

PXG2-NITRO Series

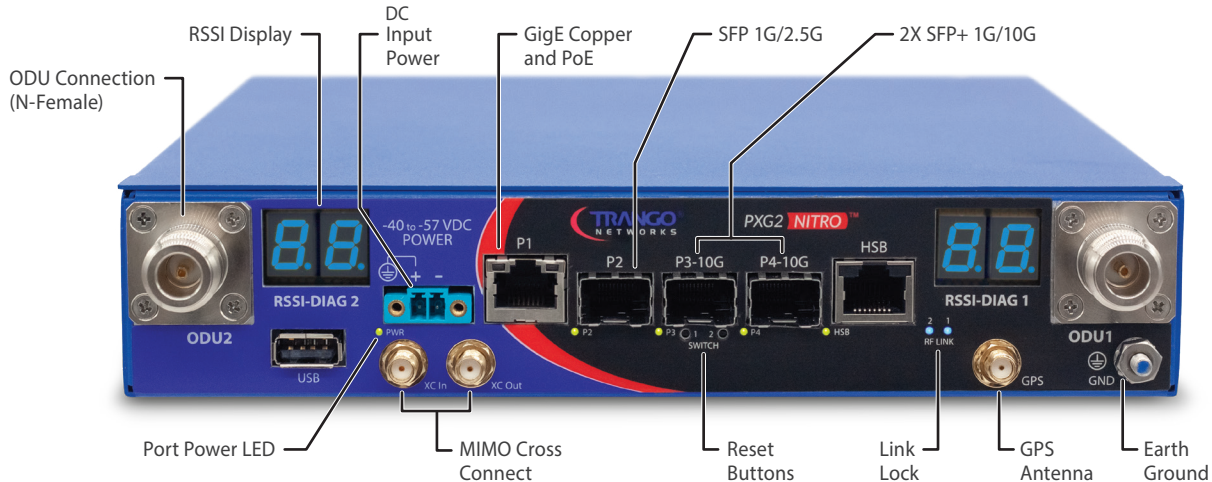
Dual Core Multi-Gigabit FDD Split Architecture
Point to Point Microwave Ethernet Transmission System



- Capacity of 1.6 Gbps up to 4096 QAM
- 6-42 GHz worldwide licensed band support
- Customized speed profiles
- Band Aggregation via a single IDU
- Dual & single channel space diversity
- Onboard GPS and sensors

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Overview

The PXG2-NITRO is a full duplex split architecture point-to-point licensed microwave Ethernet transmission system. A single Indoor unit (IDU) with 2 outdoor units (ODUs) can carry up to 1.6 Gbps (3.2 Gbps aggregate) capacity using two 80 MHz wide channels and layer 1 RF channel bonding. The system supports 1+0, 2+0, XPIC, 4x4 MIMO and MRC space diversity configurations.

The system uses the latest in modem technology with future proof support for up to 16384 QAM, closed loop MIMO, and packet retransmission capability which can be achieved with software update.

Key Features

- **Industry Leading Capacity**
 - **2.5 Gbps FDD** in 112 MHz (ETSI channel).
Up to 5 Gbps using 4x4 MIMO.
 - **1.6 Gbps FDD** in 80 MHz (FCC) channel.
Up to 3.2 Gbps using 4x4 MIMO.
- **6-42 GHz Worldwide Licensed Band Support** using Trango HP2/HP4 ODUs and new high power HP5 models
- **Band Aggregation** via a single IDU aggregates 2 separate frequency band ODUs like 11 and 18 GHz together at layer 1.
- **Customized Speed Profiles** supported with customer specified coding, FEC, retransmission, filtering, remotely uploadable.
- **Dual Channel Space Diversity** using a single IDU aggregates 2 space diversity channels up to 60 MHz channel width, providing full Gigabit operation.
- **Single Channel Space Diversity** using HP2 ODUs up to 112 MHz with MRC for increased system gain.
- **Carrier Ethernet Switch** with 1, 2.5, and 2x 10 Gigabit ports to support LACP/LAG
- **SyncE and 1588** Support
- **Onboard GPS** for optional clock reference and mapping.
- **Management** via Web, SSH, Serial, and SNMP
- **Onboard Sensors** for current, voltage, humidity, vibration, temperature, position.

Specifications

Wireless	
Frequency Range	6-42 GHz, All major TR Spacings supported
Channel Sizes Supported (MHz)	3.5, 5, 7, 8, 10, 12.5, 14, 20, 25, 27.5/28, 30, 40, 50, 55/56, 60, 80, 100, 112
Modulation Levels	QPSK to 4096 QAM Hitless ACM (future 8192, 16384 QAM)
Transmit RF power output	Up to 33.5 dBm
System Configurations	1+0, 2+0, 2+0 XPIC, 4x4 MIMO, Space Diversity with MRC
Physical	
Construction/Mounting	PXG2-NITRO-IDU: All Aluminum construction with integrated Fan. 2 Units mount is 1U high 19 inch rack HP2 ODU: Cast Aluminum Alloy Direct antenna mount HP4 ODU: Cast Aluminum Alloy Direct antenna mount HP5 ODU: Cast Aluminum Pole mount with Waveguide ports
Size	PXG2-NITRO-IDU: 8.5 x 10.5 x 1.75 inches without rack ears HP2 ODU: 10.9 x 9.4 x 3.6 in, HP4 ODU: 8.95 x 8.95 x 3.25 in typ, HP5 ODU: 10.9 x 9.75 x 4 in
Weight	PXG2-NITRO IDU: < 2.45 lbs (1.1 kg) HP2 ODU: <9.5 lbs (4.32 kg), HP4 ODU: 4.5 lbs (2.1 kg) HP5 ODU: <10 lbs (4.5 kg)
Environmental	
Operating Temperature Range	PXG2-NITRO-IDU: -15 deg C to +55 deg C, ODU: -40 deg C to +65 deg C
Humidity	PXG2-NITRO-IDU: 90% RH non-condensing, ODU: 100% RH
Standards Compliance	
Safety	IEC/EN 60950-1
EMC	EN 301 489-1 V1.8 (2008-04) EN 301 489-4 V1.4.1 (2009-02)
FCC RF Compliance	CFR47 Part 101 – Licensed Microwave
FCC Conducted Emissions	FCC 15.107 (a) Class "B"
FCC Radiated Emissions	FCC 15.109 (a) Class "A"
EU	EN 302 217-2
Power	
Input Voltage	Direct -40 to -57 VDC (positive ground) and via PoE
Power Consumption	PXG2-NITRO-IDU: <35 W HP2-x ODU: 25 W Typ, 35W Max HP4-x ODU: 28W Max HP5-x ODU: (Space Diversity): 65W Typical
User Interfaces	
Ethernet Traffic/Management Ports	P1: RJ45 - 10/100/1000BaseT with PoE P2: SFP – 2500/1000Base-X SFP modules supported P3, P4: SFP+ – 10G/1000/100Base-X SFP+ modules supported:
1+1 HSB	RJ45 – Special Cat5 cable required between units
Cross Connect Xin and Xout	SMA-Female
USB	OBM Ethernet or WIFI connectivity for management
Antenna	Compatible with ADxx-XX-S2, -R2, -T2 antennas
Antenna Alignment	BNC-F on ODU, 2 Digit LED Display in dBm on IDU for each ODU
Management	
Local	Command Line Interface via USB or Serial port
Remote	Web, SSH, Telnet, SNMPv2/3, software upgrade via web or FTP. In Band (IBM) or Out of Band (OBM) supported on all Eth Ports
Event monitoring	Local non-volatile storage, Trap on threshold, with time stamps
Integrated sensors	
Humidity	Measure humidity inside the IDU
Temperature	Measure internal temperature on the IDU and ODU
Vibration	Measure movement/vibration on the IDU
GPS	Record position and 1PPS clock source
Voltage	Measures all input and internal voltages and current consumption

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