



Part No. 1001826

# ISM 868 MHz Embedded PCB Antenna with Cable

868 MHz

Supports: Tracking, Smart Home, Agriculture, Automotive, Healthcare, Digital Signage, Wearables, Industrial Devices



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### KEY BENEFITS

#### Stay-in-Tune

IMD antenna technology provides superior RF field containment, resulting in less interaction with surrounding components.

#### Quicker Time-to-Market

By optimizing antenna size, performance and emissions, customer and regulatory specifications are more easily met.

#### Reliability

Products are the latest RoHS version compliant.

### APPLICATIONS

- Embedded design
- Cellular, Headsets, Tablets
- Gateway, Access Point
- Handheld
- Telematics
- Tracking
- Healthcare
- M2M, Industrial devices
- Smart Grid
- OBD-II

Ethertronics' ISM 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 868 MHz ISM enabled handheld devices, media players and other mobile devices.

### Real-World Performance and Implementation

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 Isolated Magnetic Dipole (IMD) technology to deliver a unique size and performance combination.

### Electrical Specifications

Typical performance on 100 x 65 mm PCB

Frequency	868 - 870 MHz
Peak Gain	-9 dBi
Average Efficiency	7.5%
Return Loss	< -2.5 dB
Feed Point Impedance	50 ohms unbalanced
Polarization	Linear
Power Handling	0.5 Watt CW

### Mechanical Specifications & Ordering Part Number

Ordering Part Number	1001826
Size (mm)	34.00 x 7.0 x 0.8
Weight (grams)	0.83
Cable/Connector (mm)	Length: 100 Diameter: 1.13 Color: Black Connector: U.FI compatible
Mounting	Adhesive on bottom side on antenna
Packaging	PE bags

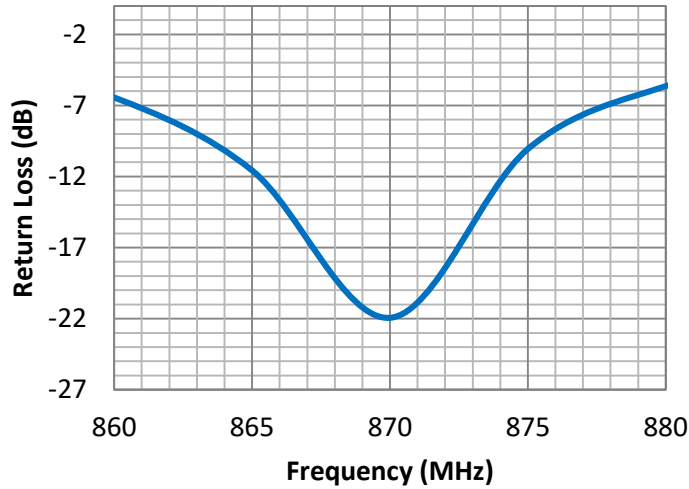


ISM 868 Embedded PCB Antenna Specifications  
Ethertronics produces a wide variety of standard and custom antennas to meet user needs.

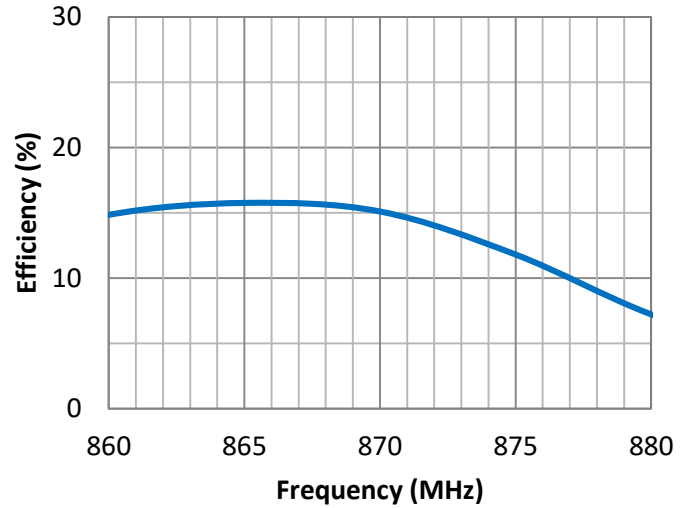
VSWR, Efficiency Plots (Tuned @ 868MHz)

Typical performance on 100 x 65 mm PCB

Return Loss



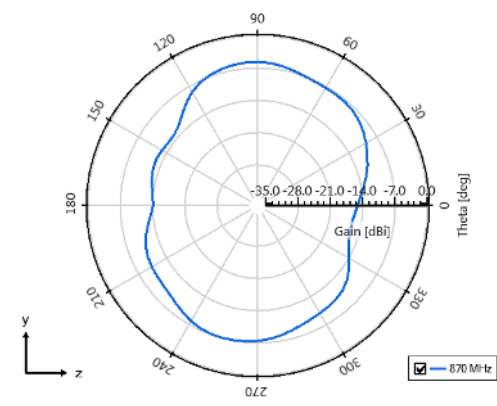
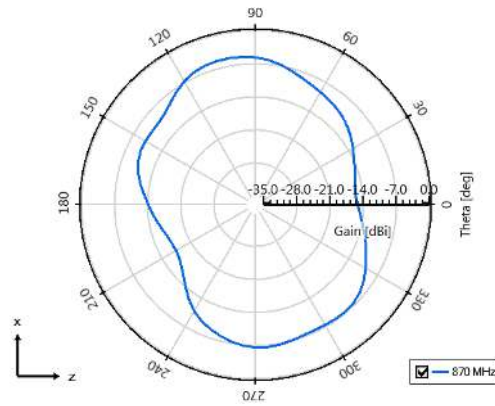
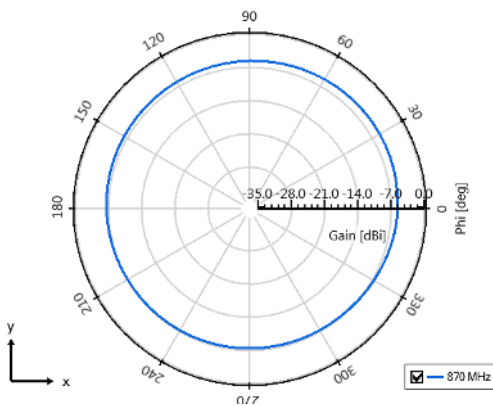
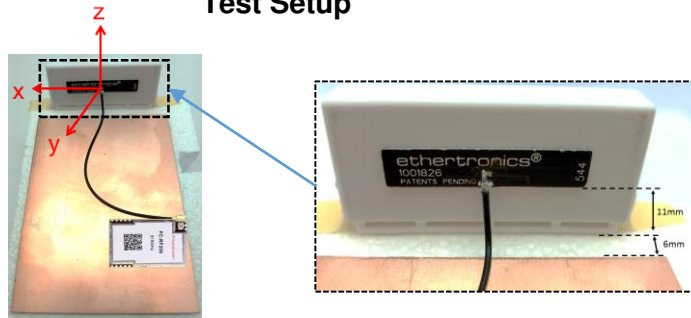
Efficiency



Antenna Radiation Patterns

Typical performance on 100 x 65 mm PCB  
Measured @ 868 MHz

Test Setup



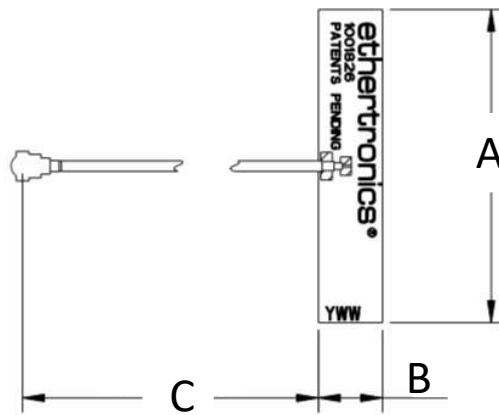


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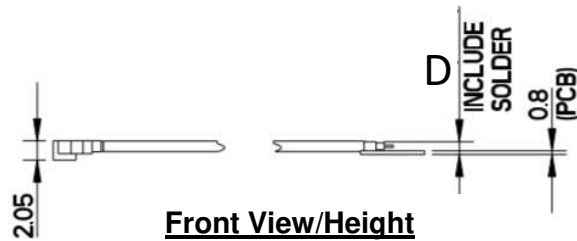
**Antenna Demo Board**

Typical layout dimensions (mm)

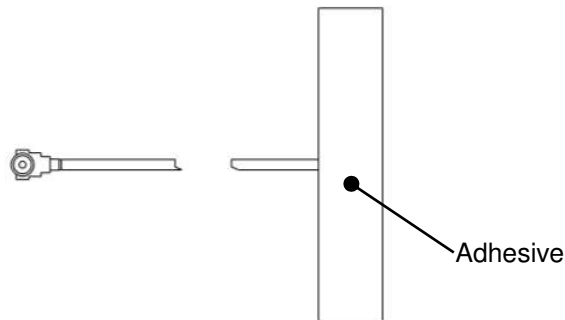
Part Number	A (mm)	B (mm)	C (mm)	D (mm)
1001826	34.0 ± 0.3	7.0 ± 0.3	101.35 ± 3.0	2.3 (max)



**Top View**



**Front View/Height**



**Bottom View**