

All-in-One Outdoor Subscriber Unit

Tranzeo's **TR-WMX-3-XX** Series of carrier-class Outdoor Subscriber Units (SU) are fully compliant with the IEEE802.16-2004 standard (802.16d), and support operation in both the licensed 3.5GHz and lightly-licensed 3.65GHz bands. Tranzeo's full spectrum of indoor and outdoor subscriber units are also based on a WiMAX Forum Certified™ design ensuring seamless interoperability with all WiMAX certified Base Stations (BS).

Ideal for rapid deployment and low to medium density applications including rural and enterprise networks, Tranzeo products are designed for the lowest total cost of ownership (TCO) and superior performance, offering incredible ROI.

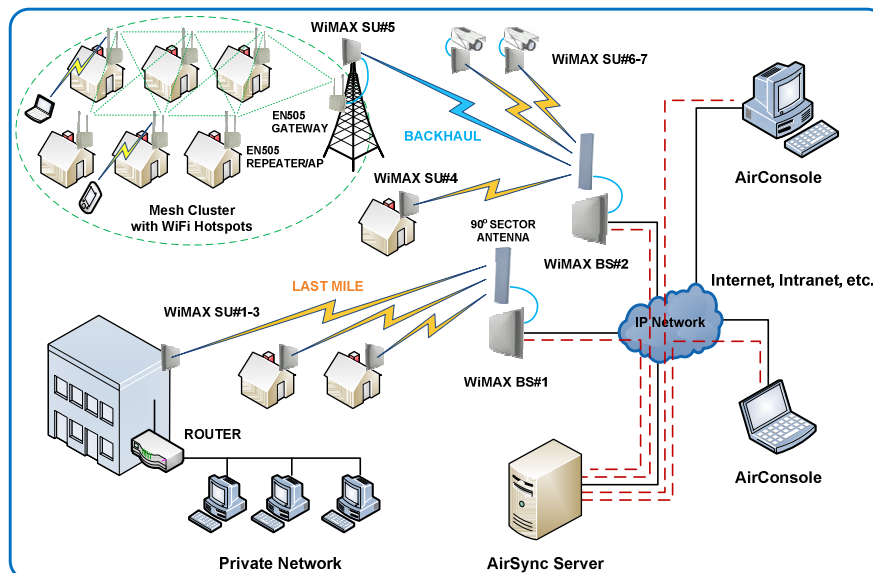
Designed and manufactured at Tranzeo's leading edge engineering facilities and state-of-the-art manufacturing in British Columbia, Canada resulting in the highest quality and lowest price. The **TR-WMX-3-XX** family of products are RUS accepted with "Buy American" status, making it qualified for stimulus funding.

The ruggedized weatherproof all-in-one design meets IP67 and NEMA Type 4X environmental standards, requiring minimum installation and maintenance costs in conditions ranging from -40 °C to +55 °C. The **TR-WMX-3-XX** series of products are also backed by Tranzeo's industry-leading **3-Year Parts & Labour Warranty** and unparalleled **Lifetime Technical Support** for worry-free network operation.



Applications

- Internet Service
- Community Broadband
- Data Acquisition
- Security and Surveillance
- VoIP and IPTV Service
- Backhaul



Key Features

- IEEE 802.16-2004 Compliant
- Based on the Wavesat Chipset
- Up to +20dBm Transmit Power
- Selectable 3.5MHz and 7MHz Channel Bandwidths
- Full QoS Traffic Classifier and Scheduling: UGS, rtPS, nrtPS, BE
- IEEE 802.1Q VLAN Tagging
- IEEE 802.1d Transparent Bridging
- DES-CBC and AES-CCM Encryption
- X.509 Authentication
- Support for AirSync™ Element Management System (EMS)
- Remote Firmware Upgrade
- Power-over-Ethernet (PoE)
- Easy to Install All-in-One Units with Integrated Antenna
- IP67 & NEMA Type 4X 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.

Tranzeo Wireless Technologies Inc.

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Radio Interface and Model Information			
Standards	IEEE 802.16-2004 (802.16d)		
Radio Operation	Subscriber Unit (Point-to-Multipoint, LOS, NLOS)		
Frequency Range	3300 – 3675 MHz		
Channel Bandwidths ⁽¹⁾	3.5 MHz, 7 MHz (Selectable)		
Frequency Resolution	250kHz Steps		
Duplex Method	TDD, OFDM 256-FFT		
Adaptive Modulation	64-QAM, 16-QAM, QPSK, BPSK		
Spectral Efficiency	5 bits/sec/Hz (64-QAM un-encoded)		
Receiver Sensitivity	Burst Type	3.5MHz	7MHz
	BPSK ½	-94	-91
	QPSK ½	-91	-90
	QPSK ¼	-90	-87
	16-QAM ½	-87	-84
	16-QAM ¼	-84	-81
	64-QAM ¼	-80	-77
Transmit Power	3300-3600MHz	+20 dBm (max)	
	3600-3675MHz	+17 dBm (max)	
RF Output Dynamic Range	30 dB		
Antenna Polarization	Horizontal or Vertical		

Antenna Options and Model Information					
Model No. ⁽²⁾	Antenna Options	Beamwidth		Wind Load (N)	
		Horizontal	Vertical	100 mph	125 mph
TR-WMX-3-N-f/W	N-Female Connector (external)	N/A	N/A	72	112
TR-WMX-3-17-f/W	17dBi Panel Antenna (internal)	24°	24°	72	112
TR-WMX-3-20-f/W	20dBi Panel Antenna (internal)	17°	17°	182	285

Networking and Management	
Management, Provisioning & Monitoring	Web-based Management, Centralized EMS, Remote Firmware Upgrades, SSH, SNMP (MIB-II, 802.11 MIB, Tranzeo MIB)
Network Protocols	TCP/IP, UDP, NAT, DHCP Client/Server, VPN Pass-Through
Bridging & VLAN Support	IEEE 802.1d Transparent Bridge, IEEE 802.1Q VLAN Tagging and Management VLAN
Authentication & Encryption Protocols	X.509, DES-CBC, AES-CCM
QoS Scheduling	UGS, rtPS, nrtPS, BE
QoS Traffic Classifier	ToS, Protocol, Address, Source Port, MAC address, User Priority, VLAN ID
Bandwidth Control	Asymmetric Bandwidth Control
Error Control	Concatenated Reed-Solomon Convolution Code
Ethernet	1 x 10/100Base-T with Auto-Sense (Water-Tight RJ-45)

Power Supply	
Power Consumption	TBC Watts (max)
Power Supply	Power over Ethernet (PoE)
DC Adapter	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		
	TR-WMX-3-N, TR-WMX-3-17	TR-WMX-3-20
Dimensions	10.38" x 8.63" x 3.00" (264mm x 219mm x 76mm)	16.18" x 14.43" x 3.50" (411mm x 367mm x 89mm)
Weight	1.79 lbs (0.81 Kg)	4.36 lbs (1.98 Kg)
LED Display	Radio, LAN, Status, Signal Strength, Power	
Installation Hardware (included)	PoE Injector with Built-in Surge Protection, DC Adapter, Ethernet Boot with Weatherproof Gasket, L-Bracket and U-Bolt with up to 20° Up/Down Tilt for Pole Mounting	
Weather Rating	IP67 and NEMA Type 4X	
Operating Temperature	-40°C to +55°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, Industry Canada (RSS192), CE! (EMC: EN 301 489, Safety: EN 60950, Radio: EN 302 217)
Warranty	3-Year Parts and Labour

⁽¹⁾ Not all channels are approved for use in all regions. ⁽²⁾ f: FCC Model (for use in the USA only), W: World Model (subject to local regulatory requirements). 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.