



NewNet WiMAX CPEi 825 Series

Plug & Play Wireless Broadband Modem with Integrated VoIP

The CPEi 825 series Customer Premises equipment (CPE) provides high-performing, orientation-free wireless broadband access to meet your end-users' home networking needs including data & voice in one convenient package.

Highlights

- Plug & Play installation
- High performance radio
- Omni-directional antenna performance
- Simple Front panel operational status LEDs for radio signal quality, data and voice status
- 10/100Base-T Ethernet (RJ-45) for high speed data access
- Integrated RJ-11 ATA port to support up to 3 RENs with full featured telephone service
- Over The Air (OTA) upgrades
- Standards based device management (HTTPS & TR069)
- Intuitive diagnostics for quick troubleshooting
- Support for CLASS services (caller ID, call waiting, three-way calling etc.)

Convenient, Efficient & Reliable

The CPEi 825 wireless broadband modem is based on NewNet's proven WiMAX CPE experience. This power packed WiMAX

CPE platform focuses on improved uplink performance, network operations & management and self-diagnostics, while including all of the advanced features and functionality of the previous generation product. The CPEi 825 has one data access port and features a firewall for security, providing an effective solution for basic residential broadband data service needs.

Easy-to-read signal strength indicators are clearly visible on the front of the CPEi 825, making it intuitive for users to check the status of the device at any time. Communication Service Providers (CSPs) can control the number of LEDs lit on the device by setting the thresholds of each LED per their network RF plans. This offers a unique way of delivering committable service levels to end-users.

In addition, facility to wall-mount the device with optional accessory enables end users to fix the device at the best possible location and not have to worry about orienting the device post initial installation. This feature eliminates the need to buy expensive remote antennas and also offers a more efficient way to overcome any potential additional indoor penetration losses.

The CPEi 825 is built of components with very high mean time between failure (MTBF) specifications. This ensures that the CSP will be able to keep the device in service for several years with minimal repair and return overheads.



Improved performance

Radio design of CPEi 825 incorporates extensive lessons learned by NewNet Communication Technologies from network deployments in over 40 countries, with over two million WiMAX CPEs and devices sold. NewNet understands that measure for radio performance of any device is not just the effective radiated power (EIRP) which is typically used in the network planning tools for setting cell boundaries. Antenna beam width limitations, orientation losses of the device and selection of optimal antenna transmit position at any particular moment, also have major impacts on the service level areas and overall network capacity.

The CPEi 825 comes with a highly sensitive receiver, omni directional antenna performance, high power output & high gain – orthogonally polarized antennas with switched transmit diversity for improved radio performance. These factors stretch the service level areas of the network, improve cell edge performance and

also reduce uplink overheads on the access points. Together these factors not only improve the end-user experience, but also enhance the overall site capacity.

Reduce Operations & Maintenance overheads

The NewNet CPEi 825 series supports remote management capability, allowing management and health monitoring of the devices from a standards based centralized device management server such as TR069 platforms or even a simple HTTPS server based platform. TR069 is the Broadband Forum's recommended device management standard for fixed modem management. Customers may further benefit from using NewNet NBBS device management solution that also supports TR069 standards.

The CPEi 825 supports unique features such as self-diagnostics, modular upgrades and enhanced statistics to reduce CSP's overall operations & maintenance (O&M) overheads and to ensure consistent optimal performance of the devices. In addition, advanced security and authentication protocols protect the end-user and the CSP from external threats.

CPEi 825 Series Specifications

Connectivity	1 Ethernet port 1 Integrated ATA ports (VoIP)
Radio Performance	27dBm Antenna gain: 2.5GHz / 3.5GHz band products 5dBi, 2.3GHz products 4.5dBi Omni-directional performance & orthogonally polarized antennas Adaptive transmit antenna switching for improved uplink performance Highly sensitive receiver that exceeds the RCT specifications Two branch Maximum Ratio Combining diversity (MRC) MIMO A/B & Beamforming (TxAA) Convolution Turbo Coding (CTC) Hybrid Automatic Repeat Request (HARQ)
Frequency Band	CPEi 23825 (2300 - 2400 MHz) CPEi 25825 (2496 - 2690 MHz) CPEi 35825 (3400 - 3600 MHz)
Channel Bandwidth Support & Modulation Schemes	Available in 2.3GHz, 2.5GHz and 3.5GHz bands 2.3GHz / 2.5GHz bands: 5MHz & 10MHz channel support 3.5GHz band: 5 MHz , 7 MHz and 10MHz channel support QPSK, 16QAM, 64QAM
Codec & Quality Of Service Classes Supported	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	Authentication methods according to IEEE 802.16e, EAP-TLS and EAP-TTLS AES (128-bit CCM) data encryption and authentication Residential firewall
Remote Configuration & Software Upgrade	OTA (Over The Air) field upgradeable HTTPS agent TR-069 agent
OS & Browser Compatibility	Windows, Mac, LINUX
Environmental and Regulatory	Asia, Europe, Canada, Latin America



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