aperto networks
a Division of Tranzeo Wireless Technologies, Inc.
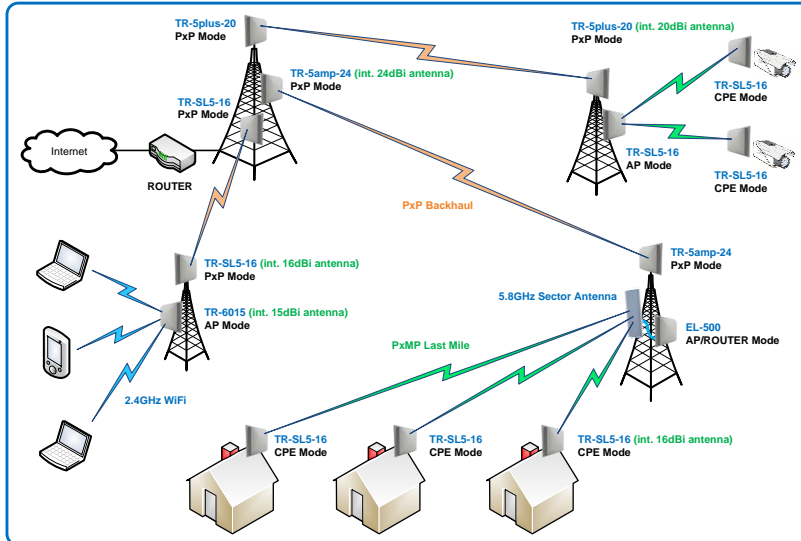
Advanced All-in-One AP/PxP/CPE

Tranzeo's **TR-SL5-XX-48** series of Tri-Mode outdoor units support -48VDC POE operation. The versatile and low-cost units can be configured as Access Point (AP), Point-to-Point (PxP), or Customer Premise Equipment (CPE), making them suitable for a broad range of applications.

The **TR-SL5** series of products feature high performance radios and advanced networking and management capabilities including NAT Routing, StreamEngine™ QoS, WEP/WPA/WPA2 Security, and Bandwidth Throttling. The all-in-one design features an integrated 16dBi directional panel antenna, and comes complete with POE injector suitable for -48VDC operation, yielding the lowest total cost of ownership (TCO). Also available is a connectorized unit for supporting an external antenna for more demanding applications

The ruggedized weatherproof design meets IP67 and NEMA Type 4X environmental standards, and is ideal for conditions ranging from -65 ^{o}C to +60 ^{o}C. The **TR-SL5** series is also backed by an industry-leading **3 Year Parts & Labour Warranty** with **Lifetime Technical Support** for worry-free network operation.

Applications

- Remote Data Acquisition
- Internet Service
- Video Transmission
- Security and Surveillance
- Private Networks
- Point-to-Point Backhaul

Key Features

- IEEE 802.11a Compliant
- AP/PxP/CPE Modes
- Up to +13dBm Transmit Power with Adjustable Output
- -48VDC PoE Operation
- Selectable 5/10/20MHz Channels
- Bandwidth Throttling
- Built-in StreamEngine™ QoS
- WEP/WPA/WPA2 Security
- TCP/IP, UDP, TFTP, SNMP v2c
- NAT, PPPoE, VPN Pass-through
- Web-based Management Tools
- Remote Firmware Upgrade
- Integrated 16dBi Panel Antenna
- Daylight Visible Alignment LED's for Quick Deployment
- Weatherproof Enclosure

About Tranzeo Wireless Technologies ™

Tranzeo Wireless Technologies Inc. (TSX:TZT) leads the wireless broadband industry for value, by producing high-performance wireless network equipment with a low cost of ownership and unparalleled service allowing communities and businesses to communicate without boundaries. Since the company's inception in 2000, Tranzeo's optimum cost effectiveness, premium quality and responsive support have attracted a growing number of devoted dealers and distributors worldwide.

Aperto Networks operates as a wholly owned subsidiary of Tranzeo. Aperto is a leading supplier of wireless broadband, mobile WiMAX and Enterprise VPN solutions using highly versatile and cost-effective carrier-grade WiMAX Forum Certified infrastructure equipment.

Tranzeo Wireless Technologies Inc.

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Radio Interface	
Standards	IEEE 802.11a
Frequency Range	5170 – 5875 MHz
Channel Bandwidths	5MHz, 10MHz, 20MHz (Selectable)
Radio Mode	Access Point (AP), Point-to-Point (PxP), Customer Premise Equipment (CPE)
Transmit Power	+13 dBm (max) with Adjustable Output
Receiver Sensitivity	-73dBm @ 54 Mbps, -85dBm @ 6 Mbps
Data Rate & Modulation	48/54 Mbps QAM-64, 24/36 Mbps QAM-16, 12/18 Mbps QPSK, 6/9 Mbps BPSK
Receive Signal Strength	Daylight Visible Alignment LED's and Noise/Receive Levels (dBm)
Internal Antenna Polarization	Horizontal or Vertical

Antenna Options and Model Information					
Model No.	**Antenna/Connector Type**	**Wind Load (N)**		**Beamwidth**	
		100 mph	**125 mph**	**Horizontal**	**Vertical**
TR-SL5-N-48	N-Type Female Connector	72	112	N/A	N/A
TR-SL5-16-48	16 dBi Panel (internal)	72	112	17°	17°

Networking and Management	
Device Management	Cross-Platform Utility, Web-Based Management, Remote Configuration and Firmware Upgrades (via IP), TFTP, SNMP v2c (MIB-II, 802.11 MIB, Tranzeo MIB), Import/Export/Save Settings Profiles
Protocols	TCP/IP, UDP, NAT, DHCP Client/Server, PPPoE, WDS, VPN Pass-Through, Multiple MAC Bridging
Quality of Service (QoS)	StreamEngine™ QoS
Bandwidth Management	Bandwidth Throttling (Bridge and Router Modes)
Security	40/64-bit and 128-bit WEP Encryption, WPA/WPA2 (TKIP/AES), MAC address filtering, Management VLAN
Ethernet	1 x 10/100Base-T (Water-Tight RJ-45)
Max DHCP Clients	10

Power Supply			
Power Consumption [1]	4.3 Watts (Idle)		
	5.4 Watts (Full Tx Mode and Max Power)		
Power Supply	Power over Ethernet (PoE)		
Operating Voltage [2]	**Min**	**Nominal**	**Max**
	-35VDC	-48VDC	-60VDC

Mechanical and Environmental	
Radio Dimensions	10.38" x 8.63" x 3.00" (264mm x 219mm x 76mm)
Radio Weight	1.75 lbs (0.8 Kg)
Installation Hardware (included)	48V PoE Injector with Built-in Surge Protection, Ethernet Boot with Weatherproof Gasket, L-Bracket with KEP Nuts and U-Bolt for Pole Mount
Environmental Rating	IP67 and NEMA Type 4X
Operating Temperature	-65°C to +60°C
Storage Temperature	-40°C to +85°C

Compliance and Warranty	
Export Control	HTC 8517.69.0000, ECCN 5A002 ENC, ECL 1-5.A.2.A.1
Compliance & Approvals	RoHS, FCC Part 15 Class B, Industry Canada, CE!, EMC: EN 301 489, Safety: EN 60950, Radio: EN 302 213
DFS Modes	Ofcom (UK), ETSI, FCC, Industry Canada
Warranty	3 Year Parts and Labour

[1] At -48VDC and with 300-ft Cat5 cable. [2] Power source must be fuse protected. Specifications are subject to change without notice. Tranzeo and the Tranzeo logo are registered trademarks of Tranzeo Wireless Technologies Inc. All other trademarks mentioned herein are the property of their respective owners.