## 8\*10/100/1000Base-T + 4\*1G/2.5GBase-X SFP

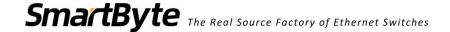
# LT-IS6312GP-4GX8GT-2BT Series





#### **Features:**

- 8\*10/100/1000Base-T RJ45 PoE, 4\*1G/2.5GBase-X SFP
- > Redundant power 44-57V input with polarity reverse/over-voltage/over-current protection
- ➤ Complies with IEEE802.3af PoE, IEEE802.3at PoE+ and IEEE802.3bt PoE++ standard
- > DI/DO/RS485 and USB one key configuration & upgrading are optional
- ➤ Layer 3 features: Support IPv4/IPv6 static routing, DHCP server
- Support Layer 2 management function: VLAN/VLAN Classification/QinQ/STP, RSTP, MSTP/Port Mirroring/DHCP/Multicast/ACL/IGMP/QoS/LLDP/802.1X/Dying Gasp/SFP DDM/IPV6 management/PoE management/Web/SNMP/Telnet/TFTP/Web upgrading
- > Support G.8032 ERPS protocol, recovery time ≤20ms
- Support 6KV surge protection and ESD: Air-15kV, Contact-8kV Protection
- > IP40 fan-less and Din-rail hardware design
- > Operation temperature: -40 °C ~+75 °C



#### Overview

The SmartByte LT-IS6312GP-4GX8GT-2BT series are the highly reliable managed industrial PoE switches with 8-port 10/100/1000-T PoE and 4-port 1000/2500Base-X fiber optical interfaces. They comply with IEEE802.3af PoE, IEEE802.3at PoE+, IEEE802.3bt PoE++ standard protocol, the Max power output consumption per port can reach 90W (1-2 ports), which are the idea solution for those high power consumption industrial networking PDs. They support 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-IS6312GP-4GX8GT-2BT series also support DI/DO/RS485 and robust layer 2 management function, which can fulfill the special needs of industrial automation applications.

LT-IS6312GP-4GX8GT-2BT series are the high cost-effective easy-to-use devices, which provide essential industrial Ethernet networking function, including wide range power input 44-57VDC, redundant power design with polarity reverse 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. They are 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**

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Model No.	LT-IS6312GP-4GX8GT-2BT/ LT-IS6312GP-4GX8GT-D-2BT	
Interface	Fiber ports	Copper RJ45 ports
	4	8
Ethernet	8*10/100/1000Base-T RJ45 PoE/PoE+, 1-2 ports support PoE++ 4*1000/2500Base-X SFP	
Management port	1*RJ45 Console port (115200,8,N,1), 1*USB 2.0 (optional)	
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	

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IEEE 802.1w Rapid Spanning Tree Protocol	
IEEE 802.1Q VLAN	
ITU-T G.8032 ERPS	
IEEE 802.1X Port Authentication Network Control	
TEEL 802.35t FOLTT	
Off: the device is power off or failed	On: the device power on is normal
Blinking: device initialization	On: device on normal operation
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	
Off: Device on normal working state	On: Fault alarm
Off: ports link down	
On: ports link up	
Blinking: data on TX/RX	
Off: PoE not working	
On: PoE working	
Off: ports link down	
On: ports link up	
Blinking: data on TX/RX	
44-57VDC(802.3af) 52-57VDC(802.3at/802.3bt) redundant power input	
5.8A Max	
Full loading without PoE ≤15W PoE power budget ≤240W	
Removable 4-pin terminal block	
	IEEE 802.1Q VLAN ITU-T G.8032 ERPS IEEE 802.13x Port Authentication Network IEEE 802.1ab LLDP IEEE 802.3ad LACP IEEE 802.3af POE IEEE 802.3at POE+ IEEE 802.3bt POE++  Off: the device is power off or failed Blinking: device initialization  Off: USB flash drive not insert or not d On: USB flash drive is detected by devi Blinking: the device is reading and write  Off: Device on normal working state  Off: ports link down  On: ports link up  Blinking: data on TX/RX  Off: PoE not working  On: PoE working  Off: ports link down  On: ports link up  Blinking: data on TX/RX   44-57VDC(802.3af) 52-57VDC(802.3af) 52-57VDC(802.3at/802.3bt) redundant power input  5.8A Max  Full loading without POE ≤15W POE power budget ≤240W

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 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 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		
	IP Standard ACL	
ACL	MAC extend ACL	
ACL	IP extend ACL	
	IPv6 ACL	
	Support QoS Class, remarking	
	Support SP, WRR queue scheduling	
QoS	Ingress port-based rate-limit	
	Egress port-based rate-limit	
	Support policy-based QoS	
	Port access control	
802.1x	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 & Mainten	ance 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	
Tree management	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	

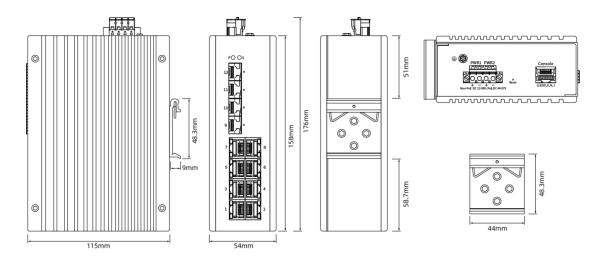
	Support optical transceiver DDM function	
Cable detection	Support copper port cable detection	
PoE management	Support 802.3af/802.3at/802.3bt	
	Support PD watchdog	
	Support PoE priority management	
	Support Max PoE power configuration for each port	
	Support alarm waterline configuration	
	Support reserved 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	DHCP server	
IPv4 / IPv6	static routing	
Switching features		

Switching capacity	36Gbps
Packet forwarding rate	53.5Mpps
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	54*115*158mm
Weight	LT-IS6312GP-4GX8GT-2BT (1.25 kg); LT-IS6312GP-4GX8GT-D-2BT( 1.35kg)
Operating environment	
Operating temperature	-40℃~+75℃
Storage/transportation temperature	-40℃~+85℃
Relative humidity	Operation humidity: 10%-90%RH Storage humidity: 5%-95%RH
Industrial Standard	
	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)
EMS	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

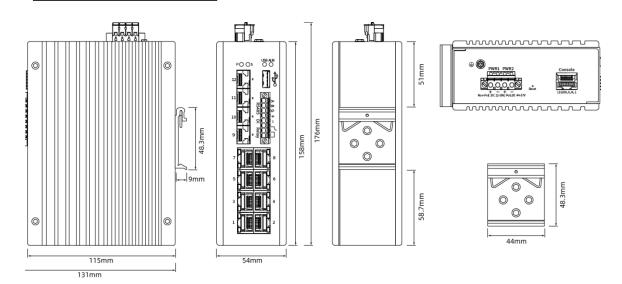
# SmartByte The Real Source Factory of Ethernet Switches

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

#### LT-IS6312GP-4GX8GT-2BT



#### LT-IS6312GP-4GX8GT-D-2BT





### **Order information**

Model	Description
LT-IS6312GP-4GX8GT-2BT	L2+ Managed industrial PoE switch with 8*10/100/1000Base-T RJ45 PoE ports and 4*1G/2.5GBase-X SFP slots, complies with IEEE802.3af, IEEE802.3at and IEEE802.3bt standard, DC44-57V input, redundant dual power supply, Din-rail installation. Operation temperature: -40 $^{\circ}$ C $^{\circ}$ +75 $^{\circ}$ C
LT-IS6312GP-4GX8GT-D-2BT	L2+ Managed industrial PoE switch with 8*10/100/1000Base-T RJ45 ports and 4*1G/2.5GBase-X SFP slots, supports DI/DO/RS485, complies with IEEE802.3af, IEEE802.3at and IEEE802.3bt standard, DC44-57V input, redundant dual power supply, Din-rail installation; Operation temperature: -40 $^{\circ}$ C $^{\circ}$ +75 $^{\circ}$ C