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## Products

### 300-pin Transponder (SerDes Transceiver) Modules

Opnext offers 300-pin Transponders for the following Data Rates / Applications

- [40 Gbit/s](#)
- [10 Gbit/s IR/LR](#)
- [10 Gbit/s SR](#)

#### 40 Gbit/s

##### 40G Features

- Laser Class 1
- Transmission length: 2 km (VSR2000-3R2)
- Operation Case Temperature: 0 to 70°C
- Low Power Consumption
- OIF SFI-5 Electrical Interface
- MSA I2C Edition 4 Management Interface
- 300-pin MSA Package: 5" x 7" x 0.7"

##### 40G Applications

- OC-768 and STM-256 short reach
- Metropolitan area network
- IP router and ATM core switch
- OADM
- High-speed data communications

Part No.	Data Rate (Gbit/s)	Wavelength (nm)	Operating Temp (°C)	Output Power (dBm)	Extinction Ratio (dB)	Received Power (dBm)	Electrical I/F	Power Supply (v)	Power Consumption typical (W)	Reach	Dimensions	Remarks
TRV7B10BN	40	1,550	0 to 70	0 to +3	>8.2	-6 to +3	CML (SFI-5)	+5, +1.8, +3.3, -5.2	17	<2 km VSR2000-3R2 (ITU-T G693)	127 x 177 x 17.8 mm 5 x 7 x 0.7"	I2C Jitter Filter

## 10 Gbit/s IR / LR

### 10G IR/LR Features

- Laser Class 1
- SONET and ITU SDH compatible at OC-192 and STM-64 rates
- MSA compliant
- Intermediate reach, long-reach, and DWDM applications
- ILM or MZ + CW-LD transmitter
- Available with C-band and L-band (TRV708x / TRV709x type)
- PIN-PD or APD receiver with CDR
- Electrical interface with 16ch 622 Mbit/s MUX/ DEMUX
- 622 Mbit/s LVDS data interface
- OIF, SFI4 compliant electrical interface
- Compact package with 300-pin (10x30 pin) electrical connector
- Alarms, controls and performance monitoring functions

### 10G IR/LR Applications

- OC-192 and STM-64 long-reach terrestrial transmission
- Metropolitan area network
- IP Router and ATM core switch
- OADM
- High-speed data communications
- FEC (10.7 Gbit/s, G.709)
- 10 Gbit/s Ethernet

Part No.	Data Rate (Gbit/s)	Wavelength (nm)	Operating Temp (°C)	Output Power (dBm)	Extinction Ratio (dB)	Received Power (dBm)	Electrical I/F	Power Supply (v)	Power Consumption typical (W)	Reach	Dimensions
TRV7054xN* TRV7055BN TRV7056GN*	10 10.7	1,530 to 1,562	0 to 70	-1 to +2	>8.2	-14 to -1	LVDS	+3.3, -5.2	5.0	≤40 km IR-2/S- 64,2b 10GbE	55.9 x 76.2 x 13.5mm 2.2 x 3.0 x 0.53"
TRV7058BN TRV7059xN*	10 10.3 10.7	1,530 to 1,562	0 to 70	-1 to +2	>8.2	-14 to -1	LVDS	+3.3, -5.2	5.0	≤40 km IR-2/S- 64,2b 10GbE	55.9 x 76.2 x 13.5mm 2.2 x 3.0 x 0.53"
TRV7073xN* TRV7074BN	10 to 10.7	1,530 to 1,565	0 to 70	-1 to +3	>8.2	-23 to -9	LVDS	+3.3, -5.2	5.0	≤40 km 10GbE	55.9 x 76.2 x 13.5mm 2.2 x 3.0 x 0.53"
TRV7067xN* TRV7068BN	10 to 10.7	1,530 to 1,565	0 to 70	0 to +4	>9.0	-24 to -7	LVDS	+3.3, -5.2	5.0	≤80 km P1L1- 2D2, 10 GbE	55.9 x 76.2 x 13.5mm 2.2 x 3.0 x 0.53"
TRV7063xN* TRV7064BN	10 to 11.3	1,530 to 1,565	0 to 70	0 to +4	>9.0	-24 to -7	LVDS	+3.3, -5.2	5.0	≤80 km P 1L1- 2D2, 10 GbE	55.9 x 76.2 x 13.5mm 2.2 x 3.0 x 0.53"
TRV7083xN* TRV7084BN	10 to 11.1	1,530 to 1,565	0 to 70	+3 to +6	>10	-24 to -7	LVDS	+3.3, -5.2	6.0	≤80 km TDM	88.9 x 101.6 x 13.5mm 3.5 x 4.0 x 0.53"

\*Builtin Jitter Filter

## 10 Gbit/s SR

### 10G SR Features

- Laser Class 1
- SONET and ITU SDH compatible at OC-192 and STM-64 rates
- MSA compliant
- Very short-reach
- DFB transmitter
- PIN-PD with CDR
- Electrical interface with 16ch 622/644 Mbit/s MUX/DEMUX
- 622/644 Mbit/s LVDS data interface
- OIF, SF14 compliant electrical interface
- Compact package with 300-pin (10x30 pin) electrical connector
- Alarms, controls and performance monitoring functions monitoring functions

### 10G SR Applications

- OC-192 and STM-64 short-reach
- Metropolitan area network
- IP router and ATM core switch
- OADM
- High-speed data communications
- FEC (10.7 Gbit/s, G.709)
- 10 Gbit/s Ethernet

Part No.	Data Rate (Gbit/s)	Wavelength (nm)	Operating Temp (C)	Output Power (dBm)	Extinction Ratio (dB)	Received Power (dBm)	Electrical I/F	Power Supply (v)	Power Consumption (W) Typical	Reach	Dimensions	Remarks
TRV5017xS	10 10.7	1,310	-5 to 70	-6 to -1	>6	-11 to -1	LVDS	+3.3, +1.8*3	4.5	<2 km / 7 km 164.1/SR-1 (GR-253)	55.9 x 76.2 x 13.5 mm 2.2 x 3.0 x 0.53"	I2C, Jitter Filter
TRV5027xS	10 10.7	1,310	-5 to 70	-4 to 0	>6	-12 to 0	LVDS	+3.3, +1.8*3	4.5	<12 km SR-1 (GR-1377)	55.9 x 76.2 x 13.5 mm 2.2 x 3.0 x 0.53"	I2C, Jitter Filter
TRV5027EN	10.3	1,310	-5 to 70	-5.2*1 to 0.5	>3.5	-10.3*2 to 0.5	LVDS	+3.3, +1.8*3	4.5	10 km 10GBASE-LR (10GbE)	55.9 x 76.2 x 13.5 mm 2.2 x 3.0 x 0.53"	I2C, Jitter Filter
TRV5027EZ	10 10.3	1,310	-5 to 70	-5.2*1 to -1	>6	-10.3*2 to 0.5	LVDS	+3.3, +1.8*3	4.5	<2 km / 7 km, 10 km 164.1/SR-1/ (GR253) 10GBASE-LR 10GbE)	55.9 x 76.2 x 13.5 mm 2.2 x 3.0 x 0.53"	I2C, Jitter Filter
TRV5019xS	10 10.7	1,310	-5 to 70	-6 to -1	>6	-11 to 1	LVDS	+3.3, +1.8*3	4.3	<2 km / 7 km 164.1/SR-1 (GR-253)	55.9 x 76.2 x 13.5 mm 2.2 x 3.0 x 0.53"	I2C, Jitter Filter
TRV5029xS	10 10.7	1,310	-5 to 70	-4 to 0	>6	-12 to 0	LVDS	+3.3, +1.8*3	4.3	<12 km SR-1 (GR-1377)	55.9 x 76.2 x 13.5mm 2.2 x 3.0 x 0.53"	I2C, Jitter Filter

TRV5029EN	10.3	1,310	-5 to 70	-5.2*1 to 0.5	>3.5	-10.3*2 to 0.5	LVDS	+3.3, +1.8*3	4.3	10 km 10GBASE- LR (10GbE)	55.9 x 76.2 x 13.5mm 2.2 x 3.0 x 0.53"	I2C, Jitter Filter
TRV5029EZ	10 10.3	1,310	-5 to 70	-5.2*1 to -1	>6	-10.3*2 to 0.5	LVDS	+3.3, +1.8*3	4.3	<2 km / 7km, 10km 164.1/SR- 1/ (GR253) 10GBASE- LR 10GbE)	55.9 x 76.2 x 13.5mm 2.2 x 3.0 x 0.53"	I2C, Jitter Filter
TRV5016xS	10 10.7	1,310	-5 to 70	-6 to -1	>6	-11 to -1	LVDS	+3.3, +1.8, -5.2	4.5	<2 km/7km 164.1/SR-1 (GR-253)	55.9 x 76.2 x 13.5mm 2.2 x 3.0 x 0.53"	I2C
TRV5026xS	10.3	1,310	-5 to 70	-4 to 0	>6	-12 to 0	LVDS	+3.3, +1.8, -5.2	4	<12 km SR-1 (GR- 1377)	55.9 x 76.2 x 13.5mm 2.2 x 3.0 x 0.53"	I2C
TRV5026EN	10.3	1,310	-5 to 70	-5.2*1 to 0.5	>3.5	-10.3*2 to 0.5	LVDS	+3.3, +1.8, -5.2	4	10 km 10GBASE- LR (10GbE)	55.9 x 76.2 x 13.5mm 2.2 x 3.0 x 0.53"	I2C
TRV5026EZ	10 10.3 10.7	1,310	-5 to 70	-5.2*1 to -1	>6	-10.3*2 to 0.5	LVDS	+3.3, +1.8, -5.2	4	<2 km / 7 km, 10 km 164.1/SR- 1/ (GR253) 10GBASE- LR 10GbE)	55.9 x 76.2 x 13.5mm 2.2 x 3.0 x 0.53"	I2C
TRV5018xS	10 10.3 10.7	1,310	-5 to 70	-5.2*1 to -1	>6	-10.3*2 to 0.5	LVDS	+3.3, +1.8*3	4.3	10 km 10GBASE- LR (10GbE)	55.9 x 76.2 x 13.5mm 2.2 x 3.0 x 0.53"	I2C
TRV5028xS	10 10.3 10.7	1,310	-5 to 70	-4 to 0	>6	-10.3*2 to 0.5	LVDS	+3.3, +1.8*3	4.3	<12 km SR-1 (GR- 1377) 10GBASE- LR (10GbE)	55.9 x 76.2 x 13.5mm 2.2 x 3.0 x 0.53"	I2C

\*1: OMA: Optical Modulation Amplitude

\*2: Stressed receiver sensitivity in OMA

\*3: +3.3V Single voltage supply is available with power consumption of 4.8W typ.