

PL7330T / PL7330R16 RF Link High Power Input, 16dB Optical Budget 45Km - 1310nm or 70Km - 1550nm

Features & Benefits:

- ❖ IF Band: 10–200MHz
- ❖ More than 45Km distance [70Km with a PL7330T1550]
- ❖ 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 versions are available for longer fiber runs and single Fiber CWDM multiplexing solutions



Product Description

Foxcom's Platinum IF 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 16dB optical budget with the **PL7330R16** and 10/4dB optical budget with the **PL7330R10** and **PL7330R4** receiver.

Utilizing 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 subrack 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.

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

The **PL7330T** transmitters and **PL7330R4/R10/R16** receivers are designed for subrack 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 subrack loading and full LNB powering.

Specifications

IF Band PL7330T [PL7330T1550] / PL7330R16 Link
High Power Input, 16dB Optical Budget [45Km - 1310nm or 75Km - 1550nm]

RF Specifications	Units	Typical	Minumum	Maximum
Frequency Range - Bandwidth	MHz	10-200		-
Amplitude Response @any Unity Gain 10 – 200 MHz any 36 MHz	dB	±0.25 ±0.2	.	±0.25 ±0.2
Gain Stability	dB/24hr	± 0.2		± 0.25
Gain Variation over temperature	dB		-2	2
SFDR1	dB/Hz	103		
SFDR2	dB/Hz	99		
DR (Dynamic Range - single channel) ³	dB			30
CNR [any 1 MHz] ²	dB	50	48	53
Noise Figure (NF) ¹	dB	44	42	45
Noise Figure (NF) ²	dB	20	17	22
Output IP3 (OIP3) ⁴	dBm	-	+15	+20
Group Delay Variation-linear @ 10 to 30 MHz 30 to 200 MHz	ns	<3.0 <1.0		
Input/Output Impedance	Ohm	50 or 75		
1 dB Compression Point	dBm	2		3
Phase Noise ⁵	None			
Third Order InterModulation [IMD] ⁶	dBc		-55	-40
Input Signal Range - Total Power	dBm		-30	-5
Maximum Input without Damage				+15
Output Signal Range - Total Power ⁷	dBm		-30	-5
TX/RX Input/Output Return Loss 50 Ohm 75 Ohm	dB	-18 -17		-18 -17
Test Port [front panel sample port] ⁸	dB	-20	-22	-18
RF Connector Input/Output Test Port	Type		F, SMA, BNC, N F, BNC	
Optical Specifications	Units	Typical	Minimum	Maximum
Optical Wavelength	nm	1310/1550/CWDM		
Optical Power Output	mW/dBm	2 / 3	1.7/2.5	

IF Band PL7330T [PL7330T1550] / PL7330R16 Link
High Power Input, 16dB Optical Budget [45Km - 1310nm or 75Km - 1550nm]

Optical Budget / Distance 10 dB optical budget	dBm/km	1310 nm 1550 nm 25 40		
RX Optical Input Power	dBm	-13	-14	-7
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]9	Amps	0.35		
Supply Current (RX)	Amps	0.45		
EMI Rating		EMI Rating: FCC Class B CE Mark		
Physical Specifications				
Operating Temperature Range	°C		-10	+55
Storage Temperature Range	°C	-45 to +85	-45	+85
Relative Humidity		95% non-condensing		
Altitude	ft / Km	10,000 [3.08] operating 14,000 [12.2] non-operating		
Dimensions [DxWxH]	ins/cm	12x0.8x4 / 30.5x2x10.2		
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 MIL-STD-810E. Designed to withstand 20G at 11 ms [½ sine pulse] in non-operating configuration.		

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1. -5dBm RF input, link gain = 0dB, IMD=-40dBc @ -7dBm optical input - max. RF input
 2. -30dBm RF input, link gain = 25dB, IMD=-40dBc @ -7dBm optical input - min.. RF input
 3. User adjustable
 4. -5dBm RF in @ IMD=-40dBc
 5. Direct modulation utilized
 6. Adjustable. Above -10dBm input min. -50dBc
 7. Alarm trip point: RED -2dBm, AMBER -33dBm
 8. -45dBm minimum input
 9. Under 10° add 120 mA for TX [laser heating]
 10. With standard adiabatic derating at 2°C/1000ft. [0.3 Km.]

All specifications are subject to change without notice.

Ordering Information

Example: PL7230T-50SMA-SC

L-Band, high RF input transmitter, 1310 nm laser, 50-Ohm SMA RF connector and SC/APC optical connector

PL7

2	3	0	T	Null	50SMA	SC
A	B	C	D	E	F	G

A Platinum Product

- 00 - MCP
- 01 - Chassis & PS
- 0 - 5 MHz Tx/Rx
- 1 - 10 MHz Tx/Rx
- 2 - L-Band Tx/Rx
- 3 - IF Tx/Rx
- 4 - Wideband Tx/Rx
- 5 - Data XVCR
- 6 - Accessories
- 7 - Non-chassis mount products

B Tx RF Input/Rx RF output

- 2 - Low power input
- 3 - High power input

C Product Series

- Null - None [default]
- 1 - 1st series
- 2 - 2nd series
- etc.

D Module Type

- T = Tx
- R = Rx
- S = Serial data
- E = Ethernet
- G = GigE

E Laser for Tx & Optical Budget for Rx

- Tx: Null = 1310nm laser
- 1500 = 1550nm laser
- XXXX = ITU grid
- Rx: 4=4dB 18=18dB
- 10=10dB 25=25dB

RF Connector

- 75F = 75-Ohm F
- 75BNC¹ = 75-Ohm BNC
- 50BNC¹ = 50-Ohm BNC
- 50SMA = 50-Ohm SMA
- 50N = 50-Ohm N

G Optical Connector

- Null = FC/APC [default]
- SC = SC/APC
- E2 = E2000

1. Not available on L-Band and Wideband products

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