



# Delivering Cutting Edge Technology for both Fixed and Nomadic WiMAX

# High Gain WiMAX USB Modem

UH350 is part of Greenpacket's portfolio of next generation Wave 2 compliant WiMAX Modems and the world's first high gain USB modem supporting both fixed and nomadic WiMAX. Incorporating one of the most advanced antenna designs, UH350 sets new standards for ease of use, performance and quality, both indoors and outdoors.

## Fixed & Nomadic Use

Ideal for indoor, outdoor and nomadic use for true mobility

## High Antenna Gain

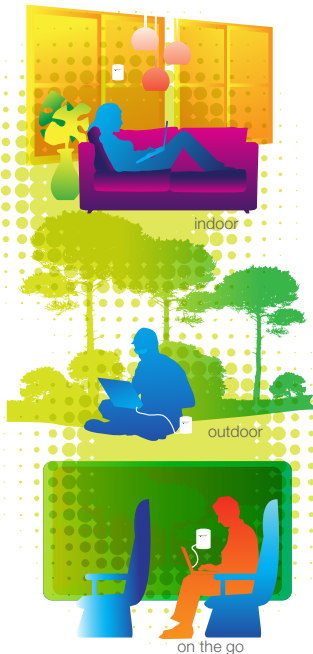
Omni antenna with 5dBi gain, radiates and receives WiMAX signals from any direction for great flexibility in modem placement

## Smart Signal Transmission

Automatically selects best antenna to improve signal strength for better uplink performance

## High Transmission Power

Enjoy better signal quality even while indoors with 25dBm



## Plug 'n Play

Instant Internet connection minus the complication

## Stylish Design

Strong aesthetic values to appeal to style conscious users

## Accessories

1. Suction Cup  
Fix suction cup to a window/wall for better indoor coverage
2. USB Cable  
1m USB cable gives users the flexibility of sitting away the window/wall and yet enjoy optimum WiMAX signal

## Key Features

- IEEE 802.16e WiMAX Wave 2 Compliant
- TDD SOFDMA
- MIMO Matrix A and B
- Operates within 3.3GHz to 3.6GHz Frequency Range
- 5, 8.75, 10MHz Channel Bandwidth
- Up to 25dBm Transmission Power
- 5dBi Antenna Gain
- Up to 30Mbps Throughput\*
- Dual Omni Antenna
- 1Tx, 2Rx with Transmitter Diversity
- External Antenna Connector (optional)
- 5 Classes of QoS Support
- Auto Provisioning
- Over-the-air Firmware Upgrade

\* Subject to field conditions.

## Package Contents

- 1 x UH350 WiMAX USB Modem
- 1 x USB Cable
- 1 x Suction Cup
- 1 x Quick Installation Guide





# Technical Specification

## Physical Layer

<b>Standard</b>	IEEE 802.16e-2005 (WiMAX) Wave 2
<b>RF Access Scheme</b>	Scalable OFDMA
<b>Duplexing</b>	TDD
<b>Data Rate</b>	<ul style="list-style-type: none"> <li>• Up to 30Mbps (DL)</li> <li>• Up to 6Mbps (UL)</li> </ul>
<b>Frequency Range</b>	3.3GHz to 3.6GHz
<b>Channel Bandwidth</b>	5, 8.75, 10MHz
<b>Adaptive Modulation</b>	<ul style="list-style-type: none"> <li>• QPSK 1/2, 3/4</li> <li>• 16QAM 1/2, 3/4</li> <li>• 64QAM 1/2, 2/3, 3/4, 5/6</li> </ul>
<b>Frame Size</b>	5ms
<b>Diversity</b>	Tx Antenna Diversity
<b>MIMO</b>	Matrix A/B
<b>Beamforming</b>	<ul style="list-style-type: none"> <li>• UL Sounding</li> <li>• AMC 2x3 with dedicated pilots</li> <li>• PUSC with dedicated pilots</li> </ul>
<b>RF Output Power</b>	Maximum 25 dBm
<b>Antenna Type</b>	Integrated Omni Antenna (5dBi)
<b>Receive Sensitivity</b>	<p>5MHz Bandwidth Receive Sensitivity:</p> <ul style="list-style-type: none"> <li>• -91.0dBm @ QPSK 1/2</li> <li>• -87.6dBm @ QPSK 3/4</li> <li>• -85.3dBm @ 16QPSK 1/2</li> <li>• -81.2dBm @ 16QPSK 3/4</li> <li>• -80.1dBm @ 64QAM 1/2</li> <li>• -77.0dBm @ CTC-64QAM-2/3</li> <li>• -75.9dBm @ CTC-64QAM-3/4</li> <li>• -74.0dBm @ CTC-64QAM-5/6</li> </ul> <p>10MHz Bandwidth Receive Sensitivity:</p> <ul style="list-style-type: none"> <li>• -88.0dBm @ QPSK 1/2</li> <li>• -84.6dBm @ QPSK 3/4</li> <li>• -82.3dBm @ 16QPSK 1/2</li> <li>• -78.2dBm @ 16QPSK 3/4</li> <li>• -77.1dBm @ 64QAM 1/2</li> <li>• -74.0dBm @ CTC-64QAM-2/3</li> <li>• -72.9dBm @ CTC-64QAM-3/4</li> <li>• -71.0dBm @ CTC-64QAM-5/6</li> </ul>
<b>Cyclic Prefix</b>	1/8
<b>Channel Coding</b>	CC, CTC
<b>Power Control</b>	Open and closed loop power control (Adaptive Modulation)
<b>DL Sub-carrier Allocation</b>	<ul style="list-style-type: none"> <li>• PUSC</li> <li>• PUSC with all sub-channel / dedicated pilots</li> <li>• FUSC</li> <li>• AMC 2x3</li> </ul>
<b>UL Sub-carrier Allocation</b>	<ul style="list-style-type: none"> <li>• PUSC with / without sub-channel rotation</li> <li>• FUSC</li> <li>• AMC 2x3</li> </ul>

## Electrical & Mechanical

<b>Dimensions (H x W x D)</b>	98mm x 70.5mm x 16.5mm
<b>Weight</b>	70g
<b>MTBF</b>	100,000 hours
<b>Power Supply</b>	USB
<b>Power Consumption (+23dBm)</b>	< 2.5W
<b>Idle Mode Power Consumption</b>	< 5mW
<b>Temperature</b>	0°C ~ 40°C (Operating)
<b>Humidity</b>	<ul style="list-style-type: none"> <li>• 5% to 80% non-condensing (Operating)</li> <li>• 5% to 90% non-condensing (Storage)</li> </ul>

## MAC Layer

<b>Radio Optimization</b>	<ul style="list-style-type: none"> <li>• ARQ and HARQ</li> <li>• Payload header suppression</li> </ul>
<b>ARQ ACK Type</b>	<ul style="list-style-type: none"> <li>• Cumulative ACK Entry</li> <li>• Cumulative with Selective ACK Entry</li> <li>• Cumulative ACK with Block Sequence</li> <li>• ACK</li> </ul>
<b>HARQ</b>	<ul style="list-style-type: none"> <li>• HARQ Chase combining with CTC</li> <li>• DL – Category 1, 2, 3, 4</li> <li>• UL – Category 1, 2, 3, 4</li> <li>• MIMO Chase combining</li> </ul>
<b>Mobility</b>	<ul style="list-style-type: none"> <li>• Hand over with / without Optimization</li> <li>• Supports Idle Mode</li> <li>• Power Saving Class of Type 1 Sleep Mode</li> </ul>
<b>QoS Scheduler Options</b>	<ul style="list-style-type: none"> <li>• Advanced Scheduling Algorithm with full QoS support</li> <li>• Unsolicited Grants Service (UGS)</li> <li>• Enhanced Real-time Polling Service (ertPS)</li> <li>• Real-time Polling Service (rtPS)</li> <li>• Non-real-time Polling Service (nrtPS)</li> <li>• Best Effort (BE)</li> </ul>
<b>Service Flow Support</b>	<ul style="list-style-type: none"> <li>• Policy enforcement for each service flow</li> <li>• Each subscriber station supports multiple classes of service</li> </ul>
<b>Security Authentication</b>	<ul style="list-style-type: none"> <li>• EAP Client TLS and TTLS</li> <li>• End-to-end PKM v2</li> <li>• Authentication based on X.509 certificate</li> </ul>

## Interface

<b>Antenna</b>	<ul style="list-style-type: none"> <li>• 2Rx antennas with receive MRC, MIMO A, MIMO B</li> <li>• 1Tx antenna with antenna switch diversity</li> </ul>
<b>LED Indication</b>	1 Dual color
<b>USB 2.0</b>	1 USB 2.0 interface
<b>Flash Memory</b>	16MB

\* Product specifications are subject to change without prior notice.



# Technical Specification

## WiMAX Connection Manager

<b>Auto Install</b>	Automatically installed when device is plugged into the computer for the first time
<b>Auto Run</b>	Automatically activated when device is plugged in
<b>Auto Startup</b>	Could be set to automatically start when Windows starts
<b>Provisioning</b>	Supports OTA (Over-the-air) Provisioning <ul style="list-style-type: none"> <li>• OMA-DM (Optional)</li> <li>• Greenpacket Update Server</li> </ul>
<b>Intelligent Rule Manager</b>	<ul style="list-style-type: none"> <li>• Intelligent Profile Manager</li> <li>• Centralized Configuration of all connection rules</li> </ul>
<b>Connection Display</b>	<ul style="list-style-type: none"> <li>• Link Status</li> <li>• Signal Strength</li> <li>• Speed and Usage</li> <li>• Bandwidth Meter</li> </ul>
<b>Connection Coach</b>	<ul style="list-style-type: none"> <li>• Coverage information</li> <li>• Tips / Tutorial and directory</li> </ul>
<b>Connection Profiles</b>	<ul style="list-style-type: none"> <li>• Pre-Defined Profile</li> <li>• User-Defined Profile</li> <li>• Profiles Switching</li> </ul>
<b>GUI</b>	<ul style="list-style-type: none"> <li>• Multi Skin</li> <li>• Multi Language</li> <li>• Always on Top</li> <li>• Flexible GUI Framework</li> </ul>
<b>Seamless Mobility</b>	<ul style="list-style-type: none"> <li>• Mobile IP</li> </ul>
<b>Mobile IP (Optional)</b>	<ul style="list-style-type: none"> <li>• Mobile VPN</li> <li>• Home Agent Support</li> </ul>
<b>Supported Platform</b>	<ul style="list-style-type: none"> <li>• Windows XP / Vista (32-bit), Linux, MAC OS</li> <li>• Track Number of activations</li> <li>• Maximum activations</li> </ul>
<b>License Control</b>	<ul style="list-style-type: none"> <li>• Auto upgrade to new version</li> <li>• Update manager</li> </ul>
<b>Updates</b>	<ul style="list-style-type: none"> <li>• Firmware, drivers etc</li> <li>• OMA-DM support (Optional)</li> </ul>

## Optional Accessories



USB 360° Gender Changer



USB Cradle

## Accessories



Suction Cup



1m USB Cable

## Package Contents

- 1 x UH235 WiMAX USB Modem
- 1 x USB Cable
- 1 x Suction Cup
- 1 x Quick Installation Guide



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For more information on Greenpacket's products and solutions, please contact us at [marketing.gp@greenpacket.com](mailto:marketing.gp@greenpacket.com)

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