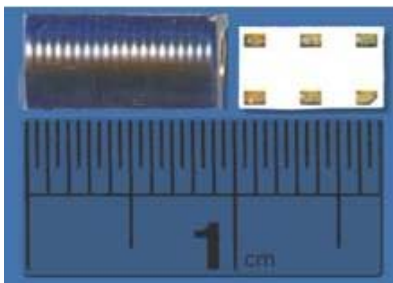


Tavel™ Active FM Antenna Solution 87.5–108 MHz



Ethertronics' Tavel series of internal, active FM antennas deliver on the key needs of today's unified media product designers: high performance and small form factor. The antenna solution is composed of a pre-tested, small form factor, SMD active antenna tuning module with an antenna element and can be customized to fit in a wide range of FM enabled handsets and mobile products, including:

- Mobile Phones
- Notebook Computers
- Portable DVD Players
- Media Appliances
- Netbooks and Ultra Mobile PC's

TECHNOLOGY ADVANTAGES

Real-World Performance and Implementation

Ethertronics' unique technology optimizes antenna size, performance and emissions to meet customer specifications quickly while reducing time-to-market. High performance is achieved across the entire range of frequencies. High receive performance leads to lower overall system power consumption. Plus, high RF selectivity eliminates the cost and space for band-pass circuitry.



KEY BENEFITS

DESIGN ADVANTAGES

Quicker Time-to-Market

- By optimizing antenna and module size and performance, customer and protocol specifications are more easily met.

High receive performance, Low power consumption

- Ethertronics' unique internal FM antenna approach provides high receive performance.

Simplified Integration

- Single control line simplifies integration with the receiver.

Flexible, Internal Form Factors Support Advanced Industrial Designs

- Smaller, more efficient internal antennas and modules break through restrictive design rules and provide new freedom in component placement.

Superior Range & Signal Strength

- Ethertronics' FM antenna provides external antenna performance in an internal form factor providing great receiver performance.
- Active antenna design enables high performance even in small ground plane design situations.

RoHS Compliant

- Ethertronics' antennas are fully compliant with the European RoHS Directive 2002/95/EC.

SERVICE AND SUPPORT

Extensive RF Experience

- Ethertronics' global applications engineering teams have extensive RF and antenna integration experience and are available to support design-in of our FM antenna solution into your product. Comprehensive application documentation is also available.

PRODUCT: Internal FM Antenna

Ethertronics' Internal (Embedded) FM Antenna Specifications.
Ethertronics produces a wide variety of standard and custom antennas to meet user needs.
Below are the typical specs for an FM application.

Electrical Specifications

Typical Characteristics

Parameters	Minimum	Nominal	Maximum	Units
Frequency Range		87.5 -108.1		MHz
3dB Bandwidth		600		kHz
Output Impedance		100		Ohm
VSWR		<2:1		
Typical Isolation at 200 MHz		40		dB
Voltage Supply	2.5	2.7	3.3	V
Current Consumption		3		mA
Voltage Supply Ripple			10	mV
Tuning Voltage	0		2.7	V
Tuning Current		30		μA
Antenna System Gain*	-6		-3	dB

*Antenna mounted on demo board, measured in free space
Parameters are measured at a 2.7 Volt supply unless otherwise stated.

Mechanical Specifications

Electronic tuning module size	6.1 x 3.5 x 1 mm
Antenna Element Size	10mm length x 4 mm diameter (dimensions can vary)
Antenna and PCB Weight	5 grams