70/140 MHz IF Fiber Optic Link

Features & Benefits

❖ IF-Band: 10–200 MHz
❖ Up to 10Km distance
❖ Powerful management capabilities via a front panel LCD and rack mounted SNMP
❖ 1550nm and CWDM ITU Grid laser options for longer fiber runs and single fiber CWDM multiplexing solutions
❖ User monitoring and control of IMD levels

Product Description

Foxcom's Platinum 70/140 MHz IF products are designed to meet the increasing demand for modularity and high-performance in a small form factor for superior long-distance transmission. The link performs at full capability within a 4dB optical budget.

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 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.

Each low profile individual transmitter or receiver can be "hot swapped" in the sub-rack 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 **Platinum** transmitter and receiver are designed for sub-rack chassis mounting. The associated Platinum chassis 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.

PL7330 Specifications

RF Specifications	Value
Frequency Range - Bandwidth	10–200 MHz
Amplitude Response @ Unity Gain 10–200 MHz any 36 MHz	±0.35 ±0.20dB
Gain variation over temperature	±1.5dB
Gain stability dB/25hr	±0.2dB
SFDR[1]	>105 dB/Hz$^{2/3}$
Noise Figure (NF)[1]	13dB
Output IP3 (OIP3)[3]	20dBm
CNR [any 1MHz] [1]	>75dB
Group Delay Variation	<1.5ns
Third Order Inter-Modulation [IMD][2]	-55 to -40dBc
RF Input Power Range – Total Power[4]	0 to -30dBm
RF Output Signal Range – Total Power[5]	-30 to 0dBm
TX/RX Input / Output Return Loss 50 Ohm 75 Ohm	-15dB -13dB
RF connector options	N/SMA/F/BNC50/BNC75
Optical Specifications	**Value**
Optical Wavelength	1310nm
Optical Power Output	2mW / 3dBm
Optical Budget / Distance[6]	4dB/10Km
Min RX Optical Input Power	-1dBm
Optical Connector Types	FC-APC or SC-APC (E2000 option)

1. -25dBm RF input, link gain=20dB, IMD=-40dBc@3dB optical budget
2. User adjustable
3. -5dBm RF out @ IMD=50dBc
4. Alarm trip point: RED -2dBm, AMBER -30dBm
5. Within optical budget
6. longer when 1550nm laser is installed

Advanced Technology

Chassis

Figure 1: Rear view of 12 Slot Chassis with one MCP slot and dual Power Supply slots

Transmitter and Receiver with LCD and LED Indicators

Figure 2: Transmitter with LCD and LED Indicators
(Only Transmitter is shown here; Receivers are available and provide corresponding information)

LED Name	Color	Description
Power	Green	Power On
	No Light	Power Off
Status/Alarms	Green	No Alarms
	Amber	Minor Alarms
	Red	Critical Alarm
RF Input	Green	Input within specification
	Amber	Input below specifications
	Red	No input or above specifications
Remote	Yellow	Main processor control in effect
	No Light	No Main Processor Control

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SNMP Graphic User Interface (GUI) for Monitoring & Control

Figure 3: SNMP GUI

The SNMP GUI enables the user to perform detailed monitoring & control of the system, including detection, such as:

- General data about the system, including version control
- Card status
- Optical power input and output monitoring
- RF power input and output monitoring
- AGC/MGC selection
- IMD selection (TX only)
- Power supply monitoring, such as DC Voltage, AC/DC Failures, Temperature, Fan speed
- Alarm history and alarm severity
- System statistics

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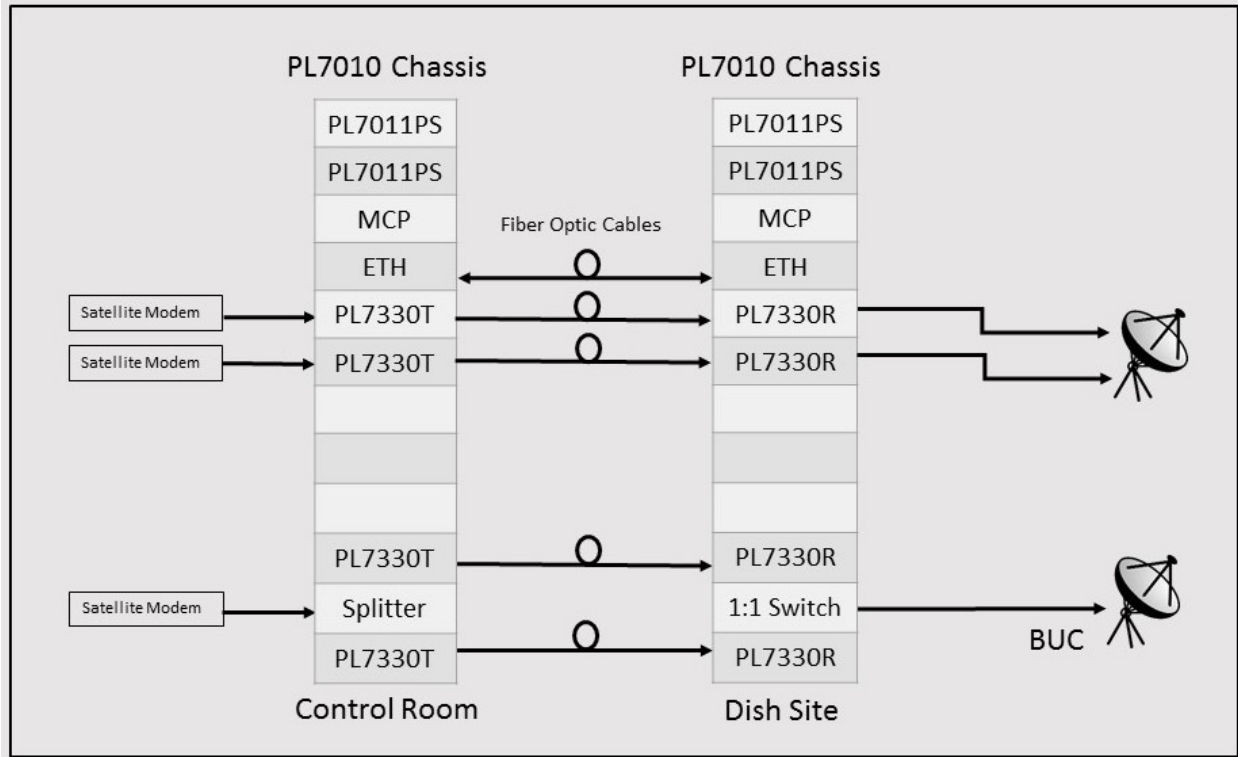# Typical IF-Uplink

Figure 4: Typical IF-Uplink System

Figure 4 represents two typical IF-band uplinks within a teleport. The system is comprised of two sets of 19" 3RU indoor chassis (PL7010) with dual power supplies and an MCP Card.
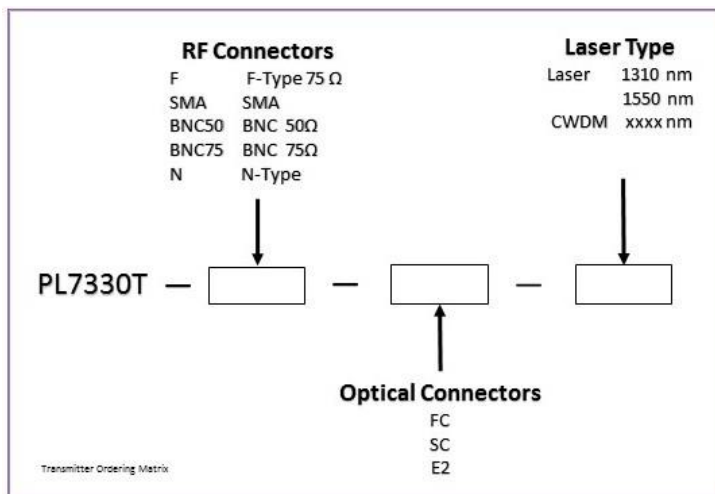
The uplink consists of a pair of PL7330T transmitters at the control room site receiving two IF signals from the modems and a pair of PL7330R receivers at the antenna site.

The other uplink represents one redundant link. A single IF-band signal is split at the output of the modem feeding into a pair of PL7330T optical transmitters at the indoor site. A pair of PL7330R receivers at the antenna site converts the optical signals back into RF and feed into a 1:1 RF switch.

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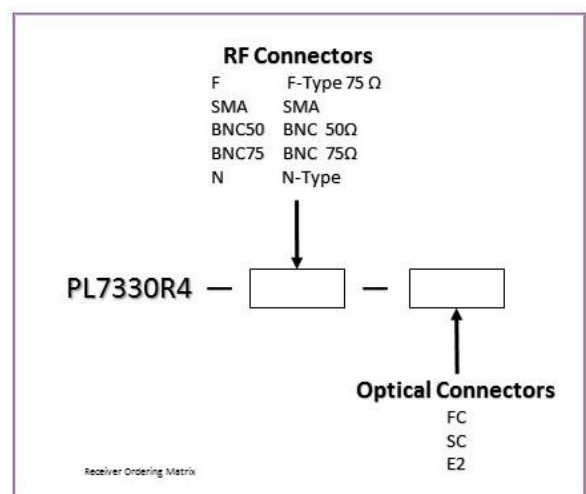
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Ordering Matrix

Request a Quote

Transmitter Ordering Matrix

Receiver Ordering Matrix

Example Part Number: PL7330T – BNC 75 – FC –1310

Recommended Accessories

Active Accessories

- ❖ 28dB Gain RF Amp
- ❖ 55dB Gain RF Amp
- ❖ Redundancy RF Switch
- ❖ Optical Ethernet Link

Passive Accessories

- ❖ Wideband RF Splitter
- ❖ IF RF Splitter
- ❖ 10MHz/L-Band Diplexer
- ❖ 2way Optical Splitter
- ❖ 1310/1550nm MUX/DeMUX

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