

# 1U, 100G Transponder Platform



## 1U Low Cost 100G

### TRANSPONDER

- Single Fiber Type
- Dual Fiber Type (SMF / DSF)
- 100Gb/s / 40G
- ITU DWDM DFB-LD
- 26dB Power budget
- Build in MUX/DEMUX
- Loopback Function
- 2 Hot Pluggable Power Supply
- 2 Hot Pluggable Fan Tray
- EDFA for amplification
- OSC channel

### INTERFACE

- 1 x CFP User Ports
- 2 x SC Line Port
- 1 x SMC Card
- 3 x Universal Slots
- 1 x Console Port
- 1 x Management port
- 1 x Office Alarm

eWAVE5101 100G transponder is developed for high capacity and long distance optical transport solutions. It is designed to support various 100G client services including 100GBASE-LR4, 100GBASE-ER4 and 100GBASE-SR10 and seamlessly interface with any third party equipment. 40G traffics are also supported, such as 40GBASE-LR4, 40GBASE-ER4. The concept of developing eWAVE5101 is to provide optional way for rolling 100G services with cost effective solution. It is designed to meet the market demands for low power consumption and rack space saving thus reducing the overall CAPEX and OPEX.

eWAVE5101 provides an all-in-one solution, which has all pluggable function cards (EDFA, DCM) integrated in 1RU chassis. eWAVE5101 can simply plug-play for 80 km box to box transmission without any EDFAs. With EDFA and DCM cards plugged into the same 1RU chassis, eWAVE5101 can do up to 160 km transmission. In addition, eWAVE5101 has pluggable Simple Management Card (SMC) which monitors operation and controls the configuration of the unit without accessing the management port.

#### Ideal for the following applications:

- High capacity networks ranging up to 80km without intermediate sites
- Acting as a media converter between the different 100G/40G optical interfaces
- CPE for 100G/40G managed services
- Providing 100G/40G links over existing infrastructure
- Provide loopback function for testing the transmission or transportation infrastructure

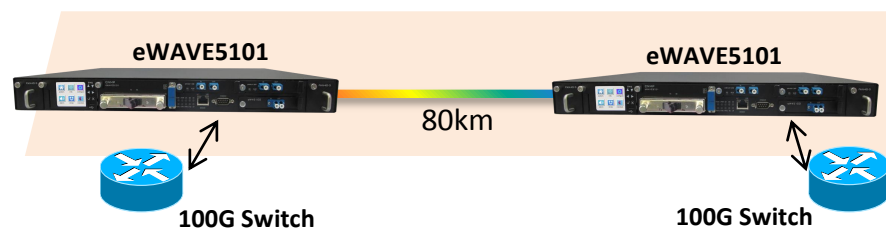
#### Features:

- ✓ Highest 100G density feature set in the market.
- ✓ Supporting 100GBASE-x client interface
- ✓ Supporting 40GBASE-x client interface
- ✓ Supporting single fiber and dual fiber (SMF / DSF)
- ✓ Standards based ITU-T G.709 100G
- ✓ Client Interface: CFP LR-4 WDM 4 x 25Gb/s OTU4
- ✓ 3 slots for EDFA , DCM or passive WDM/OAD cards
- ✓ 1 slot for SMC card
- ✓ Line Side: 80km distance PTP, and over 1000 km with Boost, line and pre EDFAs

#### Sample configuration:

100/40G Transponder/Media Converter

100/40G Transponder/Media Converter



### Dual Fiber Stacking:



### Single Fiber Stacking:



### Order Information:

#### Dual Fiber (SMF):

Model	Channel	Frequency (THz)	Wavelength (nm)
eWAVE5101D1	C21 ~ C30	192.10 ~ 193.00	1560.61 ~ 1553.33
eWAVE5101D2	C31 ~ C40	193.10 ~ 194.00	1552.52 ~ 1545.32
eWAVE5101D3	C41 ~ C50	194.10 ~ 195.00	1544.53 ~ 1537.40
eWAVE5101D4	C51 ~ C60	195.10 ~ 196.00	1536.61 ~ 1529.55

Note: In dual fiber application, it supports 4 x 100G by using stacking

#### Single Fiber:

Model	Tx Channel	Frequency (THz)	Rx Channel	Frequency (THz)
eWAVE5101BD1	C21 ~ C30	192.10 ~ 193.00	C41 ~ C50	194.10 ~ 195.00
eWAVE5101BD2	C31 ~ C40	193.10 ~ 194.00	C51 ~ C60	195.10 ~ 196.00
eWAVE5101BD3	C41 ~ C50	194.10 ~ 195.00	C21 ~ C30	192.10 ~ 193.00
eWAVE5101BD4	C51 ~ C60	195.10 ~ 196.00	C31 ~ C40	193.10 ~ 194.00

Note:

- 1) In single fiber application, eWAVE5101BD1 and eWAVE5101BD3, or eWAVE5101BD2 and eWAVE5101BD4 should be configured in peer as Node A and Node B.
- 2) Sub-card oW5402BD must be used in single fiber application as Red/Blue band split.
- 3) These products support dual fiber, bidirectional application.
- 4) Dual fiber application is able to stack up to 4x100G. Single fiber application is able to stack up to 2x100G.

#### Dual Fiber (DSF):

Model	Frequency (THz)	Wavelength (nm)
eWAVE5101DSF	191.95	1561.83
	192.20	1559.79
	192.70	1555.75
	193.00	1553.33
	193.40	1550.12
	193.85	1546.52
	194.40	1542.14
	194.75	1539.37
	195.35	1534.64
196.00	1529.55	

Note: Due to four wavelength mixing effect, we have to select above 10 DWDM wavelengths from total 80 DWDM wavelengths (50G channel space)

#### Hardware:

Model	Description
oW45xx	FBG base DCM card (xx depends on distance in km)
PSU-200W-AC	Pluggable power supply (AC), 200W, 100-240VAC
PSU-200W-DC	Pluggable power supply (DC), 200W, -48VDC
oW5402D	2 Sub-band filter for stacking
oW5404D	4 Sub-band filter for stacking
oW5402BD1/D2/D3/D4	Sub-band filter for Single Fiber (D1 corresponds to eWAVE5101BD1)
eW5101-FAN	Pluggable FAN tray
oW4312RP	Red-band Pre EDFA (1545 nm ~1560 nm)
oW4317RB	Red-band Boost EDFA (1545 nm ~1560 nm)