

## MDS ClearWave™ Antennas

### Omni and Yagi Antennas

### MDS...Global wireless solutions. Industrial Wireless Performance.

For more than 2 decades, Microwave Data Systems (MDS) has been providing wireless networking solutions with applications in SCADA, telemetry, telecommunications, and online transaction markets. MDS provides licensed and unlicensed solutions, with more than 500,000 radios installed in over 110 countries.

### Now Improved MDS ClearWave™ Antennas!

MDS has improved the MDS ClearWave Antenna line to provide even better value. This line now features:

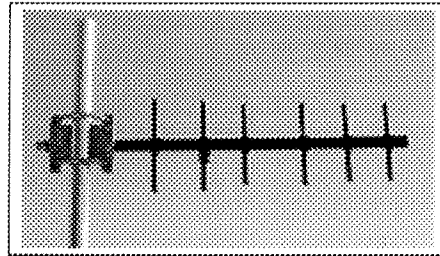
- Smaller Physical Size - Less wind loading, means higher wind and ice survival ratings
- Increased Gain - Over the previous design
- Acceptance of Larger Masts - Now up to 2.5 in. (6.35 cm)
- An Extended Warranty - Increased to 2 full years
- Teflon Impregnated Double Powder Coat Finish - Standard on all Yagi antennas
- Internally Matched Driven Elements - Improves antenna performance even when icy
- Integral Feedline - More secure and resistant to damage
- Feedline that may be Replaced in the Field - Simplifies maintenance if needed

### MDS ClearWave Antenna Product Overview

MDS ClearWave Antennas are premium quality antennas engineered for long lasting service. MDS ClearWave antennas operate in the 401-470 and 890-960 MHz frequency bands, and there are models available for various gain levels (see listing below). The Yagi antennas may be stacked for added gain where required.

**MDS ClearWave Omni Antennas** are fiberglass covered with a 16" pigtail to an "N" type connector. They are rated to 100 mph wind loading.

**MDS ClearWave Yagi Antennas** come standard with an endboom connection (N Female). The MDS ClearWave "A" "B" "C" antennas come with a "pigtail" connection which provides a one piece weather-proof cable factory sealed to the antenna in 10 ft. (3 m), 15 ft. (4.6 m), and 25 ft. (7.6 m) lengths respectively. The all-welded design of MDS ClearWave antennas utilize high strength 6061-T6 aluminum to withstand heavy ice, high wind and other extreme weather conditions. The Teflon impregnated powder coat finish provides superior corrosion resistance in all conditions and helps reduce ice loading. Each antenna comes complete with a heavy duty bracket, which easily permits vertical or horizontal polarization.



#### Market Applications

- Gas/Oil Production and Distribution
- Water, Gas and Electric Utilities
- Lotteries
- Traffic Control
- Industrial Process Control
- Railroad Communication Systems

## Why consider an MDS ClearWave Antenna solution?

**High system performance and data integrity!** Through robust design and construction, MDS ClearWave Antennas are optimized for MDS Data Networking systems.

**Flexibility and rapid installation!** Quick return on investment due to simple installation. These antenna products are designed for optimum installation efficiency.

**Performance under the most adverse conditions!** Exceptional design provides excellent performance in the face of interference or difficult signal paths.

**Simplified System Ordering!** MDS offers one stop shopping - one product order covers both our radios and the appropriate antennas.

## Features

- High gain
- Heavy duty
- Welded construction
- High grade aluminum (6061-T6)
- Tough Teflon impregnated powder coat finish
- Heavy duty mounting bracket included
- Yagis available with N Female connector standard. Optional factory sealed N Male in 10', 15', and 25' lengths
- Omnis available with N Male connector standard

## Downloads

- English PDF Data Sheet
- Portuguese PDF Data Sheet
- Spanish PDF Data Sheet
- French PDF Data Sheet

## Specifications - Yagi Antennas

Part #	Frequency (MHz)	# of Elements	Gain (dBd)	Antenna Connector/Cable
97-3194-A01	406-430	3	6.5	Standard N Female
97-3194-A01A	406-430	3	6.5	10' LMR400 with factory weather sealed N Male
97-3194-A01B	406-430	3	6.5	15' LMR400 with factory weather sealed N Male
97-3194-A01C	406-430	3	6.5	25' LMR400 with factory weather sealed N Male
97-3194-A02	406-430	6	10	Standard N Female
97-3194-A02A	406-430	6	10	10' LMR400 with factory weather sealed N Male
97-3194-	406-430	6	10	15' LMR400 with factory weather

A02B					sealed N Male
97-3194-A02C	406-430	6	10		25' LMR400 with factory weather sealed N Male
97-3194-A03	430-450	3	6.5		Standard N Female
97-3194-A03A	430-450	3	6.5		10' LMR400 with factory weather sealed N Male
97-3194-A03B	430-450	3	6.5		15' LMR400 with factory weather sealed N Male
97-3194-A03C	430-450	3	6.5		25' LMR400 with factory weather sealed N Male
97-3194-A04	430-450	6	10		Standard N Female
97-3194-A04A	430-450	6	10		10' LMR400 with factory weather sealed N Male
97-3194-A04B	430-450	6	10		15' LMR400 with factory weather sealed N Male
97-3194-A04C	430-450	6	10		25' LMR400 with factory weather sealed N Male
97-3194-A05	450-470	3	6.5		Standard N Female
97-3194-A05A	450-470	3	6.5		10' LMR400 with factory weather sealed N Male
97-3194-A05B	450-470	3	6.5		15' LMR400 with factory weather sealed N Male
97-3194-A05C	450-470	3	6.5		25' LMR400 with factory weather sealed N Male
97-3194-A06	450-470	6	10		Standard N Female
97-3194-A06A	450-470	6	10		10' LMR400 with factory weather sealed N Male
97-3194-A06B	450-470	6	10		15' LMR400 with factory weather sealed N Male
97-3194-A06C	450-470	6	10		25' LMR400 with factory weather sealed N Male
97-3194-A13	902-960	3	6.4		Standard N Female
97-3194-A13A	902-960	3	6.4		10' LMR400 with factory weather sealed N Male
97-3194-A13B	902-960	3	6.4		15' LMR400 with factory weather sealed N Male
97-3194-A13C	902-960	3	6.4		25' LMR400 with factory weather sealed N Male
97-3194-A14	902-960	6	10		Standard N Female

97-3194-A14A	902-960	6	10	10' LMR400 with factory weather sealed N Male
97-3194-A14B	902-960	6	10	15' LMR400 with factory weather sealed N Male
97-3194-A14C	902-960	6	10	25' LMR400 with factory weather sealed N Male

**Additional Specifications**

Bandwidth VSWR 1.5 400MHz:	>= 38 MHz
Bandwidth VSWR 1.5 900MHz:	58 MHz
Power Rating:	150 Watts
Lightning Protection:	DC ground
Standard Antenna Connector:	Type:N Female
A, B, or C Antenna Connector Type:	N Male
Front to Back Ratio:	>=15 dB
Wind Loading:	400 MHz: 200 mph wind, 110 mph with 0.5" radial ice 900 MHz: 200 mph wind, 160 mph with 0.5" radial ice

**Mounting Information**

A mounting bracket complete with hardware is supplied to mount the antenna on a 1.5" to 2.5" Dia. mast. Allows for vertical or horizontal polarization.

**Other frequencies available.  
Warranty 2 full years.**

**Specifications - Omni Antennas**

Part #	Frequency (MHz)	Description	Vertical Beam Width	Height	Weight
97-3194A16	902-928	5dBd Omnidirectional N male 16" jumper	27°	48"	1.75 lb.
97-3194A17	902-928	7dBd Omnidirectional N male 16" jumper	17°	96"	4 lb.
97-3194A18	406-430	5dBd Omnidirectional N male 16" jumper	22°	71"	4 lb.
97-3194A19	430-450	5dBd Omnidirectional N male 16" jumper	27°	71"	4 lb.
97-3194A20	450-470	5dBd Omnidirectional N male 16" jumper	27°	71"	4 lb.
97-3194A21	890-960	3dBd Omnidirectional N male 16" jumper	40°	26"	1.25 lb.

97- 3194A22	890-960	5dBd Omnidirectional N male 16" jumper	27°	48"	1.75 lb.
97- 3194A23	928-960	7dBd Omnidirectional N male 16" jumper	17°	96"	4 lb.

#### Additional Specifications

Power Rating: 250 Watts  
 Lightning Protection: DC ground  
 Wind Loading: 100 mph  
 White Fiberglass Radome

#### Mounting Information

A pipe mount that can attach up to a 2.5" pipe (3" OD) is supplied. The antennas are all fiberglass inclosed with a white radome.

**Warranty 2 full years.**

MDS products are manufactured under a quality system certified to ISO 9001. MDS reserves the right to make changes to specifications of products described in this data sheet at any time without notice and without obligation to notify any person of such changes.

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