



## AT-GS2002/SP

### Ethernet Bridging Converter

#### AT-GS2002/SP

10/100/1000T to 1000 SFP,  
standalone bridging converter

#### Overview

The AT-GS2002/SP Ethernet bridging converters are designed to extend the distance of your network by interconnecting LAN devices that are physically separated by large distances. These bridging converters have the functionality to connect any managed/unmanaged 10Mbps, 100Mbps, or 1000Mbps (1Gbps) switch or hub using standard 10/100/1000T RJ-45 connections and convert the electrical signal to fiber optical signal via its SFP port.

#### Extend the Distance of Ethernet

Each AT-GS2002/SP bridging converter features a 10/100/1000T twisted pair port and an SFP port. The twisted pair port has an RJ-45 connector and a maximum operating distance of 100 meters (328 feet). These units can operate at half- and full-duplex.

The AT-GS2002/SP fiber optic port has a SFP slot and the maximum operating distance and speed is dependent on the SFP.

The AT-GS2002/SP supports SFPs operating at Gigabit Ethernet (1000Mbps) speeds.

#### Standalone or Rack-mounted

Each small bridging converter is powered by an external power supply unit for use in standalone applications. Where multiple media converters are used, up to 12 standalone devices can be inserted into a low-cost AT-MCR12 rack-mount chassis, allowing all the converters to be powered by a single internal power supply. In critical applications, a second load sharing internal power supply can be installed into the rack-mount chassis. The bridging converters can also be 19" rack-mounted either individually using the AT-WLMT, AT-TRAY1 or up to four devices using the AT-TRAY4.

#### Hassle Free Support

All Allied Telesis Ethernet bridging converters offer free technical support, ensuring trouble-free installation.

#### Key Features

- Converts speed as well as media type
- Extends Gigabit networks to distances up to 80km
- Supports 1000Mbps SFP modules
- Auto MDI/MDI-X
- Auto-negotiation (IEEE 802.3u-compliant)
- Store and forward data packet handling
- Support MissingLink™ and Smart MissingLink™
- Transparent to IEEE 802.1Q VLAN packets
- Automatic address learning and aging
- System and port LEDs
- External AC power adapter
- Rack-mountable using optional AT-WLMT, AT-MCR12, TRAY4, or TRAY1 chassis

#### Ordering Information

**AT-GS2002/SP-xx**  
Gigabit Ethernet bridging converter,  
10/100/1000T to SFP (550m to 80km)

Where xx =

- 10 AC power supply, US power adapter
- 20 AC power supply, European power adapter
- 30 AC power supply, UK power adapter
- 40 AC power supply, Australian power adapter

**AT-SP Series**  
1000Mbps SFP product line

# AT-GS2002/SP | Ethernet Bridging Converter

## Technical Specifications

### Status Indicators

#### System LEDs

LED	Colour	Description
Power	Green	Indicates that the converter power is on.
	Off	Indicates that the converter has no power signal.
AN	Green	Indicates that the port auto-negotiation is ON.
	Off	Indicates that the port auto-negotiation is OFF.

#### SFP Port LEDs

LED	Colour	Description
LINK	Green	Indicates a valid link has been established between the port and the end-node.
	Off	Indicates that there is no link between the port and the end-node.
ACT	On	Indicates that the port is transmitting and/or receiving data packets.

#### 10/100/1000T Twisted Pair Port LEDs

LED	Colour	Description
LINK	Green	Indicates a valid link has been established between the port and the end-node.
	Off	Indicates that there is no link/activity between the port and the end-node.
ACT	On	Indicates that the port is transmitting and/or receiving data packets.
	Off	Indicates that there is no activity on the port.
100	Green	Indicates that the port is operating at 100Mbps.
	Off	Indicates that the port is not operating at 100Mbps.
1000	Green	Indicates that the port is operating at 1000Mbps.
	Off	Indicates that the port is not operating at 1000Mbps.

NOTE: The AT-GS2002/SP operates at 10Mbps when both the 100Mbps LED and 1000Mbps LED are OFF.

#### MODE push button LEDs

LED	Colour	Description
ML	Green	MissingLink mode is enabled.
	Off	MissingLink mode is disabled.
SML	Green	Smart MissingLink mode is enabled.
	Off	Smart MissingLink mode is disabled.
LT	Green	Link Test mode is enabled.
	Off	Link Test mode is disabled.

### Link Test, MissingLink, and Smart MissingLink Functions

#### Link Test

The link test is a fast and easy way for you to test the connections between the media converter ports and the end-nodes that are connected to the ports. If a network problem occurs, you can perform a link test to determine which port is experiencing a problem, and so be able to focus your troubleshooting efforts on the cable or end-node where the problem resides.

#### MissingLink

The MissingLink feature enables the two ports on the media converter to pass the 'Link' status of their connections to each other. When the media converter detects a loss of connection to an end-node, the media converter shuts down the connection to the other port, thus notifying the end-node that the connection has been lost.

#### Smart MissingLink

The Smart MissingLink feature performs exactly the same function as MissingLink with one additional feature. When a link is lost on a port, the LINK LED of the port which still has a valid connection to its end-node starts to blink. This allows you to quickly determine which port still has a valid connection (LINK LED blinking) and which port has lost its connection (LINK LED off).

### Physical Specifications

Dimensions: 10.5cm x 9.5cm x 2.5cm  
(W x D x H) (4.125 in x 3.75 in x 1.0 in)

Weight: 0.27 kg (0.60 lbs)

### Power Characteristics

External power: 100-120/220-240V AC, 50/60Hz  
Supply: +/-3%  
Input supply voltage: 12VDC +/-5%  
Max current: .5A  
Powerconsumption: 6W

### Copper Ports

RJ45 connector  
Auto MDI/MDI-X  
Half/full-duplex  
Auto-negotiation  
10/100/1000T compliant

### Environmental Specifications

Maximum operating temp: 0°C to 40°C (32°F to 104°F)  
Maximum storage temp: -25°C to 70°C (-13°F to 158°F)  
Operating and storage altitude: Up to 3,048 meters (10,000 feet)  
Relative humidity operating and storage: 5% to 95% (non-condensing)

### Electrical/Mechanical Approval

Safety Conforms to all standards normally supported by Allied Telesis products including safety standards EN60950 (TUV), UL60950 (cULus), CE Compliant, EN60825

Standard IEEE 802.3, IEEE 802.3u

Immunity Conforms to EN55024 immunity standard

EMI/RFI FCC Class A, EN55022 Class A, VCCI Class A, C-TICK

USA Headquarters | 19800 North Creek Parkway | Suite 100 | Bothell | WA 98011 | USA | T: +1 800 424 4284 | F: +1 425 481 3895

European Headquarters | Via Motta 24 | 6830 Chiasso | Switzerland | T: +41 91 69769.00 | F: +41 91 69769.11

Asia-Pacific Headquarters | 11 Tai Seng Link | Singapore | 534182 | T: +65 6383 3832 | F: +65 6383 3830

[www.alliedtelesis.com](http://www.alliedtelesis.com)

© 2011 Allied Telesis Inc. All rights reserved. Information in this document is subject to change without notice. All company names, logos, and product designs that are trademarks or registered trademarks are the property of their respective owners. 617-000035 Rev.J