

TSN-6325-8T4S4X

Industrial L3 8-Port 10/100/1000T + 4-Port 1G/2.5G SFP + 4-Port 10GBASE-X SFP+ Managed TSN Ethernet Switch



Innovative Industrial TSN Ethernet Switch Guaranty Delivery of Time-Sensitive Data

PLANET TSN-6325-8T4S4X is a brand-new Industrial-grade Layer 3 Time-Sensitive Networking (TSN) Managed Ethernet Switch which features 8 10/100/1000BASE-T RJ45 ports, 4 100/1G/2.5GBASE-X SFP ports and 4 10GBASE-SR/LR SFP+ ports and Layer 3 IP routing in a rugged IP30 metal case for stable operation in heavy environments, address all levels of the industrial automation network, from the field bus to the factory backbone. And it guarantees end-to-end transmission of high-priority traffic with extremely low latency.

With 10Gbps fiber interfaces, the TSN-6325-8T4S4X can handle extremely large amounts of data in a secure topology linking to an industrial backbone, 5G NR base station or Wi-Fi6/6E wireless AP. The TSN-6325-8T4S4X is capable of providing non-blocking switch fabric as high as **116Gbps** in the temperature range from **-40** to **75 degrees C**. It greatly simplifies the tasks of upgrading the industrial LAN for catering to increasing bandwidth demands.



A Simplified Pathway to a TSN-compatible Infrastructure

PLANET TSN-6325-8T4S4X provides real-time, low-latency network communication for industrial automation, 5G NR networks, Industry 4.0, 4K/8K video streaming, and VR/AR gaming industry by using the **Time-sensitive Networking (TSN)** technology and **IEEE 1588 Precision Time Protocol (PTPv2)** for time synchronization on all ports.

Physical Port

- 8 10/100/1000BASE-T RJ45 copper ports
- 4 100/1000/2500BASE-X SFP slots for SFP type auto detection
- 4 10GBASE-SR/LR SFP+ slots, compatible with 1000BASE-X and 2500BASE-X SFP
- One RJ45-to-RS232 console interface for basic management and setup

Industrial Hardened Design

- Dual power input, redundant power with reverse polarity protection
 - DC 9 to 48V input or AC 24V input
 - Active-active redundant power failure protection
 - Backup of catastrophic power failure on one supply
 - Fault tolerance and resilience
- DIN-rail and wall-mountable designs
- · IP30 aluminum case
- Supports 6000V DC Ethernet ESD protection
- -40 to 75 degrees C operating temperature

Digital Input and Digital Output

- 2 digital input (DI)
- 2 digital output (DO)
- · Integrates sensors into auto alarm system
- · Transfers alarm to IP network via email and SNMP trap

Time Sensitive Networking

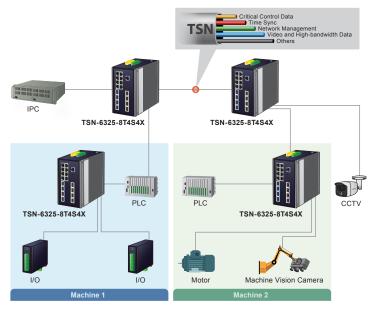
- High Precision Time Synchronization
 - IEEE1588 (Time Stamping)
 - 802.1AS-Rev gPTP default profile
- Shapers
 - 802.1Qbv Enhancements for Scheduled Traffic
 - 802.1Qch (Cyclic Queuing and Forwarding)
- TSN Stream Policing
 - 802.1Qci (Per Stream Filtering and Policing)
- Redundancy
 - 802.1CB FRER for seamless redundancy
 - Also standard Linear and Ring protection

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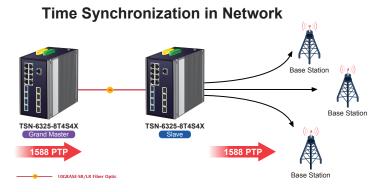
The TSN-6325-8T4S4X supports TSN IEEE standards needed for a complete real-time communication solution. These include IEEE 802.1AS-REV profile for time synchronization, IEEE 802.1Qbv Enhancements for Scheduled Traffic, IEEE 802.1Qbu Frame Preemption, IEEE 802.3br Interspersing Express Traffic (IET), IEEE 802.1Qci for per-stream filtering and policing (PSFP) and IEEE 802.1CB frame replication and elimination for reliability (FRER) for seamless redundancy.

The TSN-6325-8T4S4X eliminates the need for separating information technology (IT) and operational technology (OT) Ethernet networks, providing a more ubiquitous approach to synchronization and precision timing for today's industrial automation systems.



1588 Time Protocol for Industrial Computing Networks

The TSN-6325-8T4S4X features IEEE 1588v2 PTP (Precision Time Protocol) with hardware-based time stamping for precise time synchronization of networks, and support for **Boundary Clock**, **End to End** and **Peer to Peer Transparent Clock** modes. It is ideal for telecom and carrier Ethernet applications, supporting MEF service delivery and timing over packet solutions for IEEE 1588 and synchronous Ethernet.



10GBASE-X SFP+ High-bandwidth Interfaces for Diversified Bandwidth Applications

The TSN-6325-8T4S4X has the capability to reach a high speed of 10Gbps over fiber-optic cabling which helps to accelerate the performance of large data transmission.

Delay Reduction

- IEEE 802.1Qbu Frame Preemption
- IEEE 802.3br Interspersing Express Traffic (IET)

Layer 3 IP Routing Features

- IPv4 dynamic routing protocol supports RIPv2 and OSPFv2 and IPv6 OSPFv3
- IPv6 dynamic routing protocol supports OSPFv3
- · IPv4/IPv6 hardware static routing
- Routing interface provides per VLAN routing mode

Layer 2 Features

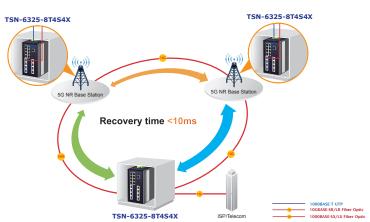
- High performance of Store-and-Forward architecture, and runt/CRC filtering eliminates erroneous packets to optimize the network bandwidth
- · Storm control support
 - Broadcast/Multicast/Unknown unicast
- Supports VLAN
 - IEEE 802.1Q tagged VLAN
 - Supports provider bridging (VLAN Q-in-Q IEEE 802.1ad)
 - Private VLAN Edge (PVE)
 - Protocol-based VLAN
 - MAC-based VLAN
 - Voice VLAN
 - GVRP (GARP VLAN Registration Protocol)
- Supports Spanning Tree Protocol
 - IEEE 802.1D Spanning Tree Protocol (STP)
 - IEEE 802.1w Rapid Spanning Tree Protocol (RSTP)
 - IEEE 802.1s Multiple Spanning Tree Protocol (MSTP),
 - spanning tree by VLAN
 - BPDU Guard
- Supports Link Aggregation
 - 802.3ad Link Aggregation Control Protocol (LACP)
 - Cisco ether-channel (static trunk)
- Maximum 8 trunk groups, with 16 ports for each trunk
- Provides port mirror (many-to-1)
- Port mirroring to monitor the incoming or outgoing traffic on a particular port
- Loop protection to avoid broadcast loops
- Link Layer Discovery Protocol (LLDP)
- Compatible with Cisco uni-directional link detection(UDLD) that monitors a link between two switches and blocks the ports on both ends of the link if the link fails at any point between the two devices



The fiber-optic 10GBASE-X SFP+ interfaces support triple speeds, 10GBASE-SR/LR, 2500BASE-X and 1000BASE-SX/LX, meaning the administrator now can flexibly choose the suitable SFP/SFP+ transceiver according to the transmission distance or the transmission speed required to extend the network efficiently. The TSN-6325-8T4S4X provides broad bandwidth and powerful processing capacity.

Redundant Ring, Fast Recovery for Critical Network Applications

The TSN-6325-8T4S4X supports redundant ring technology and features strong, rapid self-recovery capability to prevent interruptions and external intrusions. It incorporates advanced **ITU-T G.8032 ERPS (Ethernet Ring Protection Switching)** technology, Spanning Tree Protocol (802.1s MSTP), and **redundant power** input system into customer's industrial automation network to enhance system reliability and uptime in harsh factory environments. In a simple ring network, the recovery time of data link can be as fast as 10ms.



ERPS Ring for Data Transmission Redundancy

Layer 3 Routing Support

The TSN-6325-8T4S4X enables the administrator to conveniently boost network efficiency by configuring Layer 3 IPv4/IPv6 VLAN static routing manually, the **RIP** (Routing Information Protocol) or **OSPF** (Open Shortest Path First) settings automatically.

The RIP can employ the hop count as a routing metric and prevent routing loops by implementing a limit on the number of hops allowed in a path from the source to a destination.

The OSPF is an interior dynamic routing protocol for autonomous system based on link state. The protocol creates a database for link state by exchanging link states among Layer 3 switches, and then uses the Shortest Path First algorithm to generate a route table based on that database.

Robust Layer 2 Features

The TSN-6325-8T4S4X can be programmed for advanced Layer 2 switch management functions such as dynamic port link aggregation, 802.1Q tagged VLAN, Q-in-Q VLAN, private VLAN, Multiple Spanning Tree Protocol (MSTP), Layer 2 to Layer 4 QoS, bandwidth control, IGMP snooping and MLD snooping. Via the aggregation of supporting ports, the TSN-6325-8T4S4X allows the operation of a high-speed trunk group that comes with multiple ports and supports fail-over as well.

- Supports G.8032 ERPS (Ethernet Ring Protection Switching)
- IEEE 1588v2 PTP (Precision Time Protocol)
- Features IEEE 802.1AS Time Synchronization, IEEE 802.1Qbu Frame Preemption, IEEE 802.1Qbv Enhancements for Scheduled Traffic and IEEE 802.1CB Seamless Redundancy

Quality of Service

- Ingress shaper and egress rate limit per port bandwidth
 control
- · 8 priority queues on all switch ports
- Traffic classification
 - IEEE 802.1p CoS
 - ToS/DSCP/IP Precedence of IPv4/Ipv6 packets
 - IP TCP/UDP port number
 - Typical network application
- Strict priority and Weighted Round Robin (WRR) CoS policies
- · Supports QoS and In/Out bandwidth control on each port
- · Traffic-policing on the switch port
- DSCP remarking
- · Voice VLAN

Multicast

- Supports IPv4 IGMP snooping v1, v2 and v3
- Supports IPv6 MLD snooping v1 and v2
- · Querier mode support
- IPv4 IGMP snooping port filtering
- · IPv6 MLD snooping port filtering
- MVR (Multicast VLAN Registration)

Security

- · Authentication
 - IEEE 802.1x port-based/MAC-based network access authentication
 - IEEE 802.1x authentication with guest VLAN
 - Built-in RADIUS client to cooperate with the RADIUS servers
 - RADIUS/TACACS+ users access authentication
 - Guest VLAN assigns clients to a restricted VLAN with limited services







Cybersecurity Network Solution to Minimize Security Risks

The TSN-6325-8T4S4X comes with enhanced cybersecurity to fend off cyberthreats and cyberattacks. It supports SSHv2 and TLSv1.2 protocols to provide strong protection against advanced threats. Served as a key point to transmit data over a long-distance fiber optic cable to customer's critical equipment in a business network, the cybersecurity feature of the TSN-6325-8T4S4X protects the switch management and enhances the security of the mission-critical network without any extra deployment cost and effort.



Modbus TCP Provides Flexible Network Connectivity for Factory Automation

With the supported **Modbus TCP/IP** protocol, the TSN-6325-8T4S4X can easily integrate with **SCADA** systems, **HMI** systems and other data acquisition systems in factory floors. It enables administrators to remotely monitor the industrial Ethernet switch's **operating information**, **port information**, communication status, and DI and DO status, thus easily achieving enhanced monitoring and maintenance of the entire factory.

SMTP/SNMP Trap Event Alert

The TSN-6325-8T4S4X provides event alert function to help to diagnose the abnormal device owing to whether or not there is a break of the network connection, or the rebooting response.



Access Control List

- IP-based Access Control List (ACL)
- MAC-based Access Control List (ACL)
- · Source MAC/IP address binding
- · DHCP Snooping to filter distrusted DHCP messages
- Dynamic ARP Inspection discards ARP packets with invalid MAC address to IP address binding
- · IP Source Guard prevents IP spoofing attacks
- IP address access management to prevent unauthorized intruder

Management

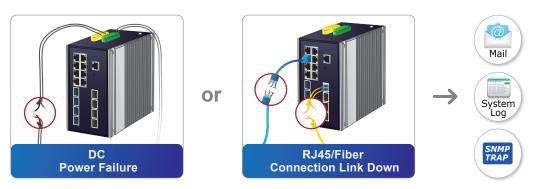
- · IPv4 and IPv6 dual stack management
- · Switch Management Interfaces
 - Console and Telnet Command Line Interface
 - HTTP web switch management
 - SNMP v1 and v2c switch management
 - SSHv2, TLSv1.2 and SNMPv3 secure access
- SNMP Management
 - Four RMON groups (history, statistics, alarms, and events)
 - SNMP trap for interface Link Up and Link Down notification
- IPv6 IP address/NTP/DNS management
- Built-in Trivial File Transfer Protocol (TFTP) client
- · BOOTP and DHCP for IP address assignment
- System Maintenance
 - Firmware upload/download via HTTP
 - Reset button for system reboot or reset to factory default
 - Dual images
- DHCP Functions:
 - DHCP Relay
 - DHCP Option82
 - DHCP Server
- · User Privilege levels control
- Network Time Protocol (NTP)
- Network Diagnostic
 - SFP-DDM (Digital Diagnostic Monitor)
 - ICMPv6/ICMPv4 remote ping
- · SMTP/Syslog remote alarm
- · System Log
- · PLANET Smart Discovery Utility for deployment management
- PLANET UNI-NMS (Universal Network Management) and CloudViewer app for deployment management

Sales office Austria sales@spectra-austria.at



Effective Alarm Alert for Better Protection

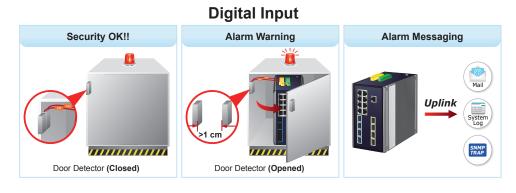
The TSN-6325-8T4S4X supports a Fault Alarm feature which can alert the users when there is something wrong with the switches. With this ideal feature, the users would not have to waste time to find where the problem is. It will help to save time and human resource.



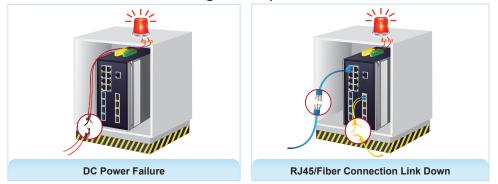
Fault Alarm Feature

Digital Input and Digital Output for External Alarm

The TSN-6325-8T4S4X supports Digital Input and Digital Output on its front panel. This external alarm enables users to use Digital Input to detect and log external device status (such as door intrusion detector), and send event alarm to the administrators. The Digital Output could be used to alarm the administrators if the TSN-6325-8T4S4X's port shows link down, link up or power failure.



Digital Output



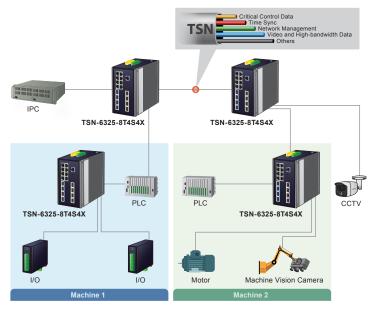
IPv6/IPv4 Dual Stack

Supporting both IPv6 and IPv4 protocols, the TSN-6325-8T4S4X helps data centers, campuses, telecoms, and more to experience the IPv6 era with the lowest investment as its network facilities need not be replaced or overhauled if the IPv6 FTTx edge network is set up.



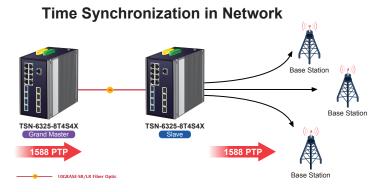
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Specifications

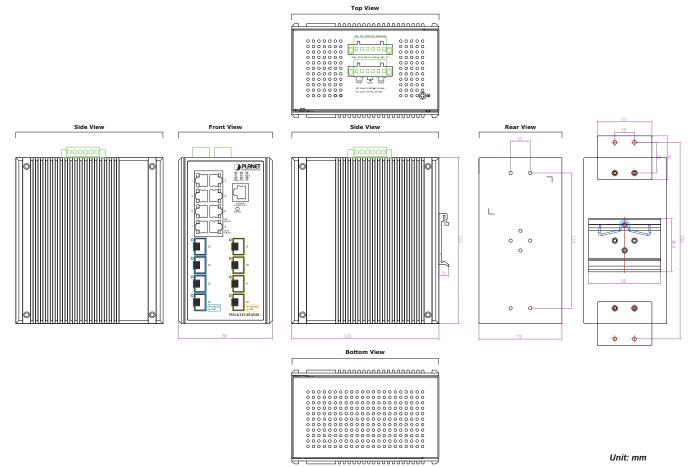
Product SN-6325-87454X Hardware Specializations 8 10/100/100BASE-T RJA5 auto-MDIMDLX ports SFP Port 8 10/100/2500BASE-X SFP ports (Ports 9 to 12) Compatible with 100BASE-F X nu Z SOUBASE-X SFP transceiver SFP-Ports 4 100BASE-SRUR SFP-slots Backward compatible with 100BASE-FX nu Z SOUBASE-X SFP transceivers Console 1 x RJ4540-RS232 serial port (115200, 6, N, 1) Reset Button -5 sec. System rebot -5 sec. System rebot -5 sec. System rebot -6 sec. System rebot -5 sec. System rebot -7 sec. System rebot -2 digital along. -7 sec. System rebot -2 digital along. -7 power 1, Pn 34 for fault alorm, Pn 56 for Power 2	
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ShP Yort Compatibue with 100BASE-FX and 2500BASE-X SFP transceiver SFP+ Ports 410GBASE-SRUR SFP+ slots Backward compatibue with 100BASE-FX, 1000BASE-SXLX/BX and 2500BASE-X SFP transceivers Console 1 x R4510-R5223 serial port (115200, 8, N, 1) Reset Button -5 sec: Factory default Connector Removable 6-pin terminal block for power input Pin 12 for Power 1, Pin 324 for fault alarm, Pin 5% for Power 2 Removable 6-pin terminal block for D/D/D inteface Pin 12 for D I t 8, 2, Pin 344 for DO 1 8, 2, Pin 5% for GND One relay output for power faulter. Alarm relay current carry ability: 1A @ 24V DC Open cellectority of power faulter. Alarm relay current carry ability: 1A @ 24V DC 2 digital input: Digital louput (DO) Cone relay output for power faulter. Alarm relay current carry ability: 1A @ 24V DC Digital output (DO) Pin 21 for Y (0.1/V) Instalation IP90 aluminum case Digital output (DO) Pin 42 for Y (0.1/V) Neight 1937 ser Y (0.1/V) Instalation IP04 and real monting SDRAM 0404 bytes Power Requirements 640 Yo X Max: 32 vartific Y 3BTU (system on) Max: 32 vartif Y 3BTU (system on) <td< td=""><td></td></td<>	
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Connector Pin 1/2 for Power 1, Pin 3/4 for fault alarm, Pin 5/6 for Power 2 Removable 6-pin terminal block for DIDO interface Pin 1/2 for D1 1 & 2, Pin 3/4 for D0 1 & 2, Pin 5/6 for GND Alarm One relay output for power failure. Alarm relay current carry ability: 1A @ 24V DC Digital Input (DI) 2 digital input: Level 0: -24 - 2.1V (±0.1V) Level 1: -21 -24V (±0.1V) Input load to 24V DC, 10mA max. Digital Output (DO) 2 digital output: Open collector to 24VDC, 10mA max. Enclosure 1930 aluminum case Installation DIN-rail or wall mounting SDRAM 64Mbytes Dimensions (W x D x H) 64 x 15 x 152 mm Weight 1597 Power Requirements Co 9-48V, 5A max. AC 24V, 2A max. Co Poutor AC 24V, 2A max. Co Poutor AC 24V JC at max. Co Poutor Max. 16.8 watts/57.3BTU (system on) Max. 38.2 watts/130.3BTU (Full loading) Max. 30.3Watts/102.3BTU (Full loading) AC 24V input: Max. 21.7 watts/74BTU (system on) Max. 30.3Watts/102.3BTU (Full loading) AC 24V input: Max. 20.5TW (full loading) Stype Protecton Stype Stype Stype Protecton Stype Stype Protecton Stype Max (Green), Ring Owner (Green) Fault	
Connector Removable 6-pin terminal block for DI/DO interface Pin 1/2 for D1 18 2, Pin 3/4 for D0 1 8 2, Pin 5/6 for GND Alarm One relay output for power failure. Alarm relay current carry ability: 1A @ 24V DC Digital Input: 2 digital input: Level 0: -24-2.1V (±0.1V) Level 0: -24-2.1V (±0.1V) Level 1: 2.1 -24V (±0.1V) Input load to 24V DC, 100mA max. Digital Output (DO) 2 digital output: Open collector to 24VDC, 100mA Digital Output (DO) Enclosure IP30 aluminum case Installation Dih-rail or wall mounting SDRAM 2044Mbytes Power Requirements C 9-48V, 5A max. Ac 24V, 2A max. DC 9-48V, 5A max. Ac 24V, 2A max. DC input: Max. 30 avatts/130.3BTU (Full loading) Max. 30.4 watts/7.3BTU (system on) Max. 30.2 watts/130.3BTU (Full loading) Max. 30.4 watts/7.4BTU (system on) Max. 30.2 watts/130.3BTU (Full loading) Max. 30.4 watts/7.4BTU (system on) Max. 30.2 watts/130.3BTU (Full loading) Max. 30.4 watts/7.4BTU (system on) Max. 30.4 watts/10.23BTU (Full loading) Max. 30.4 watts/10.3BTU (Full loading) ESD Protection System: Power 1 (Green), Power 2 (Green) <td></td>	
Pin 1/2 for DI 1 & 2, Pin 3/4 for DO 1 & 2, Pin 5/6 for GND Alarm One relay output for power failure. Alarm relay current carry ability: 1A @ 24V DC Digital Input: Level 0: -24-2.1V (±0.1V) Level 0: -24-2.1V (±0.1V) Input load to 24V DC, 10mA max. Digital Output (DO) 2 digital input: Depone collector to 24VDC, 10mA max. Input load to 24V DC, 10mA max. Enclosure IP30 aluminum case Installation DIN-rail or wall mounting SDRAM 2048Mbytes Dimensions (W x D x H) 86 x 135 x 152 mm Weight 15.97g Power Requirements C0 -948V, 5A max. Ac 24V, 2A max. Ac 24V, 2A max. Ac 24V, 2A max. Ac 24V input: Max. 16.8 watts/57.38TU (system on) Max. 32. watts/130.38TU (Full loading) Ac 24V input: Max. 32. watts/130.38TU (Full loading) Ac 24V input: Max. 32. watts/130.38TU (Full loading) Max. 32.17 watts/74BTU (system on) Max. 32. watts/130.38TU (Full loading) Max. 32.17 watts/74BTU (system on) Max. 32. watts/130.38TU (Full loading) Max. 21.7 watts/74BTU (system on) Max. 32. watts/130.38TU (Full loading) Max. 30. watts/102.38TU (Full loading) P	
Alarm One relay output for power failure. Alarm relay current carry ability: 1A @ 24V DC Digital Input: Level 0: -24-2.1V (±0.1V) Level 1: 2.1-24V (±0.1V) Level 1: 2.1-24V (±0.1V) Input load to 24V DC, 10mA max. Digital Output: Digital Output (DO) 2 digital output: Open collector to 24VDC, 100mA Discover Installation DIN-rail or wall mounting SDRAM 2048Mbytes Flash Memory 64Mbytes Dimensions (W x D x H) 86 x 135 x 152 mm Weight 1.597 g Power Requirements DC 9-48V, 5A max. AC 24V, 2A max. DC brut: Max. 16.8 watts/57.3BTU (system on) Max. 38.2 watts/130.3BTU (Full loading) AC 24V input: Max. 39.2 watts/130.3BTU (Full loading) AC 24V input: Max. 21.7 watts/74BTU (system on) Max. 30.2 watts/102.3BTU (Full loading) AC 24V input: Max. 21.7 watts/74BTU (system on) Max. 30.2 watts/102.3BTU (Full loading) ESD Protection SKV DC Surge Protection 6KV DC Surge Protection Max. 16(Green), Power 2 (Green) Fault Alarm (Red) Ring (Green), Ring Owner (Green)	
2 digital input: Level 0: -242.1V (±0.1V) Level 0: -242.1V (±0.1V) Input (DO) 2 digital output: Open collector to 24VDC, 100mA max. 2 digital output: Open collector to 24VDC, 100mA Enclosure Installation DIN-rail or vall mounting SDRAM 2048Mbytes Elash Memory 64Mbytes Dimensions (W x D x H) 86 x 135 x 152 mm Weight 1.597g Power Requirements DC input: Max. 16.8 watts/57.3BTU (system on) Max. 38.2 watts/130.3BTU (Full loading) AC 24V input: Max. 30.4 watts/74BTU (system on) Max. 30.4 watts/157.3BTU (system on) Max. 30.4 watts/120.3BTU (Full loading) AC 24V input: Max. 30.4 watts/120.3BTU (Full loading) ESD Protection 5KV DC Surge Protection 5KV DC Surger Tofection 5KV DC Surger Tofection 5KV DC Surger Tofection 5KV DC System: Power 1 (Green), Power 2 (Green	
Digital Input (DI) Level 0: 24-2.1V (±0.1V) Level 1: 2.1-24V (±0.1V) Input load to 24V DC, 10mA max. Digital Output (DO) 2 digital output: Open collector to 24VDC, 10mA Enclosure IP30 aluminum case Installation DIN-rail or vall mounting SDRAM 2048bytes Elash Memory 64Mbytes Dimensions (W x D x H) 86 x 135 x 152 mm Power Requirements DC 9-48V, 5A max. A C 24V, 2A max. Dimensions (W x D x H) 62 (-1) (uput: Max. 16.8 watts/57.3BTU (system on) Max. 38.2 watts/130.3BTU (Full loading) Power Consumption 50X Protection SDS Protection 50X V DC Surge Protection 50X Protection Surge Protection 50X Protection System: Power 1 (Green), Power 2 (Green) Fauit Alarm (Red) Ring (Green), Ring Owner (Green)	
Digital input (Di) Level 1: 2.1-24V (±0.1V) Input load to 24V DC, 10mA max. 2 Digital Output (DO) 2 Enclosure IP30 aluminum case Installation DIN-rail or wall mounting SDRAM 2048Mbytes Flash Memory 64Mbytes Dimensions (W x D x H) 86 x 135 x 152 mm Weight 1,597 g DC 9-48V, 5A max. AC 24V, 2A max. AC 24V, 2A max. AC 24V, 2A max. Ac 24V, 2A max. AC 24V, 2A max. Ac 24V, 2A max. AC 24V, input: Max. 16.8 watts/77.3BTU (system on) Max. 38.2 watts/130.3BTU (Full loading) AC 24V input: Max. 30. watts/102.3BTU (Full loading) Ac 24V input: Max. 30.9	
Level 1: 2, 1-24V (20.1) Input load to 24V DC, 10mA max. Digital Output (DO) 2 digital output: Open collector to 24VDC, 100mA Enclosure IP30 aluminum case Installation DIN-rail or wall mounting SDRAM 2048Mbytes Flash Memory 64Mbytes Dimensions (W x D x H) 86 x 135 x 152 mm Weight 1.597g Power Requirements DC 9-48V, 5A max. AC 24V, 2A max. DC input: Max. 36.2 watis/130.3BTU (system on) Max. 38.2 watis/130.3BTU (system on) Max. 30. watis/102.3BTU (Full loading) AC 24V input: Max. 30. watis/102.3BTU (Full loading) AC 24V input: Max. 30. watis/102.3BTU (Full loading) System: Flost (Full Declore), Power 2 (Green) System: Power (Green), Ring Owner (Green) Fault Alarm (Red) Ring (Green), Ring Owner (Green) Fault Alarm (Red)	
Digital Output (DO)2 digital output: Open collector to 24VDC, 100mAEnclosureIP30 aluminum caseInstallationDIN-rail or wall mountingSDRAM2048MbytesFlash Memory64 MbytesDimensions (W X D X H)85 x 135 x maxWeight1,597gPower RequirementsC 9-48V, 5A max. A C 24V, 2A max.Power ConsumptionC input: Max. 16.8 watts/57.3BTU (system on) Max. 32.2 watts/130.3BTU (Full loading)Result of Consumption5V V CESD Protection5V V CSurge Protection5V V CSurge Protection6V V CSurge Protection6V V DCSurge ProtectionSv startSurge ProtectionSv startSurge ProtectionSv startSurge ProtectionSv power 1 (Green), Power 2 (Green) Fault Alarm (Red) Fault Alarm (Red) Fault Alarm (Red) Fault Alarm (Green), Ping Owner (Green)	
Digital Output (DS)Open collector to 24VDC, 100mAEnclosureIP30 aluminum caseInstallationDIN-rail or wall mountingSDRAM2048MbytesFlash Memory64MbytesDimensions (W x D x H)66 x 135 x 152 mmPower RequirementsDC 9-48V, 5A max.Power RequirementsDC 100 rput: Max. 16.8 watts/57.3BTU (system on) Max. 38.2 watts/130.3BTU (Full loading)Flash Memory5K V DCESD ProtectionSKV DCSurge ProtectionSkV DCSurge ProtectionSkytem: Power 1 (Green), Power 2 (Green) Fault Alarm (Red) Ring Owner (Green), Ring Owner (Green)	
Enclosure IP30 aluminum case Installation DIN-rail or wall mounting SDRAM 2048Mbytes Flash Memory 64Mbytes Dimensions (W x D x H) 86 x 135 x 152 mm Weight 1,597 Power Requirements CC 39-48V, 5A max. AC 24V, 2A max. AC 24V, 2A max. DC input: Max. 16.8 watts/57.3BTU (system on) Max. 32.3 watts/130.3BTU (Full loading) AC 24V input: Max. 30. watts/102.3BTU (Full loading) AC 24V input: Max. 30 watts/102.3BTU (Full loading) AC 24V input: Max. 21.7 watts/74BTU (system on) Max. 21.7 watts/74BTU (system on) Max. 20 watts/102.3BTU (Full loading) AC 24V input:	
Installation DIN-rail or wall mounting SDRAM 2048Mbytes Flash Memory 64Mbytes Dimensions (W x D x H) 86 x 135 x 152 mm Weight 1,597g Power Requirements C2 9-48V, 5A max. AC 24V, 2A max. C2 4V, 2A max. Power Consumption DC input: Max. 16.8 watts/57.3BTU (system on) Max. 38.2 watts/130.3BTU (Full loading) AC 24V input: Max. 30 watts/102.3BTU (Full loading) Max. 21.7 watts/74BTU (system on) Max. 30 watts/102.3BTU (Full loading) ESD Protection SKV DC Surge Protection Sky Stem: Power 1 (Green), Power 2 (Green) Fower 1 (Green), Power 2 (Green) Fault Alarm (Red) Ring (Green), Ring Owner (Green)	
SDRAM 2048Mbytes Flash Memory 64Mbytes Dimensions (W x D x H) 86 x 135 x 152 mm Weight 1,597g Power Requirements DC 9~48V, 5A max. AC 24V, 2A max. DC input: Max. 16.8 watts/57.3BTU (system on) Max. 16.8 watts/57.3BTU (system on) Max. 32.2 watts/130.3BTU (Full loading) Max. 24.7 watts/74BTU (system on) Max. 21.7 watts/74BTU (system on) Max. 30 watts/102.3BTU (Full loading) ESD Protection 5KV DC Surge Protection 5KV DC Surge Protection System: Power 1 (Green), Power 2 (Green) Fault Alarm (Red) Ring (Green), Ring Owner (Green) Ring (Green), Ring Owner (Green)	
Flash Memory 64Mbytes Dimensions (W x D x H) 86 x 135 x 152 mm Weight 1,597g Power Requirements DC 9~48V, 5A max. AC 24V, 2A max. AC 24V, 2A max. Power Consumption DC input: Max. 16.8 watts/57.3BTU (system on) Max. 38.2 watts/130.3BTU (Full loading) Power Consumption AC 24V input: Max. 102.3BTU (Full loading) ESD Protection 5KV DC Surge Protection 6KV DC Full Lamman, Power 1 (Green), Power 2 (Green) Fault Alarm (Red) Ring (Green), Ring Owner (Green)	
Dimensions (W x D x H) 86 x 135 x 152 mm Weight 1,597g Power Requirements DC 9~48V, 5A max. A C 24V, 2A max. AC 24V, 2A max. Power Consumption DC input: Max. 16.8 watts/57.3BTU (system on) Max. 38.2 watts/130.3BTU (Full loading) A C 24V input: Max. 21.7 watts/74BTU (system on) Max. 30 watts/102.3BTU (Full loading) ESD Protection 5KV DC Surge Protection 6KV DC Surge Protection System: Power 1 (Green), Power 2 (Green) Fault Alarm (Red) Ring (Green), Ring Owner (Green)	
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Power Consumption AC 24V input: Max. 21.7 watts/74BTU (system on) Max. 30 watts/102.3BTU (Full loading) ESD Protection 5KV DC Surge Protection 6KV DC System: Power 1 (Green), Power 2 (Green) Fault Alarm (Red) Ring (Green), Ring Owner (Green)	
Max. 21.7 watts/74BTU (system on) Max. 30 watts/102.3BTU (Full loading) ESD Protection 5KV DC Surge Protection 6KV DC System: Power 1 (Green), Power 2 (Green) Fault Alarm (Red) Ring (Green), Ring Owner (Green)	
Max. 30 watts/102.3BTU (Full loading) ESD Protection 5KV DC Surge Protection 6KV DC Surge Protection 6KV DC Full Alarm (Red) Power 1 (Green), Power 2 (Green) Fault Alarm (Red) Ring (Green), Ring Owner (Green)	
ESD Protection 5KV DC Surge Protection 6KV DC Surge Protection 5ystem: Power 1 (Green), Power 2 (Green) Fault Alarm (Red) Ring (Green), Ring Owner (Green) Ring (Green)	
System: Power 1 (Green), Power 2 (Green) Fault Alarm (Red) Ring (Green), Ring Owner (Green)	
Power 1 (Green), Power 2 (Green) Fault Alarm (Red) Ring (Green), Ring Owner (Green)	
Power 1 (Green), Power 2 (Green) Fault Alarm (Red) Ring (Green), Ring Owner (Green)	
Fault Alarm (Red) Ring (Green), Ring Owner (Green)	
DIDO (Red)	
Per 10/100/1000T RJ45 Port:	
LED Indicators 1000Mbps LNK/ACT (Green)	
10/100Mbps LNK/ACT (Amber)	
Per SFP Port:	
1G/2.5Gbps LNK/ACT (Green)	
100Mbps LNK/ACT (Amber)	
Per SFP+ Port:	
1G/2.5Gbps LNK/ACT (Green)	
10Gbps LNK/ACT (Amber)	
Swtiching Specifications	
Switch Architecture Store-and-Forward	
Switch Fabric 116Gbps/non-blocking	
Throughput 86.3Mpps@64Bytes	
Address Table 32K entries, automatic source address learning and aging	
Shared Data Buffer 32Mbits	
Jumbo Frame 10K bytes	
Flow Control IEEE 802.3x pause frame for full duplex	
Back pressure for half duplex	



SNMP MIBs	RFC 1213 MIB-II RFC 1493 Bridge MIB RFC 1643 Ethernet MIB RFC 2863 Interface MIB RFC 2665 Ether-Like MIB RFC 2819 RMON MIB (Group 1, 2, 3 and 9) RFC 2737 Entity MIB RFC 2618 RADIUS Client MIB RFC 2863 IF-MIB RFC 2933 IGMP-STD-MIB RFC 3411 SNMP-Frameworks-MIB RFC 4292 IP Forward MIB RFC 4293 IP MIB RFC 4836 MAU-MIB IEEE 802.1X PAE LLDP	
Standards Conformance		
Regulatory Compliance	FCC Part 15 Class A CE: EN55032 EN55035	
Stability Testing	IEC60068-2-32 (free fall) IEC60068-2-27 (shock) IEC60068-2-6 (vibration)	
Standards Compliance	IEEE 802.3 10BASE-T IEEE 802.3u 100BASE-TX/100BASE-FX IEEE 802.3z Gigabit SX/LX IEEE 802.3ab Gigabit 1000T IEEE 802.3ab Gigabit 1000T IEEE 802.3ae 10Gb/s Ethernet IEEE 802.3ae 10Gb/s Ethernet IEEE 802.3bz 2.5GBASE-X IEEE 802.3bz 2.5GBASE-X IEEE 802.3ad port trunk with LACP IEEE 802.3ad port trunk with LACP IEEE 802.1D Spanning Tree Protocol IEEE 802.1D Spanning Tree Protocol IEEE 802.1w Rapid Spanning Tree Protocol IEEE 802.1s Multiple Spanning Tree Protocol IEEE 802.1c Class of Service IEEE 802.1Q VLAN tagging IEEE 802.1X Port Authentication Network Control IEEE 802.1ab LLDP IEEE 802.3ah OAM IEEE 802.1AS - Timing and Synchronization for Time- sensitive Applications IEEE 802.1Qbu Frame Preemption	IEEE 802.3br Interspersing Express Traffic (IET) IEEE 802.1Qci Per-Stream Filtering and Policing (PSFP) IEEE 802.1Qbv Enhancements for Scheduled Traffic IEEE 802.1CB Frame Replication and Elimination for Reliability (FRER) RFC 768 UDP RFC 783 TFTP RFC 791 IP RFC 792 ICMP RFC 2068 HTTP RFC 2108 HTTP RFC 1112 IGMP v1 RFC 2366 IGMP v2 RFC 3376 IGMP v3 RFC 2710 MLD v1 RFC 3810 MLD v2 RFC 3380 OSPF v2 RFC 5340 OSPF v3 RFC 2453 RIP v2 ITU-T G.8032 ERPS Ring
Environment	·	
Operating	-40 ~ 75 degrees C	
Storage	-40 ~ 85 degrees C	
Humidity	5 ~ 95% (non-condensing)	



Dimensions



Ordering Information

TSN-6325-8T4S4X

Industrial L3 8-Port 10/100/1000T + 4-Port 1G/2.5G SFP + 4-Port 10G SFP+ Managed TSN Ethernet Switch

Related Products

IGS-6325-5X1T	Industrial L3 5-Port 10GBASE-X SFP+ + 1-Port 10GBASE-T Managed Ethernet Switch
IGS-6325-8T4X	Industrial L3 8-Port 10/100/1000T + 4-Port 10G SFP+ Managed Ethernet Switch
IGS-6325-8T8S4X	Industrial L3 8-Port 10/100/1000T + 8-Port 100/1000X SFP + 4-Port 10G SFP+ Managed Ethernet Switch
IGS-6325-8T8S	Industrial L3 8-Port 10/100/1000T + 8-Port 100/1000X SFP Managed Ethernet Switch
IGS-5225-8T2S2X	Industrial L3 8-Port 10/100/1000T + 2-Port 100/1000X SFP + 2-Port 10G SFP+ Managed Ethernet Switch (-40~75 degrees C)
IGS-6325-20T4C4X	Industrial L3 20-Port 10/100/1000T + 4-Port Gigabit TP/SFP + 4-Port 10G SFP+ Managed Ethernet Switch
IGS-6325-20S4C4X	Industrial L3 20-Port 100/1000X SFP + 4-Port Gigabit TP/SFP + 4-Port 10G SFP+ Managed Ethernet Switch

Available Modules for IGS-6325 DIN-rail series

CB-DASFP-0.5/2M	10G SFP+ Directly-attached Copper Cable (0.5/2M in length)
MTB-Series Module	10GBASE-LR/SR/BX/T Modules
MGB-2G Transceiver	2500BASE-X SFP Transceiver
MGB-Series Transceiver	1000BASE-SX/LX SFP Transceiver
MFB-Series Transceiver	100BASE-FX SFP Transceiver

FCCCE

Sales office Austria sales@spectra-austria.at