

AirStream™ 4000 WiMAX Outdoor CPE

Reliable & Convenient Wireless Broadband Access

The KZTECH AirStream™ 4000 Customer Premises Equipment (CPE) is a high performance 802.16e WiMAX CPE product designed to enable quick WiMAX service deployment to the remote customers. It provides high data throughput and networking features to end users who need both bandwidth and roaming capabilities in the certain area.



RELIABLE PERFORMANCE

AirStream™ 4000 is a cost effective outdoor data CPE based on the WiMAX Forum's standard implementation of the IEEE 802.16e Wave II specification. It is able to meet the most demanding requirements of large service providers with high throughput and availability. It also supports standard TR069 and OMA-DM management interface for centralized auto provision and upgrade management. Network operators can count on the performance as well as reliability of this device. It has one data port and a simple firewall for security, providing an effective all-in-one solution to home networking needs. Factors such as integrated design, reduced power consumption, increased effective antenna gain, and improved heat dissipation design further improve the operational life span of this device.

AirStream™ 4000 can provide quick broadband wireless access. Its built-in router function provides multiple VLAN support, TOS/DSCP tagging and rate limiting to ensure greater service feasibility and reliability. Easy-to-read signal strength indicators and data activity indicator in the back panel make it intuitive for users to check the status of the device.

CONVENIENT USAGE & MANAGEMENT

The AirStream™ 4000 is a user-friendly WiMAX CPE, and very easy to install and maintain. Easy and simple installation for non professional user delivers instant broadband anywhere. All access ports in the plug and play AirStream™ 4000 are integrated and it comes with all the necessary device drivers pre-loaded. Subscribers just connect the device to their computer or home switch/router and the device is ready to offer an experience of surfing over Internet. The LEDs on the AirStream™ 4000 have also been designed for user convenience, and offer a clear sign of what the device is doing. The compact design is well suited for residential home use in the outdoor environment. The IP addresses can be statically allocated or dynamically obtained via DHCP.

AirStream™ 4000 offers rich management features which facilitate the task of carrier. It supports local management access, Telnet, WEB, and centralized remote OTA configuration, upgrades management and device monitoring via KZ Tech iManager™ 2000 EMS product.

To meet the different requirements of varied countries and regions, AirStream™ 4000 is designed to be operated under several frequencies bands. It supports wide frequency bands in 2.3-2.7GHz and 3.3-3.6GHz, which covers almost all the main frequency for WiMAX network globally.

TECHNICAL FEATURES

AirStream™ 4000 supports for 2x2 MIMO, adaptive modulation and coding (AMC) technology to maximize the system capacity and bandwidth throughput by automatically adjusting modulation to respond to various signal qualities. With high gain directional patch antenna, AirStream™ 4000 enables a longer reception range from the base station. This yields more efficient use of the network with a larger cell reach, guaranteed carrier class service, and customer service probability.

Advanced Orthogonal Frequency Division Multiplexing (OFDM) modulation enhances performance in non-line-of-sight (NLOS) conditions to ensure immunity to interference and multi-path conflicts typical of deployments in densely populated urban areas. Moreover, sophisticated QoS capabilities in the 802.16e MAC ensure true end-to-end QoS and support high quality data services.

The integrated product architecture allows the lowest possible cost of ownership. Simple installation procedure further reduces the product deployment and support cost for service providers.

SPECIFICATION

Physical

Dimensions mm (D)	265 mm (L) × 265 mm (W) × 80 mm (D)
Weight	< 3 Kg
Power Consumption	< 15 W
Power Supply	48 VDC (PoE)

Environmental

Temperature	- 30 °C -- 55 °C
Humidity	95% maximum Non-condensing

Wireless Interface

Frequency Bands	2.3-2.7 and 3.3-3.7 GHz
Radio Access	802.16e (Wave 2 MIMO)
Operation Mode	TDD (2x2 MIMO)
Channel Bandwidth	3 / 3.5 / 5 / 7 / 8.75 / 10 MHz
Output Power	> 23 dBm per antenna port
Antenna Gain	> 15 dBi (cross polarized)
Modulation	QPSK, 16QAM, 64QAM
FFT	1024/512 FFT points
FEC	Convolution and Turbo Code
Authentication	TTLS/TLS

User Interfaces

Data Interface:	1 RJ45 10/100M LAN Port
LED Indicator:	Power, System Run, LAN Activity, WiMAX RF Signal (4),
Power Supply:	24 VDC Passive PoE

Data Networking

Networking Configuration

DHCP or static IP address assignment
Bridge and Router Operation Support
Built-in DHCP Server for LAN devices

ETH-CS and IP-CS Auto Adaptation

Data Features

802.1p/q, DSCP or TOS marking
VPN Pass-through support (PPTP, L2TP and IPsec)
Built-in L2TP client support

Firewall & Access Control

IP Filtering, Virtual Server and SPI Firewall
LAN Device Access Control

Device Management

Management Features

CLI, Telnet and WEB management interfaces
SNMP and SYSLOG for Log and Alarm Reporting

Auto Provision & Upgrade Management

Standard TR069 management with WIB Support
OMA-DM Management Support

Industry Standards

IEEE

IEEE 802.3 10Base Ethernet
IEEE 802.3u Fast Ethernet
IEEE 802.1p CoS Priority Protocol
IEEE 802.1Q VLAN Tagging

Information to Users

According to the FCC Part 15.19, 15.21, and 15.105 rules, for this EUT, the instructions or operation manual furnished the user shall include the following or similar statement, placed in a prominent location in the text of the manual:

FCC Warning

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE 1: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

FCC RF Radiation Exposure Statement

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body and use antenna gain should be less than 12.0dBi.