ANTENEX® *is proud to introduce a new compact line of fiberglass base station antennas. The Invader™ is a low visibility an-tenna intended for local coverage applications in urban sites. From Analog to Digital, DATA to SCADA, the technical specifications for antennas have reached far beyond what was acceptable just a decade ago.* ***ANTENEX®*** *takes pride in leading the industry to higher standards than ever before.*

A tuned bandwidth-expanding network is integral to the Invader™ antenna, which ensures an excellent VSWR over both the up link and down link portions of the desired frequency band.

800/900 MHz Invader™ antennas are end-fed collinear antennas with a down-tilt radiating pattern and are intended for local cover-age operation in high-density urban sites where coverage below the antenna is crucial. These antennas are more compact, lower in cost, and shorter in length than comparable parallel-fed antennas.

1.8 GHz, 2.1 GHz and 2.4 GHz Invader™ antennas are parallel-fed collinear antennas with no down-tilt and are intended for generalpurpose applications. Parallel-fed collinear antennas have an increased efficiency at microwave frequencies, a more constant radiation angle with frequency and have better immunity to detuning from icing and rain than the typical end-fed collinear. ***ANTENEX®*** *has chosen to lead the way in the design of these antennas to provide a superior product in a market that shows great promise for growth over the next decade.*

Both end-fed and parallel-fed models are available with built in "N"-female connectors. End-fed models are also available with pigtail connectors.

The standard Invader™ features a 1" marine style threaded base mount and is excellent for pass through mounting on telemetry enclosures. The sleeve version identified by the "SL" suffix easily mounts to a mast with the new FMCB mount, see page 11. The FMCB mount makes a great wall bracket when the "U" bolt is removed. An economical choice is the pigtail version, suffixed with "P".

We are often questioned about the down-tilt aspect on the 800 and 900 MHz urban Invader™ as this pattern puts a signal null on the horizon. Our down-tilt angle was selected to minimize the signal power that is wasted above the horizon and maximizes the signal that is delivered into the antenna's service area. The sophisticated user recognizes that at these frequencies, when the antennas are located only a few feet off the ground, all signal paths are achieved by reflection. A 20-degree down-tilt angle therefore provides the maximum signal into the areas where propagation is desired. As down-tilt is most easily achieved in end-fed collinear antennas, this geometry was selected for our urban Invader™ models. All Invader™ models are tested on a HP® network analyzer prior to shipment.

Technical Data - Product Features & Information

	800/900 Models	1.8, 2.1, 2.4 GHz Models
• **Gain:**	See model.	See model.
• **Frequency:**	See model.	See model.
• **Radome Diameter:**	½"	¾"
• **Length:**		
0 dBd	9"	9"
3 dBd	16"	12"
5 dBd	24"	
6 dBd		25"
9 dBd		50"
• **VSWR:**	<1.5:1 in specified band	<2.0:1 in specified band
• **Power:**	25 watts	25 watts
• **Impedance:**	50 ohms, DC continuity	50 ohms, DC continuity
• **Ground Plane:**	None required	None required
• **Connector:**	ype "N"-female or pigtail	with RG316 and type "TNC"
• **Wind Load:**	125 M.P.H.	100 M.P.H.
• **Polarization:**	Vertical	Vertical
• **Beam Tilt:**	-20 degrees	0 degrees
• **Mounting:**	1", 14 TPI Marine Thread or 1" OD mounting sleeve	

Ordering Guide - Clear, Easy & Sensible!

FMC8243 = ***Invader***™ Fiberglass Mini-Cell Antenna, 824-896 MHz, 3dBd Gain, with Marine Base.

FMC	**Antenna Style**	**FMC =** ***Inader***™ Fiberglass Mini-Cell Antenna
824	**Frequency**	Frequency component of part number in bold below: **806**-869 **824-896** **896**-960 **1850**-1970 **2130**-2200 **2400**-2500
3	**Gain**	**0** = Unity **3** = 3 dBd **5** = 5 dBd **6** = 6 dBd **9** = 9 dBd
Blank	**Mount**	**Blank** = Threaded Marine Mount 14 tpi **SL** = Sleeve Aluminum Mount (requires brackets) **P** = Pigtail Version

THREADED BASE

Model	Frequency	
800/900 MHz UNITY GAIN THREADED MODELS		
FMC8060	806-869 MHz	Unity
FMC8240	824-896 MHz	Unity
FMC8960	896-960 MHz	Unity
1.8 , 2.1 AND 2.4 GHz UNITY GAIN THREADED MODELS		
FMC18500	1850-1970 MHz	Unity
FMC21300	2130-2200 MHz	Unity
FMC24000	2400-2500 MHz	Unity
800/900 MHz 3 dB GAIN THREADED MODELS		
FMC8063	806-869 MHz	3 dBd
FMC8243	824-896 MHz	3 dBd
FMC8963	896-960 MHz	3 dBd
1.8, 2.1, AND 2.4 GHz 3 dB GAIN THREADED MODELS		
FMC18503	1850-1970 MHz	3 dBd
FMC21303	2130-2200 MHz	3 dBd
FMC24003	2400-2500 MHz	3 dBd
800/900 MHz 5 dB GAIN THREADED MODELS		
FMC8065	806-869 MHz	5 dBd
FMC8245	824-896 MHz	5 dBd
FMC8965	896-960 MHz	5 dBd
1.8, 2.1 AND 2.4 GHz 6 dB GAIN THREADED MODELS		
FMC18506	1850-1970 MHz	6 dBd
FMC21306	2130-2200 MHz	6 dBd
FMC24006	2400-2500 MHz	6 dBd
1.8, 2.1 AND 2.4 GHz 9 dB GAIN THREADED MODELS		
FMC18509	1850-1970 MHz	9 dBd
FMC21309	2130-2200 MHz	9 dBd
FMC24009	2400-2500 MHz	9 dBd

SLEEVE BASE

800/900 MHz UNITY GAIN SLEEVE MODELS		
FMC8060SL	806-869 MHz	Unity
FMC8240SL	824-896 MHz	Unity
FMC8960SL	896-960 MHz	Unity

Threaded, Sleeve, and Pigtail Models

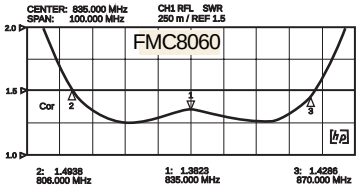
FMCB Mount

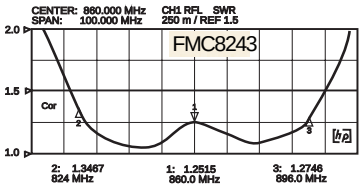
Model	Frequency	Gain
1.8, 2.1 AND 2.4 GHz UNITY GAIN SLEEVE MODELS		
FMC18500SL	1850-1970 MHz	Unity
FMC21300SL	2130-2200 MHz	Unity
FMC24000SL	2400-2500 MHz	Unity
800/900 MHz 3 dB GAIN SLEEVE MODELS		
FMC8063SL	806-869 MHz	3 dBd
FMC8243SL	824-896 MHz	3 dBd
FMC8963SL	896-960 MHz	3 dBd
1.8, 2.1 AND 2.4 GHz 3 dB GAIN SLEEVE MODELS		
FMC18503SL	1850-1970 MHz	3 dBd
FMC21303SL	2130-2200 MHz	3 dBd
FMC24003SL	2400-2500 MHz	3 dBd
800/900 MHz 5 dB GAIN SLEEVE MODELS		
FMC8065SL	806-869 MHz	5 dBd
FMC8245SL	824-896 MHz	5 dBd
FMC8965SL	896-960 MHz	5 dBd
1.8, 2.1 AND 2.4 GHz 6 dB GAIN SLEEVE MODELS		
FMC18506SL	1850-1970 MHz	6 dBd
FMC21306SL	2130-2200 MHz	6 dBd
FMC24006SL	2400-2500 MHz	6 dBd
1.8, 2.1 AND 2.4 GHz 9 dB GAIN SLEEVE MODELS		
FMC18509SL	1850-1970 MHz	9 dBd
FMC21309SL	2130-2200 MHz	9 dBd
FMC24009SL	2400-2500 MHz	9 dBd
PIGTAIL CABLE BASE		
800/900 MHz UNITY GAIN PIGTAIL MODELS		
FMC8060P	806-869 MHz	Unity
FMC8240P	824-896 MHz	Unity
FMC8960P	896-960 MHz	Unity
800/900 MHz 3 dB GAIN PIGTAIL MODELS		
FMC8063P	806-869 MHz	3 dBd
FMC8243P	824-896 MHz	3 dBd
FMC8963P	896-960 MHz	3 dBd
800/900 MHz 5 dB GAIN PIGTAIL MODELS		
FMC8065P	806-869 MHz	5 dBd
FMC8245P	824-896 MHz	5 dBd
FMC8965P	896-960 MHz	5 dBd
MOUNTING BRACKET		
FMCB	Mounting bracket for Sleeve	

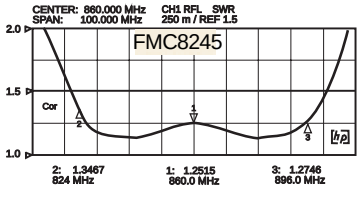
FMC8245, FMC8243, mounts not included.

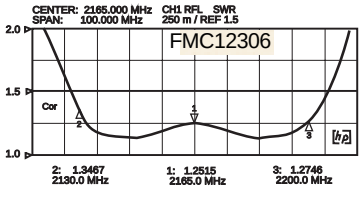
FMC8063P With FMCB Mount

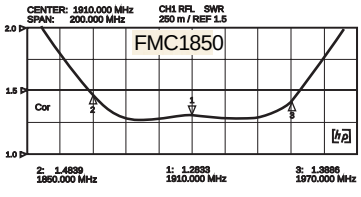
VSWR

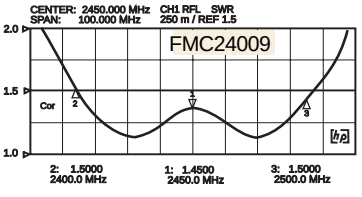




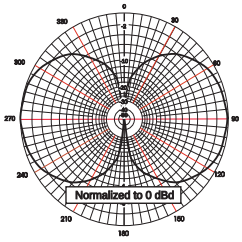








Vertical Field Patterns



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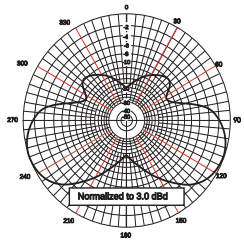

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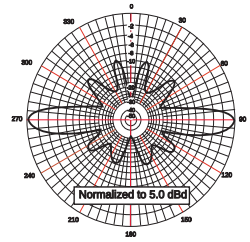

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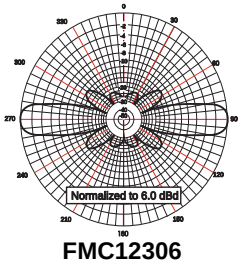

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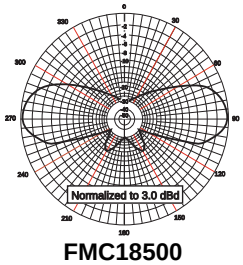

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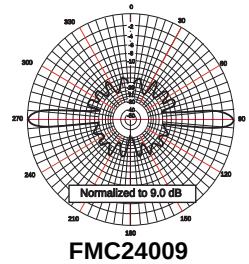

FMC24009

Many Models Available By Special Order Only, Call or visit http://www.antenex.com For Details!