

### Advanced AP Routing

Tranzeo's **TR-FDD** 5.8GHz high performance Point-to-Point (PxP) Bridge utilizes two radios, allowing data to flow in both directions at the same time when paired up with another TR-FDD unit. The design of these products allow the use of interchangeable filters to meet changing demands. The enhanced radio filtering matches the channel size, allowing the radios to only listen to the desired channels, providing at least 65dB of adjacent channel rejection for enhanced performance in locations with multiple radios.

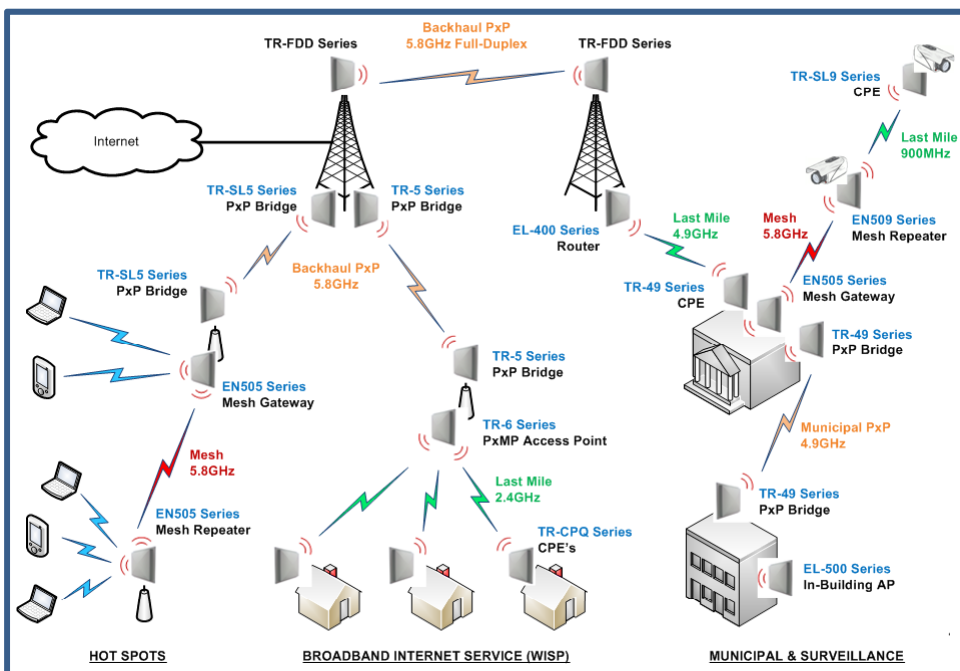
The **TR-FDD** series of products are also backed up by an industry-leading **5-Year Parts and 3-Year Part & Labour Warranty** and **Lifetime Technical Support** for worry-free network operation.

Tranzeo's leading edge engineering facilities combined with our state-of-the-art in-house manufacturing ensures highest quality products at very competitive prices. The **TR-FDD** family of products are RUS accepted with "Buy American" status.



### Applications

- ISP Backhaul
- VoIP Backhaul
- Video Transmission
- Leased Line Replacement
- Private Networks



### Key Features

- IEEE 802.11a Based
- Up to +13dBm Transmit Power with Adjustable Output
- 5, 10, or 20MHz Channel BW
- Dual-Radio Full-Duplex Operation
- Interchangeable Channel Shields
- Built-in StreamEngine™ QoS
- WEP/WPA/WPA2 Security
- NAT, PPPoE, VPN Pass-through
- Power-over-Ethernet (PoE)
- Daylight Visible Alignment LED's
- Easy to Install All-In-One Unit
- IP67 & NEMA Type 4X Enclosure
- Web-based Management Tools
- Remote Firmware Upgrade

### About Tranzeo Wireless™

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.

### Tranzeo Wireless Technologies Inc.

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## Technical Specifications

Radio Interface						
<b>Standards</b>	IEEE 802.11a Based <sup>(1)</sup>					
<b>Frequency Range</b>	5745 – 5805 MHz with Field Replaceable Channel Shields					
<b>Channel Bandwidths</b>	5MHz, 10MHz, 20MHz					
<b>Radio Mode</b>	Dual-Radio Full-Duplex Point-to-Point (PxP) Bridge					
<b>Transmit Power (Radio 1)</b>	+13 dBm (max) with Adjustable Output					
<b>Receiver Sensitivity (Radio 2)</b>	Adaptive					
<b>Data Rate &amp; Modulation</b>	48/54 Mbps QAM-64, 24/36 Mbps QAM-16, 12/18 Mbps QPSK, 6/9 Mbps BPSK					
<b>Receive Signal Strength</b>	Noise and Receive Signal Levels (dBm) and Daylight Visible Alignment LED's					
<b>Antenna Polarization</b>	Horizontal or Vertical					
Antenna Options and Model Information						
Model No. <sup>(2)</sup>	Type	Wind Load (N)		Beamwidth		
		100 mph	125 mph	Horizontal	Vertical	
TR- FDD-24f/W	24 dBi Panel (internal)	170	270	8.7°	7.7°	
TR- FDD-26f/W	26 dBi Grid (external)	140	230	6°	6°	
TR- FDD-29f/W	29 dBi Dish & Radome (external)	340	540	6°	6°	
TR- FDD-32f/W	32 dBi Dish & Radome (external)	780	1220	4°	4°	
Networking and Management						
<b>Device Management</b>	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					
<b>Protocols</b>	TCP/IP, UDP, NAT, DHCP Client/Server, PPPoE, VPN Pass-Through, Transparent Multiple MAC Bridging					
<b>Quality of Service (QoS)</b>	StreamEngine™ QoS					
<b>Bandwidth Management</b>	Bandwidth Throttling (Bridge and Router Modes)					
<b>Security</b>	40/64-bit and 128-bit WEP Encryption, WPA/WPA2 (TKIP/AES/Enterprise), MAC address filtering					
<b>Ethernet</b>	1 x 10/100Base-T (Water-Tight RJ-45)					
<b>Max DHCP Clients</b>	255					
Channel Shield Options <sup>(3)</sup> (Not Included)						
Model No.	Pass Band 1	Pass Band 2	Insertion Loss (min)	Flatness (max)	Return Loss (min)	Isolation (min)
TR-CS1	5735-5755MHz	5815-5835MHz	2.0 dB	1.0dB	15dB	65dB
TR-CS2	5735-5755MHz	5775-5795MHz	2.0 dB	1.0dB	15dB	45dB
TR-CS3	5755-5775MHz	5795-5815MHz	2.0 dB	1.0dB	15dB	45dB
Power Supply						
<b>Power Consumption</b>	11 Watts (max)					
<b>Power Supply</b>	Power over Ethernet (PoE) - PoE Injector with Surge-Protection included					
<b>DC Adapter</b>	18VDC/1.1A (INPUT: 120-240VAC~ 50-60Hz, 0.6A) f-Model: Fixed UL Plug (US only) W-Model: Snap-In Plugs for US, UK, and EU included					
Mechanical and Environmental						
<b>Dimensions (radio only)</b>	16.18" x 14.43" x 3.50" (41.1cm x 36.7cm x 8.9cm)					
<b>Dimensions (radio package)</b>	28" x 17" x 4" (54cm x 33cm x 10cm)					
<b>Weight (radio package)</b>	9 lbs (4 Kg)					
<b>Installation Hardware</b>	Mounting Bracket (1), Kept Nut/Washer (8), U-Bolt with 2 Nuts (1), Ethernet Boot (1), and N-Connector Accessory Kit <sup>(4)</sup>					
<b>Environmental Rating</b>	IP67 and NEMA Type 4X					
<b>Operating Temperature</b>	-65°C to +60°C					
<b>Storage Temperature</b>	-40°C to +85°C					
Compliance and Warranty						
<b>Export Control</b>	HTC 8517.69.0000, ECCN 5A002 ENC, ECL 1-5.A.2.A.1					
<b>Compliance &amp; Approvals</b>	RoHS, FCC Part 15 Class B, Industry Canada, CEI, EMC: EN 301 489, Safety: EN 60950, Radio: EN 302 213					
<b>Warranty</b>	5-Year Parts / 3-Year Parts and Labour <sup>(5)</sup>					

<sup>(1)</sup> Not compatible with other IEEE 802.11a compliant devices, and must be paired with another TR-FDD or TR-FDD-GT product <sup>(2)</sup> f: FCC Model (for use in the USA only), W: World Model (subject to local regulatory requirements) <sup>(3)</sup> The appropriate channel shield must be purchased separately <sup>(4)</sup> Included for models with external antenna kit only <sup>(5)</sup> 1-Year Parts and Labour warranty for products built before December 1, 2006, and 3-Year Parts and Labour warranty for products built after December 1, 2006 and before December 31, 2007. Specifications are subject to change without notice. StreamEngine is a trademark of Ubicom. Tranzeo and the Tranzeo logo are registered trademarks of Tranzeo Wireless Technologies Inc.