

# 5800/01 4G GbE Muxponder

## A TDM multiplexer for Gigabit Ethernet

### Key benefits:

- Plug and play with automatic provisioning, providing easy and fast installation
- Transparent transport of Gigabit Ethernet or Fast Ethernet
- High wavelength utilization via Transmode's Intelligent WDM (iWDM) concept using 4Gb/s line rate
- Multi-functional plug-in unit. Same hardware can be used as Muxponder and Regenerator
- Technology agnostic. Pluggable transceivers enable usage in CWDM as well as DWDM networks.
- Dual line ports enabling sub 50ms protection
- Low Power Design ensures low total cost of ownership

The 5800/01 4G Muxponder is a powerful part of Transmode's TS-Series platform enabling cost efficient transport networks based on CWDM and DWDM technology



### Optimized for Metro/Access applications

The 5800/01 4G Muxponder is an extremely powerful device for the Metro/access applications where low cost, compact design and low power consumption are crucial components.

### Multi functional - Three operating mode

The 5800/01 can be configured into three different modes:

- 4G Muxponder mode
- Double 2.5G Muxponder mode
- 3x Regenerator mode

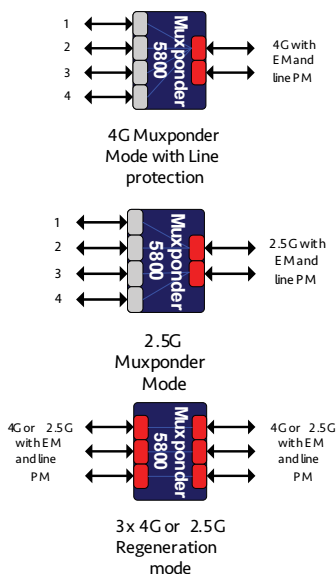


Fig. 1 The three main operating modes of the 5800

In 4G Muxponder mode the 5800/01 electrically multiplexes four GbE or 100Base-T signals onto one 4.25Gb/s wavelength channel. In this mode 4G capable transceivers are used, available in various options supporting links up to 70 km (un-amplified) both for CWDM and DWDM networks. In this mode the 5800/01 also has an in-built Line Protection feature that can be initiated via the management interface.

In Double 2.5G Muxponder mode the 5800/01 electrically multiplexes two GbE or 100Base-T signals onto one 2.5Gb/s wavelength channel. In this mode, the 5800/01 can be seen as two separate Muxponders carrying two GbE or 100Base-T signals each.

The 5800/01 can also be configured into a 3-channel regenerator. The figure below shows an example where 4x GbE channels are carried over a point-to-point network with an intermediate regenerator node. All nodes can be remotely managed via the embedded management channels.

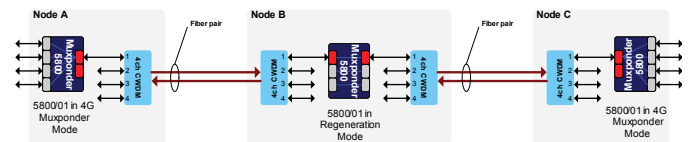


Fig. 2 An example of the 3 channel regenerator mode where 4xGbE channels are carried over a point-to-point network using an intermediate regenerator node

This unparalleled flexibility in hardware reduces the Operational Expenditures (OPEX ) as the same plug-in unit can be used to multiplex client signals as well as regenerate the line signal to extend the bridgeable distance.

The regenerator mode can also be used to convert from a CWDM to a DWDM network or to convert from one C/DWDM wavelength to another, by using corresponding transceivers (SFPs) on the appropriate interfaces.

## Tailored Network Element options

The 5800/01 MXP can be mounted in any of the TS-Series two chassis options;

- 1U TS-100 chassis
- 6U TS-1100 chassis

This enables a tailored setup depending on current and future capacity needs of the site.

## Embedded Management

The embedded management channels enable easy remote management via the line signal. There is therefore no need to provide access to the customer DCN network if the 5800/01 MXP is placed at a customer site.

## Low Power Design

A fully equipped 5800/01 consumes less than 14W. Low power consumption in combination with a small footprint reduces site costs and enables more capacity to be handled at sites with restrictions on power consumption, cooling and space. As an example, a 5800/01 mounted in a 1U TS-100 chassis will consume less than 24W.



Fig. 3 TS-100 chassis example configuration

## Technical specifications:

<b>Supported traffic formats</b>	Gigabit Ethernet Fast Ethernet
<b>Layer-1 performance monitoring</b>	Gigabit Ethernet: Based on CRC and 8B10B coding errors Line signal: Block error based on coding and framing errors
<b>Layer-2 performance monitoring</b>	Channel utilization (%) on GbE clients
<b>Protection</b>	Via two line ports set in 1+1 protection. Non-revertive switching <50ms
<b>Power consumption</b>	Max 14W worst case (with all client ports active and using DWDM SPFs)
<b>Misc line interface features</b>	Embedded management channels on line signals
<b>Operational modes</b>	4G Muxponder mode (4 client ports + 2 line ports for protection) 2.5G Muxponder mode (4 client ports + 2 line ports) 3x Regenerator mode (with embedded management channels on all 6 line ports)
<b>Released traffic combinations</b>	4xGbE with 4G line signal Double 2xGbE with two 2.5G line signals
<b>Interfaces</b>	Client interfaces: SFP MM, SM @ 1310nm/1550nm versions covering ranges from 100m up to 15km. Multi Rate 100Mb/s – 2,125Gb/s. Electrical SFP for Gigabit Ethernet and Fast Ethernet. Line interfaces: SFP 4Gb/s 40km/70km CWDM (up to 16 channels) or 80km DWDM (up to 40 channels), SFP 2.5Gb/s 40km/80km/100km (up to 16 channels) or 80km DWDM (up to 40 channels)

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