

## EasyST



EasyST and ProST are the CPE products developed to work with all WiMAX compliant base stations including all base stations from Airspan. The EasyST is an all-indoor CPE designed for self-install by the end user whereas the ProST is an indoor-outdoor CPE which requires professional installation and provides superior link budget in difficult deployment conditions.

The EasyST is Airspan's second generation indoor, plug and play CPE and builds on extensive deployment experience gathered from multiple mass deployments around the globe. The EasyST includes support for Airspan's "Auto-connect" feature, which selects the best serving Base Station based on RX and TX signal levels and active modulation schemes.

### For Cost Sensitive WiMAX Deployments

#### Main Features

- World's first "Self-Install" WiMAX CPE
- Full Indoor Non-LOS deployment
- User unpacks, plugs in and surfs
- Installation takes less than 1 minute!
- Stackable "CD" Style Design
- Utilises Intel WiMAX connection 2250 device
- Optional IEEE 802.11b/g Wi-Fi access point
- Optional VoIP base for 1 or 2 POTS lines
- A range of antenna options
- Up to 8.5dBi, 4 x 90° auto selecting antenna
- 13dBi external indoor window mount antenna
- Full support for Sub-Channelisation (OFDMA on uplink)
- Integral SIM card reader
- "Auto-Connect" and "Auto-Config" features
- "Fully Nomadic Operation"

The EasyST is a physically compact WiMAX CPE designed to be deployed alongside the end user's PC. With dimensions close to the size of 2 CD jewel cases, EasyST looks great when sitting on a desk or bookshelf.

The EasyST is designed to be installed by the end user, using a simple-to-use but sophisticated user interface to enable optimum positioning without connecting to the user's PC. This helps improve service availability and reliability whilst increasing service speed and reducing network load.

Three different deployment models are supported: using the integral 8.5dBi antenna; using together with the optional Wi-Fi expansion (thus locating the EasyST by a window); or using with the stick-on-the-window external antenna. In all cases a visual indication system informs the user when the optimum location for RF reception and transmission is achieved.

EasyST also inherits the "Auto-configure" function from ASWipLL's Indoor Radio (IDR), which enables automatic downloading of service configurations over the air after the CPE has been registered on the network. This feature can be used independently or in conjunction with an integral SIM card reader.

In addition to the simple-to-use user interface, EasyST also has an in-built Web server, which allows advanced configuration by the end-user or even remote configuration by a network operator's customer service staff.

EasyST is designed for combined voice and data deployments.

EasyST has a number of optional "stackable" extension bases, one for Wi-Fi and the other for VoIP and data.





### Wi-Fi Add-on

The Wi-Fi expansion base provides full IEEE 802.11b/g Access Point functionality and turns each EasyST into an instant hot spot, with the WiMAX radio interface providing backhaul for IEEE 802.11b/g clients. Thanks to IEEE 802.16 QoS built into the EasyST, Wireless SIP phones can make high quality, managed VoIP calls.



### VoIP Add-on

Voice and Data applications are supported by the VoIP expansion base, which supports 2 voice lines and an Ethernet port, thus providing services to standard, RJ-11 equipped telephone instruments. Battery backup can also be provided, where applicable, and uses simple AA rechargeable NiMH cells

The VoIP expansion base is fully managed by Airspan's base stations and VoiceMAX solution to ensure a fully transparent, carrier-class voice service.



# Technical Data Sheet - Easy ST - Indoor CPE

## RF Interface

Physical Layer	OFDM	
Frequency Bands	3.3-3.8GHz, 4.9-5.0GHz, 2.3-2.4GHz + subsequent additional WiMAX bands	
Channel Size	1.75MHz, 3.5MHz, 5MHz, 10MHz	
FFT	256	
Duplex Method	HFDD + TDD	
Sector Angle	N/A	
Modulations Supported	64QAM, 16QAM, QPSK, BPSK	
WiMAX Profiles Supported	Fixed WiMAX	
Nomadic Support	Yes	
Mobility Support	No	Note 1: Tx powers apply for QPSK operation. 64QAM support requires appropriate power back-off.
Standards Compliance	IEEE 802.16e-2005	
Tx Power (see note 1)	+24dBm	Note 2: Rx sensitivities apply to the minimum channel bandwidth supported and include maximum sub-channelisation.
Rx Sensitivity (see note 2)	-103dBm	
AAS & Diversity Gains (Downlink / Uplink)	Up to 2dB/2dB	

## RF Interface Options

Nth Order Rx Diversity	Yes	
Space Division Multiple Access (SDMA) Support	Yes	
Spatial Freq. Interference Rejection (SFIR) Support	Yes	
MIMO	No	
Uplink Sub-Channelisation Support	1/2, 1/4, 1/8, 1/16	
Dynamic Frequency Selection (DFS) Support	N/A	
Turbo Coding Supported	No	
Configurable Cyclic Prefix	N/A	
Configurable Frame Duration	N/A	
GPS Clock Synch Supported	N/A	

## IP Options/Features

Bridging Mode	802.1D self-learning bridge	
IPv	IPv4 + IPv6	
802.1Q VLAN	Yes	
MIR / CIR	Yes	
DiffServ	Yes	
Packet IPv6 over 802.3/Ethernet	Yes	
Packet IPv4 over 802.1Q	Yes	
Packet IPv6 over 802.1Q	No	
Payload Header Suppression	Yes	
Multicast Polling	Yes	
ARQ	Yes	
Packing	Yes	

## Scheduling

Unsolicited Grant Service	Yes	
Real Time Polling	Yes	
nonReal Time Polling	Yes	
Best Effort	Yes	

## Encryption & Management

DES (3DES Keys)	Yes	
AES	Yes	
Managed Subscriber Station	Yes	

## User/Network Interface Options

User / Network Interface	10/100bT Ethernet, 802.11g WiFi, POTs with integrated RGW	
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## Powering & Interconnect

Supply Voltage	90-264V AC, 6VDC	
Indoor / Outdoor Interconnect	All Indoor Solution	

## Environment

Outdoor Equipment	N/A	
Indoor Equipment	ETS 300 019-1-3 Class 3.1	



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