	Description
LT-IS6520XGP-4XS16GT	L3 Managed industrial PoE switch with 4*1G/2.5G/10GBase-X SFP+ ports，16*10/100/1000Base-T RJ45 PoE ports. Dual redundant DC 44-57V input，Din-rail installation; Operation temperature -40℃ to 70 ℃
LT-IS6520XGP-4XS16GT-D	L3 Managed industrial PoE switch with 4*1G/2.5G/10GBase-X SFP+ ports, 16*10/100/1000Base-T RJ45 PoE ports. Support DI/DO/RS485; Dual redundant DC 44-57V input，Din-rail installation; Operation temperature -40℃ to 70 ℃