



Sat-Light Platinum Series

PL7440T/PL7440R4 RF Wideband Link



Features & Benefits

- Supports more than 8Km. distance [15Km with the PL7440T1550]
- Wideband: 10–3000 MHz
- Powerful management capabilities via a front panel LCD and rack mounted SNMP
- User control and setting of required IMD level
- Variety of RF and optical connectors
- 1550nm and CWDM ITU Grid laser options are available for longer fiber runs and single fiber multiplexing solutions

Product Description

Global Foxcom's Platinum Wideband products are designed to meet the increasing demand for modularity and high-performance in a small form factor for superior long-distance transmission. With high RF input power and wide dynamic range, the link is designed to provide full specification service up to a full 4 dB optical budget with the PL7440R4 receiver.

Utilizing Global Foxcom's **DigiRF** technology, the user has full control of all important functions for setup, operation, and analysis via the front panel LCD or via the associated sub-rack SNMP capability.

In addition **IMizer**, an automated adjustable link calibration embedded system enables the user to align the RF links IMD/CNR to specific linearity performances without a two-tone test. Select the desired IMD for the optical transmitter, either locally or remotely, **IMizer** automatically adjusts the laser drive to meet the IMD requirements. The **IMizer** requires the use of a correction factor table above 2.5 GHz.

Each low profile individual transmitter or receiver can be "hot swapped" in the sub-rack chassis maintaining the best subsystem uptime capability. Each module contains an individual processor to maximize specification performance at all times under demanding user applications.

The **PL7440T** transmitter and **PL7440R4** receiver are designed for chassis mounting. The associated Platinum chassis, model PL7010, has 12 active slots, one main control processor (MCP) slot and two redundant power supplies. No fans are required even under full sub-rack loading and full LNB powering.

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Specifications

Wideband PL7440T [PL7440T1550] / PL7440R4 RF Link

Wide Power Range, 4 dB Optical Budget [8Km–1310nm and 15Km–1550nm]

RF Specifications	Units	Typical	Minimum	Maximum
Frequency Range–Bandwidth	MHz	10–3000		3000
Amplitude Response @ Unity Gain				
10–3000 MHz	dB	±2		±2.25
any 36 MHz		±0.2		±0.3
Gain Stability	dB/24hr	± 0.2		± 0.25
Gain Slope ¹	dB	0	-1.5	+1.5
Gain Variation over temperature	dB	± 1.5	-2	2
SFDR ²	dB/Hz ^{2/3}	100		
SFDR ³	dB/Hz ^{2/3}	95		
DR (Dynamic Range–single channel) ⁴	dB			50
CNR [any 36 MHz] ²	dB	58	55	60
Noise Figure (NF) ²	dB	40	37	43
Noise Figure (NF) ³	dB	12	10	13
Output IP3 (OIP3) ⁵	dBm	20		
Group Delay Variation–linear	ns			
10–60 MHz		13		-15
60–3000 MHz		1.5		-11
Input/Output Impedance	Ohm	50 or 75		
1 dB Compression Point ⁵	dBm	2		3
Phase Noise ⁶	dBm	None		
Third Order Inter-Modulation [IMD] ⁴	dBc		-55	-40
Input Signal Range–Total Power ⁷	dBm		-50	0
Maximum Input without Damage	dBm			+15
RF Output Signal Range–Total Power ⁸	dBm		-40	0
⁹			-40	0
TX/RX Input/Output Return Loss	dB			
50 Ohm		-15		-15
75 Ohm ¹³		-13		-11
Test Port [front panel sample port] ¹⁰	dB	-20	-22	-18
RF Connector Type				
Input/Output			F, SMA, N	
Test Port			F, BNC	
Optical Specifications	Units	Typical	Minimum	Maximum
Optical Wavelength	nm	1310nm 1550nm CWDM		
Optical Power Output	mW/dBm	2 / 3	1.7/2.5	
Optical Budget/Distance (4dB optical budget)	dBm/Km	1310nm 1550nm 8 15		
RX Optical Input Power	dBm	-1	-2	4
Optical Connector Types	Type	FC/APC or SC/APC (E2000 option)		
Optical Return Loss	dB		-60	-55
Electrical Specifications				
Supply Voltage	Vdc	12		
Supply Current [TX] ¹¹	Amps	0.5		
Supply Current [RX]	Amps	.45		
EMI Rating		FCC Class B CE Mark		
Physical Specifications				
Operating Temperature Range	°C		-10	+55
Storage Temperature Range	°C		-45	+85

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Relative Humidity	95% non-condensing	
Altitude	ft / Km	10,000 [3.08] operating ¹² 14,000 [12.2] non-operating
Dimensions [D×W×H]	ins/cm	12×0.8×4 / 30.5×2×10.2
Weight	lbs./Kg	0.5 / 0.23
MTBF	Hours	TX: 309, 481 RX: 359,057
MTTR	Hours	0.083
Shock & Vibration	Designed for normal transportation environment per section 514.4 MIL-STD-810E. Designed to withstand 20G at 11 ms [½ sine pulse] in non-operating configuration.	

1. Within flatness spec
2. -0 dBm RF input, link gain = 0 dB, IMD=-40 dBc @ 3 dB opt. budget [0 dBm optical input & max. RF input]
3. -50 dBm RF input, link gain =20 dB, IMD=-50 dBc @ 3 dB opt. budget [0 dBm optical input & min. RF input]
4. User adjustable
5. -0 dBm RF in @ IMD=-40 dBc
6. Direct modulation utilized
7. Alarm trip point: RED -2 dBm, AMBER -53 dBm
8. @ 0 dB optical loss
9. -@ 4 dB optical loss
10. -45 dBm minimum input
11. Under 10⁹ add 120 mA [laser heating]
12. With standard adiabatic derating at 2°C/1000ft. [0.3 Km.]
13. -13 dB @10 to 3000MHz, -11dB @ 2500 to 3000MHz

All specifications are subject to change without notice.