

# World Wide Wireless



## WiMax 802.16x Radio & Modem Specifications

<b>Frequency</b>	Base Station	Band a: UL: 3399.5-3453.5MHz; DL: 3499.5-3553.5MHz Band b: UL: 3450.0-3500.0MHz; DL: 3550.0-3600.0MHz
	CPE	UL: 3399.5-3500.0MHz DL: 3499.5-3600.0MHz
<b>Radio Access Method</b>	TDMA FDD	
<b>Modulation</b>	OFDM 256 FFT with adaptive sub-carrier modulation: BPSK, QPSK, QAM 16, QAM 64.	
<b>Channel bandwidth</b>	3.5MHz; 1.75MHz - software selectable	
<b>Base Station Multi Carrier bandwidth (via IF Mux)</b>	14MHz	
<b>Duplexing Scheme</b>	AU full duplex SU half duplex	
<b>Central frequency resolution</b>	125KHz	
<b>Antenna (CPE)</b>	18dBi, 20°, Vertical & Horizontal polarization, compliant with ETSI EN 302 085 V1.1.2 TS3.	
<b>Maximum Output power (At antenna port)</b>	AU: 28dBm (+/-1dB) SU: 20dBm (+/-1dB)	
<b>Sensitivity</b>	-82/85 dBm for highest modulation (QAM 64) @ 3.5/1.75 Mhz	
<b>Typical values</b>	-100/103 dBm for lowest modulation (BPSK) @ 3.5/1.75 Mhz	
<b>Data</b>	IEEE 802.3 CSMA/CD	
<b>Air Interface</b>	IEEE 802.16a	
<b>VLAN support</b>	IEEE 802.1Q	
<b>Traffic Classification</b>	Layer 2 IEEE 802.1p, IP DiffServ Code Points DSCP	
<b>WAN Connection Types</b>	Static IP, Dynamic IP (DHCP), PPPoE and PPTP client	
<b>Routing</b>	Static Route, Dynamic Route (RIP1/2)	
<b>Firewall</b>	NAT Firewall with SPI mode	
<b>NAT Functionality</b>	NAT, Virtual Server, Special Application, DMZ Host	
<b>VPN</b>	IPSec, PPTP & LT2P Pass-Through	
<b>DHCP</b>	DHCP server for LAN and WLAN clients, DHCP client for WAN	
<b>Wireless Features</b>	(supported only with wireless networking gateway)	
<b>Standard</b>	IEEE 802.11b / 802.11g	
<b>Range Coverage</b>	Indoors - approx. 35-100 meters	
<b>Security</b>	WEP encryption - 64 Bit, 128 Bit	
<b>Ethernet LAN</b>	1 or 4 10/100 Base-TX RJ45 connectors	
<b>Telephony</b>	1 or 2 RJ11 connectors for Analogue telephones	
<b>PipeLock™</b>	Button for disconnection of the secure Ethernet LAN port	
<b>Packet Filter</b>	Separates data, management and telephone traffic	
<b>VLAN</b>	802.1Q+p	
<b>Authentication Per Registration</b>	H225.0.0 RAS	
<b>VoIP Protocol</b>	H.323, SIP	
<b>Internal Class 5 services</b>	Call Waiting, 3-party call, call alteration, differentiated ringing tones Activation of class 5 services supported by the IP-telephony system	
<b>G3 Fax</b>	T.38	
<b>Calling number identification</b>	FSK, DTMF	
<b>DTMF</b>	In-band and out-band using H245 and H225 bi-directional	
<b>Speech Codecs</b>	G711, G729ab	
<b>DiffServ</b>	Level 3 (IP) mechanism for handling QoS	
<b>Electrical</b>	Subscriber Unit	Base Station
<b>Power Source</b>	100-240 VAC, 50-60 Hz	-36 to -72 VDC
<b>Power Consumption (max)</b>	CPE ODU: 30W	BST PS: 200W each, up to 4 PS
	CPE IDU data: 40W	AU IDU 2 channels: 38 W
	CPE IDU data + voice: 50W	AU ODU: 38 W NPU: 70 W, PIU: 35 W, AVU: 24 W
<b>Environmental</b>	Indoor Unit	Outdoor Unit
<b>Operating Temperature</b>	0°C to 40°C	-40°C to 55°C
<b>Operating Humidity</b>	5%-95% non condensing	5%-95% non condensing, weather protected
<b>Compliance Type</b>	Standard	
<b>EMC</b>	ETSI EN 301 489-1	
<b>Safety</b>	EN 60950 (CE), IEC 60 950 US/C (TUV)	
<b>Environmental</b>	ETS 300 019 part 2-1 T 1.2 & part 2-2 T 2.3 for indoor & outdoor part 2-3 T 3.2 for indoor part 2-4 T 4.1E for outdoor	
<b>Radio</b>	ETSI EN 301 021 V.1.4.1, ETSI EN 301 753 V.1.1.1	