

## Savvi™ Embedded Ceramic WiMAX Antenna 2.5–2.7 GHz

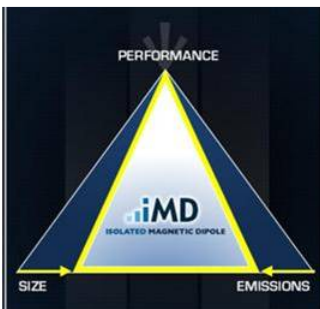


Ethertronics' Savvi series of Isolated Magnetic Dipole™ (IMD) antennas deliver on the key needs of device designers for higher functionality and performance in smaller/thinner designs. These innovative antennas provide compelling advantages for notebook computers, access points, industrial handhelds, and other WiMAX enabled devices.

### TECHNOLOGY ADVANTAGES

#### Real-World Performance and Implementation

Ceramic antennas may look alike on the outside, but the important difference is inside. Other antennas may contain simple PiFA or monopole designs that interact with their surroundings, complicating layout or changing performance with use position. Ethertronics' antennas utilize patented IMD technology to deliver a unique size and performance combination.



#### Stays in Tune

High RF isolation means IMD antennas resist detuning regardless of usage position. And one standardized part can typically be placed in a variety of locations.

#### Smallest Effective Size

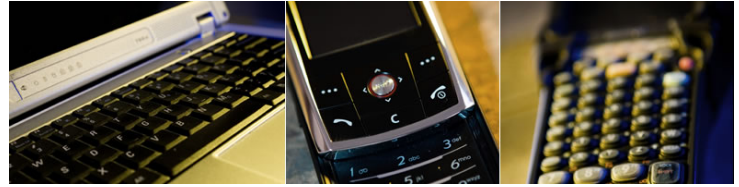
IMD antennas require a

smaller keep-out area for surrounding components, leading to a smaller effective size.

#### High Performance

IMD's high efficiency and simple design rules lower development risk and speed time-to-market without sacrificing performance. Plus, high RF selectivity eliminates the cost and space for band-pass circuitry.

More information is available on our Website at [www.ethertronics.com/resources/](http://www.ethertronics.com/resources/).



### KEY BENEFITS

#### DESIGN ADVANTAGES

##### Best in Class Performance—Smallest Occupied Volume

- 92% peak efficiency
- Minimal ground clearance and component “keep out” areas. Very low component height.
- High selectivity eliminates the need for additional filters and frees board space.

##### High Tolerance to Frequency Shifts

- IMD's high RF isolation resists antenna de-tuning that can otherwise impair reception.
- Single part works for various PCB sizes and layouts.

##### Quicker Time-to-Market

- Fewer design changes
- Simpler implementation—no matching networks.

##### RoHS Compliant

- Antennas comply with appropriate RoHS Directives.

#### END USER ADVANTAGES

##### Superior Range

- Greater antenna efficiency means longer range.

##### Exceptional Coverage

- Better coverage means fewer or no dead spots, or slow speed connections.

##### Faster Acquisition Times and Data Rates

- Users experience faster data rates for downloading email, accessing the Internet, watching mobile video, or logging data.

#### SERVICE AND SUPPORT

##### Extensive RF Experience

- Our Savvi ceramic antennas are supported by extensive application notes, and when needed, by the expertise of RF engineers who have integrated hundreds of antenna designs into wireless devices.

##### Global Operations & Design Support

- Ethertronics' global operations encompass an integrated network of design centers that provide local customer support.

## PRODUCT: WiMAX Antenna

Ethertronics' Savvi™ WiMAX Embedded Antenna Specifications  
 Ethertronics produces a wide variety of standard and custom antennas to meet user needs.  
 Below are the typical specs for a WiMAX application.

### Electrical Specifications

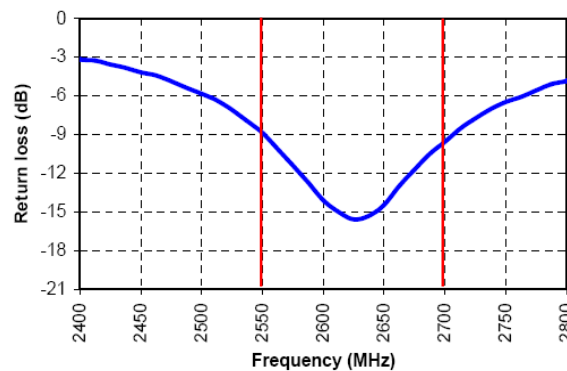
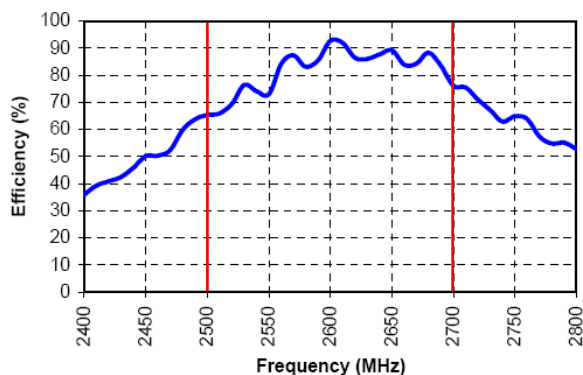
Typical Characteristics  
 (inside an enclosure)

WiMAX Antenna	2.5–2.7 GHz
Average Gain	-1.0 dBi
Average Efficiency	82%
VSWR Match	1.43 :1 max
Feed Point Impedance	50 Ω unbalanced

### Mechanical Specifications

Size	5.00x3.00x1.08mm
Mounting	Surface mount
Weight	.2 grams
Packaging	Tape & Reel

### Typical Efficiency, Return Loss



### Antenna Radiation Patterns

Typical Performance  
 Ethertronics' Test Board  
 PCB: 40x60mm

