## All-in-One Indoor Subscriber Unit

Tranzeo's **TR-WMX-3-i-50** is a carrier-class Indoor Subscriber Unit (SU) that is fully compliant with the IEEE802.16-2004 standard (802.16d). Featuring high performance radio, and based on the industry-leading Wavesat chipset, the **TR-WMX-3-i-50** supports 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[TM] design ensuring seamless interoperability with all WiMAX certified Base Stations (BS).
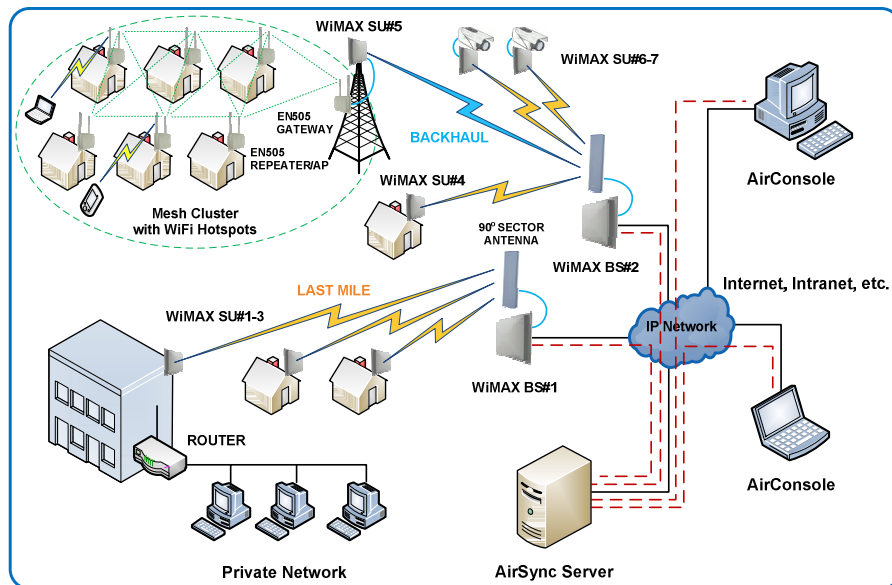
Ideal for rapid deployment and low to medium density applications including rural and enterprise networks, Tranzeo products are designed for the lowest total cost of ownership (TCO) and superior performance, offering incredible ROI.

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** family of products are RUS accepted with "Buy American" status, making them qualified for stimulus funding.

The **TR-WMX-3-i-50** is 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
- Security and Surveillance
- Community Broadband
- VoIP and IPTV Service
- Data Acquisition
- 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[TM] Element Management System (EMS)
- Remote Firmware Upgrade
- Power-over-Ethernet (PoE)
- Easy to Install All-in-One Units with Omni Directional Antenna

## About Tranzeo Wireless Technologies [TM]

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.

| Radio Interface and Model Information | | | |
|---|---|---|---|
| **Standards** | IEEE 802.16-2004 (802.16d) | | |
| **Radio Operation** | Indoor 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 ¾ | -90 | -87 |
| | 16-QAM ½ | -87 | -84 |
| | 16-QAM ¾ | -84 | -81 |
| | 64-QAM ⅔ | -80 | -77 |
| | 64-QAM ¾ | -78 | -75 |
| **Transmit Power** 3300-3600MHz | +20 dBm (max) | | |
| **Transmit Power** 3600-3675MHz | +17 dBm (max) | | |
| **RF Output Dynamic Range** | 30 dB | | |
| **Antenna Connector** | SMA connector | | |
| **Antenna (included)** | 5 dBi Omni Directional Antenna | | |
| **Model No.** [2] | TR-WMX-3-i-50-**f/W** | | |
| 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** [3] | 6 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 | | | |
| **Dimensions** | 4⅝" x 4⅛" x 1½"  (117mm x 105mm x 38.1mm) | | |
| **Weight** | 13.5 oz. (378 g) | | |
| **LED Display** | Radio, LAN, Status, Signal Strength, Power | | |
| **Installation Hardware (included)** | PoE Injector with Built-in Surge Protection, DC Adapter | | |
| **Operating Temperature** | -0°C to +40°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 90 (3.65GHz), 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). [3] With 300-ft Cat5 cable, full Tx mode, and max power.  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.