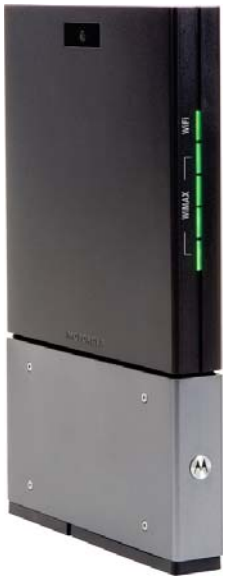

Motorola wi4 WiMAX CPE*i* 775 Series

Convenient, Reliable Wireless Broadband Access with Integrated WiFi in the Sleekest Design Yet

The Motorola CPE*i* 775 series Customer Premises Equipment (CPE) for 802.16e WiMAX networks is an all-in-one device that provides high-performing, orientation-free wireless broadband access to meet your end users' total home networking needs including data, voice & WiFi and help derive maximum profit from your WiMAX network investment.

HIGH END DESIGN

With a balanced blend of power, performance, reliability and "wow" simplicity, the CPE*i* 775 series WiMAX CPE includes a built-in WiFi router in addition to ATA ports for Voice over IP (VoIP). Following on Motorola's history of exceptional design, the CPE*i* 775 includes all this technology in a unique ultra-thin form factor that for the first time can be made available in a wide array of eye-catching color choices. The sleek unit was designed by Motorola's award winning, highly regarded Consumer Experience Design Team which is recognized for their work on the MOTORAZR™ and MOTORAZR2™ handsets. Extensive market research went into the CPE*i* 775's design to assure that this is a CPE that would enhance any home and allow service providers to differentiate and profit from their infrastructure investments.

RELIABLE AND EFFICIENT

This 802.16e WiMAX Certification ready CPE has substance and elegance. Network operators can count on the performance as well as reliability of this device. It has one data port, multiple voice access ports, a firewall for security, and an integrated WiFi router, providing an effective all-in-one solution to home networking needs. Factors such as integrated design, reduced power output, increased effective antenna gain, no moving parts and advanced ventilation further improve the operational life span of this device. Easy-to-read signal strength indicators and WiMAX network, data and WiFi status indicators in the front and back of the device make it intuitive for users to check the status of the device.

A highly sensitive receiver in the CPE*i* 775 exceeds the RCT specified receive sensitivity requirements by greater then 5db. This effectively increases the area within the cell that can support higher throughputs, likely allowing a reduction in the base station infrastructure requirements for a service provider. Higher throughput could also provide improved subscriber experience and the ability for operators to offer more services that require specific QoS levels, such as voice and video.

STATE OF THE ART ANTENNA TECHNOLOGY

Antenna design impacts both the performance and convenience of a WiMAX CPE. The CPE*i* 775 series features some of the most advanced antenna techniques available today. Our integrated, adaptively switching and high-gain antennas enable hassle-free installation. The device does not need to be rotated for optimal signal strength.

With some of the most advanced antenna designs available today, the CPE*i* 775 sets new standards for device transmit power and receive sensitivity - two factors that have a big impact on a network operator's bottom line, and the number of cells required to provide coverage. The CPE*i* 775 Series features Adaptive Transmit Antenna Switching. This feature provides dual adaptively switching antennas to support diversity techniques such as switched transmit antenna diversity on the uplink, as well as MRC Maximum Ratio Combining (MRC), and MIMO Matrix A and B on the downlink. Combined with multi-antenna operations at the access points such as open and closed-loop adaptive antenna techniques, the combined solution of Motorola's access points and CPE provides best-in-class range and indoor penetration to service providers, reducing the overall CAPEX requirements.

CONVENIENCE

The CPE*i* 775 is user-friendly, reducing expensive support costs and making a strong positive impact on a WiMAX operator's bottom line. All access ports in the plug and play CPE*i* 775 are integrated and it comes with all the necessary device drivers pre-loaded. Pre-loaded device drivers mean no CDs are required for end user installation. It can work with Windows, MAC and LINUX operating systems without any user intervention. Subscribers just connect the device to their computer and voice handsets and the device is ready to offer a unique all-in-one WAN/LAN/VoIP residential communications network. The network will automatically detect the device and perform the necessary authentication processes. Finally, zero-install design and over the air (OTA) software upgrades eliminate the need for costly truck rolls or operator intervention.

The LEDs on the CPE*i* 775 have also been designed for user convenience, and to make it easier and less costly for service providers to support the device. The LEDs offer a clear sign of what the device is doing. In addition, the LEDs support fault reporting modes.

PERFORMANCE

Motorola continues to leverage a rich heritage in RF performance in the CPE*i* 775. With over 80 years in RF experience and as a leader in wireless broadband, Motorola can consistently offer devices with best-in-class performance characteristics. The performance of the CPE*i* 775 sets new standards in transmit power and receive sensitivity, enhancing the experience for users, and decreasing infrastructure costs for a lower total cost of ownership for service providers.

CPE device performance factors considered in the CPE*i* 775 include antenna gain, receiver sensitivity, orientation, diversity techniques and effective transmitter power. The radiated performance of WiMAX CPE devices can differ dramatically. In a typical environment, 3 to 6dB low-end performance by CPEs on the network can translate to the need for over two times as many access points in order to provide the same level of service. This factor needs special attention particularly during the initial commercial launch of the network. A service provider's most important customers are often the first customers to use the network.

Managing RF interference is a key design aspect in the CPE*i* 775. As the number of subscribers increase on the network, interference introduced by the devices themselves can also reduce the service level areas from the original network plans. The CPE*i* 775 offers Switched Transmit Antenna Diversity, allowing less output power to be used on the uplink for an equivalent performance level, thereby helping to decrease the uplink interference. With less interference, the network can support a greater throughput per sector.

WiFi and WiMAX in one device can pose interference challenges if not properly isolated. WiFi transmit signals can damage the WiMAX receiver in the CPE over a period of time, which can impact the overall network capacity plans. Motorola has targeted a high level of isolation between WiFi and WiMAX signals to mitigate these issues.

CONTROL

The Motorola CPE*i* 775 Series supports remote management capability allowing management and health monitoring of the devices from a centralized network or element management system. Motorola CPEs support a wide range of statistics for the operator to look at the network performance from the device perspective. In addition, advanced security and authentication protocols protect the end-user and the operator from external threats.

MOTOROLA CPE*i* 775 SERIES SPECIFICATIONS	
Connectivity	1 data (RJ45) port
	2 integrated ATA ports (VoIP)
	802.11 B/G (WLAN).
Radio Performance	25dBm WiMAX PA output power & 7dBi peak antenna gain
	Switched Transmit Antenna Diversity for orientation independent performance and improved link budget on uplink
	5dB better receive sensitivity on an average than RCT specifications
	Two branch Maximum Ratio Combining Diversity (MRC)
	Convolution Turbo Coding (CTC)
	Hybrid Automatic Repeat request (HARQ)
	WiFi b/g router output power of 14dBm+
Channel Support	5MHz, 7MHz & 10MHz channel support
Throughput	>5 Mbps downlink and >2 Mbps uplink **
Modulation Schemes	QPSK, 16QAM, 64QAM
Quality of Service Classes	BE (Best Effort)
	UGS (Unsolicited Grant Service)
	RTPS (Real Time Polling Service)
	NRTPS (Non Real Time Polling Service)
	ERTPS (Extended Real Time Polling Service)
Security	Device authentication based on X.509 digital certificates
	Authentication methods according to IEEE 802.16e, EAP-TLS and also EAP-TTLS
	AES (128-bit CCM) data encryption and authentication
	WEP, WPA, WPA2
	Residential firewall
Remote Configuration and Software Upgrade	OTA (Over The Air) field upgradeable
	SNMP v3 agent
	TR-069 agent
	OMA agent
OS Compatibility	Windows
	Mac
	LINUX

** Cell site range and data throughputs are dependent on network planning and RF conditions.

MOTOROLA CPE*i* 775 SERIES SPECIFICATIONS (Continued)	
Mechanical and Electrical	External power: 100-240 volts AC input
	Operating temp: 0°C to 40°C
	Operating humidity: 5% to 95%, non-condensing
	US and international plug support
Environmental and Regulatory	Europe
	Asia
	Latin America

MOTOROLA AND wi4 WiMAX

The Motorola wi4 WiMAX CPE*i* 775 Series is part of the Motorola wi4 WiMAX comprehensive portfolio of solutions and services needed to plan, launch and manage a WiMAX network. Designed to complement and complete operator networks, Motorola wi4 solutions address a broad range of applications across operator segments. Our wi4 WiMAX CPEs and devices demonstrate exceptional ability to overcome the harsh conditions of the radio propagation environment. So they'll not only deliver excellent performance for your subscribers, but also lower costs and higher returns to you.

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CPE*i* 775_data sheet_v4_FNL