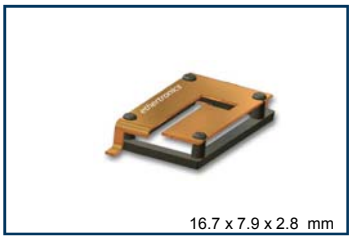
ethertronics
shaping antenna technology™

IMD WLAN Internal Antenna

2.4/5.2/5.8 GHz



GY Internal Antenna

The GY model, part of the IMD Family of WLAN Internal Antennas, represents a new category of small form factor, internal (embedded) antennas for WLAN multi-band applications. Multi-band capability allows OEMs to migrate their existing product designs by offering a single multi-mode antenna that supports both 802.11a/b/g protocols. In addition, the GY model offers increased range and greater isolation properties compared to existing internal antenna solutions.

Ethertronics' proprietary and patented Isolated Magnetic Dipole™ (IMD) antenna technology offers three distinct advantages over traditional internal antennas:

High Performance

- High efficiency
- Up to 50% higher signal strength than other internal antennas

Shaping Technology

- Controls and redirects the near-field electromagnetic distribution of the antenna's wave
- Optimizes antenna performance by improving signal strength and data quality inside buildings, in noisy environments and in fringe network coverage areas
- Less interaction with surrounding objects

High Isolation/Selectivity

- Ideal for diversity applications
- Reduced EMI with surrounding components
- Makes integration easy

The GY antenna is ideally suited for wireless data devices, where performance, size and system costs are critical. The surface mount design and compact size are suited for high volume applications. Standard antenna profiles are available or can be configured to suit individual OEM requirements.

Advantages:

Multi-Band Capability

- Single internal antenna covers several WLAN frequency bands saving cost and valuable PCB space

Spatial Diversity

- Antenna elements can be placed in close proximity to each other with reduced risk of coupling from one to another

Better Performance

- Increased range/rate
- Improved sensitivity in low signal environments

Flexible Integration

- Minimal component keep-out areas
- Smaller product size and ground plane requirements
- Reduction in front end components and matching circuits

WLAN

WLAN Technologies:
WiFi (802.11a/b/g)
HyperLAN/2

Applications:
PC/mini-PCI Cards • Notebooks
Tablet PCs • Portable Computers
PDAs • Printers

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2.400-2.485/5.150-5.350/5.725-5.825 GHz Internal (Embedded) Antenna Specifications

Electrical Specifications:

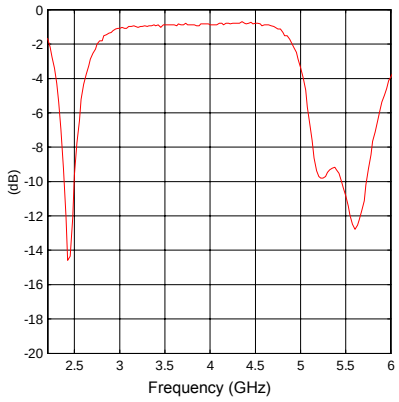
Typical Characteristics
(Inside an enclosure)

Model: GY	2.400-2.485 GHz	5.150-5.350 GHz	5.725-5.825 GHz
Peak Gain	**2.5 dBi**	**5 dBi**	**5 dBi**
Efficiency	**75 %**	**75 %**	**75 %**
VSWR Match	2 : 1	2 : 1	2 : 1
Front to Back Ratio	3 dB	10 dB	10 dB
Feed Point Impedance	50 ohms unbalanced (other if required)		
Power Handling	2 Watt cw		
Polarization	Linear		
Shielding Ratio	6 to 1 (near field)		

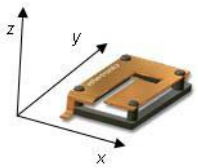
Mechanical Specifications:

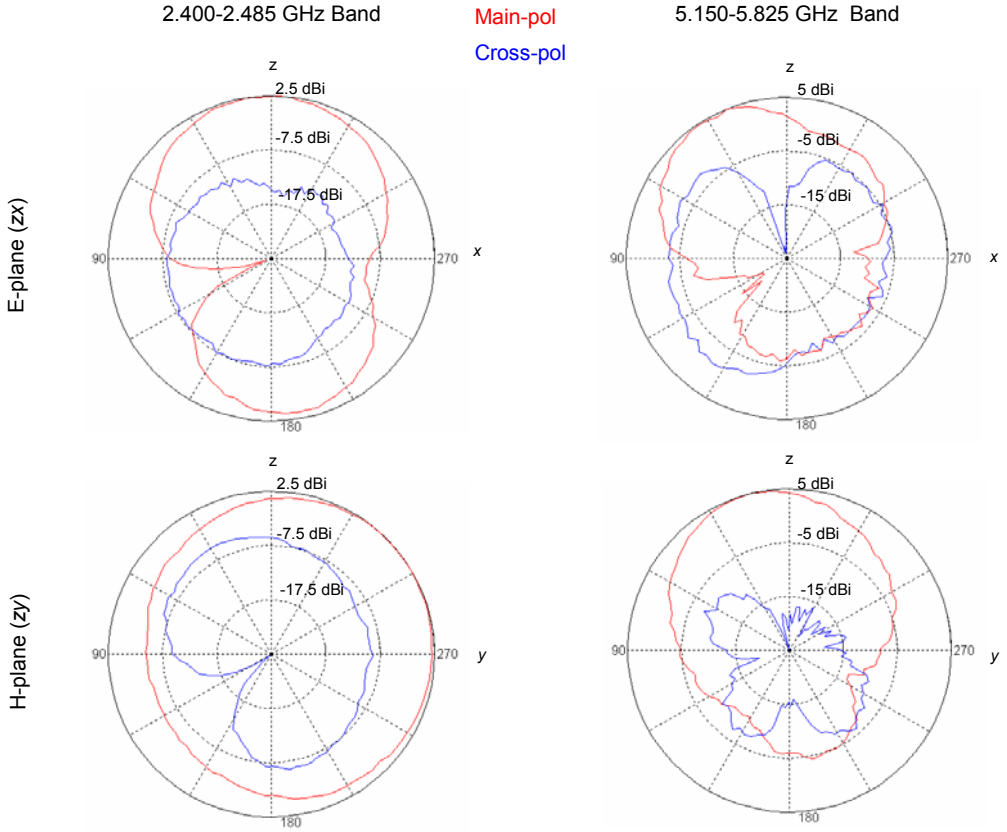
Size	16.7 x 7.9 x 2.8 mm, other configurations available
Mounting	Surface mount, 1 connection point + 1 feeding point
Weight	1 gram
Packaging	Tape and reel, tray optional

Typical Return Loss:



Antenna Radiation Patterns:





Specifications subject to change without notice.

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