

# eW31001DW Series

## 10G Multi Service, Single Channel Transponder Card



### SMALL SCALE

### HIGH DENSITY

### DWDM/CWDM

### TRANSPONDER

- 1X10G
- DWDM/CWDM
- OTN (G.709)
- GFEC/EFEC
- 10GbE/OC192/10GFC
- PM of OTN, PCS, MAC
- Low power consumption
- 1+1 protection
- Plug and play
- Small and smart

**eW31001DW Series** is a single channel 10G transponder card used in eWAVE3106/7 and eWAVE3214 platform. It provides low cost and highest port density, supports 10G transmission with 1 slot of eWAVE3107 or eWAVE3214. SFP+ modules are used in client side, which support 850nm, 1310nm or 1550nm according to different application. Line side ports are implemented by CWDM/DWDM XFP modules which support 40km, 80km transmission.

eW31001DW supports multi-service, e.g. 10GbE, OC192, and 10GFC on client port. Each channel of eW31001DW maps client traffic into OTN frame (OTU1e/2e, OTU2, OTU2f) according to ITU-T G.709 and G.sup43, and converts non-specified wavelength to CWDM or DWDM wavelength respectively.

eW31001DW supports both GFEC(G.975), EFEC(G.975.1 - 1.4) to get better OSNR performance. eW31001DW can provide OTN layer and layer 2 performances monitor information.

- ◆ Client : LAN (10.3125G), OC192 (9.953G), 10GFC (10.519G)
- ◆ Line : OTU2(10.709G), OTU1e (11.049G), OTU2e(11.095G), OTU2f(11.317G)
- ◆ PM : LOS, LOF, LOL, FEC error, B1/B2, PCS error and MAC statistics

### Optical interface performance (Typical, can be specified for different application)

Parameter	Symbol	Min	Typ	Max	Unit
<b>Transmitter</b>					
Average Optical Power	$P_f$	0		5	dBm
Center Wavelength (BOL)	$\lambda_c$	$\lambda_c - 25$	$\lambda_c$	$\lambda_c + 25$	pm
Center Wavelength (EOL)	$\lambda_c$	$\lambda_c - 100$	$\lambda_c$	$\lambda_c + 100$	pm
Tx Jitter Generation(peak-to-peak)	$Tx_j$			0.3	UI
Side mode Suppression ratio	SMSR	30			dB
Optical Extinction Ratio	ER	9			dB
Transmitter and Dispersion Penalty	TDP			2.5	dB
Average Launch power of OFF transmitter	$P_{OFF}$			-30	dBm
Relative Intensity Noise	$R_{IN}$			-130	dB/Hz
Transmission distance	D		80		km

Parameter	Symbol	Min	Typ	Max	Unit
<b>Receiver</b>					
Receiver Sensitivity(with FEC)	P <sub>sen</sub>			-29	dBm
Input Saturation Power (Overload)	P <sub>sat</sub>	-6			dBm
Wavelength Range	$\lambda_c$	1260		1600	nm
OSNR limitation (0.1nm bandwidth resolution, with FEC)	OSNR	15			dB
LOS De-Assert	LOS <sub>D</sub>			-30	dBm
LOS Assert	LOS <sub>A</sub>	-37			dBm
LOS Hysteresis		0.5			dB
<b>Mechanical and Power Specification</b>					
Weight	W	0.3			kg
Dimension (D x W x H)	D <sub>im</sub>	258 x 90.4 x 23.6			mm
Power Dissipation	P <sub>ow</sub>	20			W

### Typical Applications

- Multi Service Point to Point Application



### Wavelength Order Information:

For tunable transponder: **eW31001DW-Txx**

For CWDM transponder: **eW31001DW-Cxx**

Cxx: wavelength information of each channel

For example:

C51 ----- 1510nm

C53 ----- 1530nm

C55 ----- 1550nm

C57 ----- 1570nm

For DWDM transponder: **eW31001DW-Dxx**

Dxx: channel information of each channel

For example:

Dxx	Channel	Freq (THz)	Wavelength(nm)	Dxx	Channel	Freq (THz)	Wavelength(nm)
D18	18	191.80	1563.05	D40	40	194.00	1545.32
D19	19	191.90	1562.23	D41	41	194.10	1544.53
D20	20	192.00	1561.42	D42	42	194.20	1543.73
.....							
D38	38	193.80	1546.92	D60	60	196.00	1529.55
D39	39	193.90	1546.12	D61	61	196.10	1528.77