



# System Design

The series 10/100/1000M Ethernet media converter adopts switching technology to fulfill media conversion. *Bidirectional (BiDi) has only with one port which uses an integral WDM coupler to transmit and receive signals over a single strand fiber.* 

It complies with IEEE802.3z and IEEE802.3ab standards, and supports two types of media network connections: 10/100/1000Base-T and 1000Base-SX/LX. It inter-converts electrical signals of 10/100/1000Base-T twisted pairs with optical signals of 1000Base-SX, extending the transmission distance of a network from 100m via copper cables to 20km/40km/60km via fiber optical cables of fiber size:  $62.5/125\mu$ m,  $50/125\mu$ m,  $9/125\mu$ m. It extends the network transmission distance in WDM technology, through bidirectional communications via singlemode single-core fiber cable .

## **Features:**

- Supporting inter-conversion between 10/100/1000Base-TX and 1000Base-SX
- Supporting full-duplex and half-duplex and auto-negotiation

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Model : ATZ FO-MC-GE-SMBDxxK-SC/A\_B (xx=Dist in km: 20/40/60) Description: 10/100/1000Base-TX to 1000Base-SX/LX Standalone Gigabit Ethernet Media Converter/Singlemode/1310/1490/1550nm WDM BiDi-Single Fiber Series/SC

- Supporting automatic cross connection of twisted pair interfaces, facilitating system commissioning and installation
- Supporting the transmission of extra-long VLAN packets
- Supporting Quality of Service (QoS) and ensuring the transmission of VoIP packets;
- Supporting STP to form a redundant network
- Supporting switches like Cisco, HP, juniper, Huawei, etc.

# Specifications:

| Access mode           | 10/100/1000Mbps Gigabit Ethernet   |  |  |
|-----------------------|--|--|--|
| Standard              | IEEE802.3ab 1000Base-T, IEEE802.3z 1000Base-SX/LX Gigabit ethernet, IEEE802.1qVLAN, IEEE802.1p QoS, IEEE802.1d   |  |  |
|                       | Spanning Tree  |  |  |
| Wavelength            | 1310nm; 1490nm; 1550nm   |  |  |
| Optical Power         | -9dBm to -3dBm   |  |  |
| Transmission distance | 1310/1550nm@20Km<br>CAT5/CAT5E twisted pair: 100m  |  |  |
| Port                  | One RJ45 connector: connected to STP/UTP CAT5/CAT5E twisted pair.<br>One optical port: MM: SC/ST/FC (fiber size: 50,62.5/125µm)  |  |  |
| MAC Address table     | 2К   |  |  |
| Buffer space          | 1M   |  |  |
| Conversion means      | Media conversion   |  |  |
| Delay                 | Store-and-forward: <10µs; cut-through: 1µs   |  |  |
| BER                   | <10-9  |  |  |
| MTBF                  | 100,000 hours  |  |  |
| LED                   | PWR (power supply), FX LINK (optical link action), T<br>LINK1000 (twisted pair link1000M), TP LINK100 (twisted pair<br>link 100M), TP ACT (twisted pair packet forwarding) |  |  |
| Power                 | DC5V 2A (external), AC220 0.5A/DC-48 (built-in)  |  |  |
| Power consumption     | Full load <3W  |  |  |
| Operating temperature | -10~60°C   |  |  |
| Operating humidity    | 5%~90%   |  |  |
| Maintaining           | -40~70°C   |  |  |
| temperature           |  |  |  |



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| Maintaining humidity | 5% ~ 90% non-condensing                                   |
|----------------------|---|
| Dimensions           | 26mm (H) * 70mm (W) * 94 mm (D) (external power supply)   |
|                      | 30mm (H) * 110mm (W) * 140 mm (D) (internal power supply) |

## **Ordering information**

| Part No.                          | Descriptions                               | Remark    |
|-----------------------------------|--|-----------|
| ATZ FO-MC-GE-SMBD20K-SC/A         | Gigabit Ethernet 10/100/1000Mbps WDM Media | SC/FC/ST  |
|                                   | Converter 20km SC (TX=1310nm/Rx=1550nm)    | Available |
| ATZ FO-MC-GE-SMBD20K-SC/ <b>B</b> | Gigabit Ethernet 10/100/1000Mbps WDM Media | SC/FC/ST  |
|                                   | Converter 20km SC (TX=1550nm/Rx=1310nm)    | Available |
| ATZ FO-MC-GE-SMBD40K-SC/A         | Gigabit Ethernet 10/100/1000Mbps WDM Media | SC/FC/ST  |
|                                   | Converter 40km SC (TX=1310nm/Rx=1550nm)    | Available |
| ATZ FO-MC-GE-SMBD40K-SC/ <b>B</b> | Gigabit Ethernet 10/100/1000Mbps WDM Media | SC/FC/ST  |
|                                   | Converter 40km SC (TX=1550nm/Rx=1310nm)    | Available |
| ATZ FO-MC-GE-SMBD60K-SC/A         | Gigabit Ethernet 10/100/1000Mbps WDM Media | SC/FC/ST  |
|                                   | Converter 60km SC (TX=1490nm/Rx=1550nm)    | Available |
| ATZ FO-MC-GE-SMBD60K-SC/ <b>B</b> | Gigabit Ethernet 10/100/1000Mbps WDM Media | SC/FC/ST  |
|                                   | Converter 60km SC (TX=1550nm/Rx=1490nm)    | Available |

### Remark :

• Power adapter for stand-alone units is manufactured by third party .Power adapter included US, European, UK or Australian power plug.

• Please feel free to contact factory for any special requirement and customization

### Package Includes:

1x Bi-Directional media converter 1x power adapter

## Warranty: 3 Years

Warranty is effective from the date of original delivery. This warranty shall be void if a serial number has been removed from the product.