



# S8TB

## Unmanaged Gigabit Ethernet Switch

**(8) 10/100/1000Base-T Ports**



## User Guide

**33672 Rev. B**

## Safety Warnings and Cautions

These products are not intended for use in life support products where failure of a product could reasonably be expected to result in death or personal injury. Anyone using this product in such an application without express written consent of an officer of Transition Networks does so at their own risk and agrees to fully indemnify Transition Networks for any damages that may result from such use or sale.



**Attention:** this product, like all electronic products, uses semiconductors that can be damaged by ESD (electrostatic discharge). Always observe appropriate precautions when handling.



**NOTE:** Emphasizes important information or calls your attention to related features or instructions.



**WARNING:** Alerts you to a potential hazard that could cause personal injury.



**CAUTION:** Alerts you to a potential hazard that could cause loss of data, or damage the system or equipment.

S8TB 8-Port Unmanaged Gigabit Ethernet Switch User Guide, PN 33672 Rev. B

## Record of Revisions

Rev.	Date	Description
A	12/14/15	Initial release.
B	4/1/20	Update to Rev. B; add S8TB photo, DoC, and port layout; update MAC Table and Memory Buffer capacity specs.

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# 1. Introduction

This (8) 10/100/1000Base-T port switch with Auto-MDI/MDIX is an unmanaged multi-port switch that can be used to build high-performance switched networks. This switch is a store-and-forward device that offers low latency for high speed networking. It is designed for the core of the network backbone computing environment to solve traffic block problems at SME (small, medium enterprise) businesses.

## Features

- Conforms to IEEE 802.3, 802.3u, 802.3ab, 802.3az, and 802.3x
- 8 10/100/1000 Base-T RJ-45 Ethernet ports
- Auto-MDIX on all ports
- N-Way Auto-Negotiation supported
- Store-and-Forward switching architecture
- Backplane Bandwidth 16 Gbps
- Embedded 192k bytes memory buffer
- 4K MAC address table
- Up to 9K byte Jumbo Frame
- Small Form Factor
- Internal Power Supply
- Supports full and half-duplex for 10/100Mbps and full-duplex for 1000Mbps
- Wire-speed packet filtering and forwarding rate
- Supports IEEE 802.3az energy efficient Ethernet

## Package Contents

Unpack the contents of the S8TB packaging and verify the checklist below.

- One S8TB Switch
- One Documentation Post card
- Four Rubber Feet
- Four Sponges
- One Wall Mount Kit (two brackets + 8 screws)

Compare the contents of your S8TB package with the standard checklist above. If any item is missing or damaged, please contact your local dealer for service. Save the packaging materials for possible future use.



## 2. Hardware Description

### LED Indicators

The LED give real-time information of system operation status as shown and described below.



Front Panel

### LED Indicator Descriptions

LED	Status	Description
PWR	Steady Green	Power is On
LINKK/ACT	Steady Green	Port connection on 1000Mbps
	Steady Amber	Port connection on 10/100Mbps
	Off	Port disconnect



Back Panel

### Power Cord Included

To order the corresponding country specific power cord, add the extension from the list below to the end of the SKU: -NA = North America, -LA = Latin America, -EU = Europe, -UK = United Kingdom, -SA = South Africa, -JP = Japan, -OZ = Australia, -BR = Brazil.

### Power On

Connect the power cord to the power socket on the back panel of the switch. Connect the other side of power cord to the power outlet. The power rating of the switch is AC voltage ranging from 100-240VAC, frequency 50~60Hz.

## 3. Troubleshooting

This section is intended to help you solve the most common problems on the S8TB switch.

### ***Incorrect Connections***

#### **Faulty or loose cables**

Look for loose or obviously faulty connections. If they appear to be OK, make sure the connections are snug. If that does not correct the problem, try a different cable.

#### **Non-standard cables**

Non-standard and mis-wired cables may cause numerous network collisions and other network problem, and can seriously impair network performance. A category 5-cable tester is a recommended tool for every 100Base-TX network installation.

**RJ-45 ports:** Use unshielded twisted-pair (UTP) or shield twisted-pair (STP) cable for RJ-45 connections: 100Ω Category 3, 4 or 5 cable for 10Mbps connections or 100Ω Category 5 cable for 100Mbps connections.

Also be sure that the length of any twisted-pair connection does not exceed 100 meters (328 feet).

#### **Improper Network Topologies**

It is important to make sure that you have a valid network topology. Common topology faults include excessive cable length and too many repeaters (hubs) between end nodes. In addition, you should make sure that your network topology contains no data path loops. Between any two end nodes, there should be only one active cabling path at any time. Data path loops will cause broadcast storms that will severely impact your network performance.

### ***Diagnosing LED Indicators***

The switch can be easily monitored through panel indicators, which describe common problems you may encounter, to assist in identifying problems and where you can find possible solutions. See the section “[LED Indicators](#)” on page 5 above.

### ***Labeling***

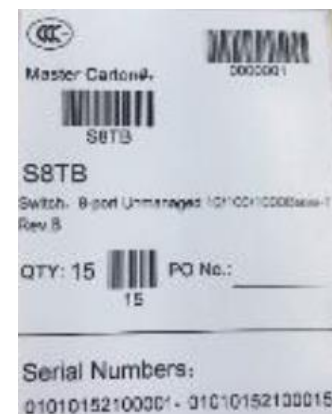
After performing the troubleshooting steps above, and before contacting Tech Support, check the product and packaging labels for information to provide Tech Support.



**Product Label**



**Box Label**



**Carton Label**

## 4. Technical Specifications

The table below lists the S8TB switch specifications.

<b>Standards</b>	IEEE 802.3 10BASE-T Ethernet IEEE 802.3u 100BASE-TX Fast Ethernet IEEE 802.3ab 1000Base-T Gigabit Ethernet IEEE802.3x Duplex Flow Control IEEE802.3az EEE
<b>Protocol</b>	CSMA/CD
<b>Technology</b>	Store and Forward switching architecture
<b>Cable Connections</b>	RJ-45 (10BASE-T): Category 3,4,5 UTP/STP RJ-45 (100BASE-TX): Category 5 UTP/STP RJ-45 (1000BASE-T): Category 5,5e or enhanced UTP/STP
<b>Connectors</b>	(8) 10/100/1000 RJ-45 ports
<b>Network Rate</b>	10/100/1000 Mbps Auto-negotiation
<b>Jumbo Frames</b>	9K Bytes
<b>MAC Address Table</b>	8K-entry (Rev. A) 4K-entry (Rev. B)
<b>Memory Buffer</b>	128K bytes (Rev. A) 192K bytes (Rev. B)
<b>Status LEDs</b>	(8) port LEDs speed (Green: 1000Mbps, Amber 10/100 Mbps), Link/Activity (flashing)
<b>Backplane</b>	16Gbps
<b>Case</b>	Metal
<b>Operating Temp.</b>	0 deg. C to +40 deg. C (+32 deg. F to +104 deg. F)
<b>Operating Humidity</b>	10% to 90% (Non-condensing)
<b>Storage Temp.</b>	-40 deg. C to +70 deg. C (-40 deg. F to +158 deg. F)
<b>Power Input</b>	Internal Power: 100 - 240VAC, 50~60Hz
<b>Power Consumption</b>	3.5 Watts max.
<b>Dimensions</b>	Width: 6.3" [160 mm] x Depth: 3.94" [100 mm] x Height: 1.28" [32.5 mm]
<b>Weight</b>	1.35 lbs. [0.61 kg]
<b>Warranty</b>	Limited Lifetime Warranty

## 5. Regulatory Compliance Information

### *Regulatory Approvals*

Compliance	Safety: LVD Emissions: FCC Class B, CE Mark, UL Listed, CCC EN55022 Class B
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### Canadian EMI Notice

This Class B digital apparatus meets all the requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numérique de la classe A respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

### European Notice

Products with the CE Marking comply with both the EMC Directive (2004/108/EC) and the Low Voltage Directive (2006/95/EC) issued by the Commission of the European Community. Compliance with these directives imply conformity to the following European Norms:

EN55022 (CISPR 22) - Radio Frequency Interference

EN60950 (IEC950) - Product Safety

### **CE Mark**

### **FCC Regulations**

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at the user's own expense.

### **Canadian Regulations**

This digital apparatus does not exceed the Class B limits for radio noise for digital apparatus set out on the radio interference regulations of the Canadian Department of Communications.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la Class B prescrites dans le Règlement sur le brouillage radioélectrique édicté par le ministère des Communications du Canada.



## European Regulations

### Warning

This is a Class B product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

### Achtung !

Dieses ist ein Gerät der Funkstörgrenzwertklasse A. In Wohnbereichen können bei Betrieb dieses Gerätes Rundfunkstörungen auftreten. In diesem Fall is der Benutzer für Gegenmaßnahmen verantwortlich.

### Attention !

Ceci est un produit de Classe B. Dans un environnement domestique, ce produit risque de créer des interférences radioélectriques, il appartiendra alors à l'utilisateur de prendre les mesures spécifiques appropriées.



In accordance with European Union Directive 2002/96/EC of the European Parliament and of the Council of 27 January 2003, Transition Networks will accept post usage returns of this product for proper disposal. The contact information for this activity can be found in the 'Contact Us' portion of this document.



CAUTION: RJ connectors are NOT INTENDED FOR CONNECTION TO THE PUBLIC TELEPHONE NETWORK. Failure to observe this caution could result in damage to the public telephone network.

Der Anschluss dieses Gerätes an ein öffentliches Telekommunikationsnetz in den EGMitgliedstaaten verstösst gegen die jeweiligen einzelstaatlichen Gesetze zur Anwendung der Richtlinie 91/263/EWG zur Angleichung der Rechtsvorschriften der Mitgliedstaaten über Telekommunikationsendeinrichtungen einschliesslich der gegenseitigen Anerkennung ihrer Konformität.

## Declaration of Conformity

<h3><i><b>Declaration of Conformity</b></i></h3>		
<i>Transition Networks, Inc.</i> <small>Manufacture's Name</small>		
<i>10900 Red Circle Drive, Minnetonka, Minnesota 55343 U.S.A.</i> <small>Manufacture's Address</small>		
<b>Declares that the products:</b>		
<b>S8TB</b>		
<b>Unmanaged Gigabit Ethernet Switch</b>		
<b>Conforms to the following Product Regulations:</b>		
FCC Part 15 Class B, EN 55032:2012, EN 55024:2010		
Directive 2014/30/EU		
Low-Voltage Directive 2014/35/EU		
IEC /EN 60950-1:2006+A2:2013		
2011/65/EU EN 50581:2012		
With the technical construction on file at the above address, this product carries the		
<b>CE Mark</b>		
I, the undersigned, hereby declare that the equipment specified above conforms to the above Directive(s) and Standards(s).		
<i>Minnetonka, Minnesota</i> <small>Place</small>	<i>March 17, 2020</i> <small>Date</small>	 <small>Signature</small>
		<i>Stephen Anderson</i> <small>Vice President of Engineering</small>

## **Contact Us**

**Technical Support:** Technical support is available 24-hours a day

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