

## MONOPATCH ANTENNA

### High efficiency, hemispherical antenna

L3Harris Monopatch Antennas are designed with a unique, patent-pending architecture that provides greater geographical coverage than is possible with common communications antennas.

#### **CLEAR LINE-OF-SIGHT COMMUNICATION**

The unique design of the antenna creates a three-dimensional hemispherical pattern with full 360-degree azimuthal and 180-degree elevation coverage.

The Monopatch Antenna is well suited for a variety of missions and applications, especially for use with relay or terminal nodes in mobile ad hoc network (MANET) systems.

With full azimuthal and elevation coverage, the warfighter can maintain clear line-of-sight communication in challenging terrain environments. In addition, loitering aircraft or unmanned aerial vehicles can operate at greater standoff distances when deployed as air relay assets.

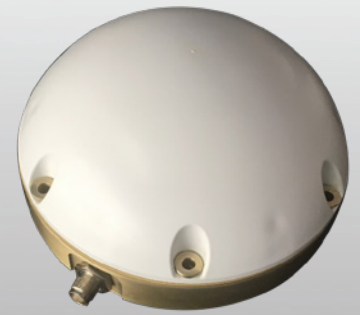
#### **SUCCESSFUL TRACK RECORD**

The Monopatch Antenna has been successfully deployed on light aircraft, helicopters and ground vehicles with two of the most commonly utilized commercially available MANET radios.

Future developments for the antenna include additional L and S band versions, MIMO and TSMx compatibility.

The Monopatch Antenna is currently available in two frequency ranges for use with commercially available MANET radios: 1) a dual frequency version in the L/S bands (NATO D/E) and 2) a wider S band version (NATO E band).

The antenna uses a common aluminum housing and dome cover with two options for location of the TNC(F) connector.



#### **BENEFITS**

The increased geographical coverage of the L3Harris Monopatch Antennas provides today's warfighters with greater capabilities on the battlefield.

- > Extended range
- > Passive operation
- > Single radio frequency (RF) interconnect
- > Lightweight



### ELECTRICAL SPECIFICATIONS

Electrical	FA00431-01 FA00437-01	FA00432-01 FA00438-01
Frequency range	1.74-1.84 GHz 2.14-2.3 GHz	2.2-2.5 GHz
Peak efficiency	79%	85%
Peak gain	5 dB	5 dB
VSWR	< 3:1	< 2:1
Impedence	50 ohms	50 ohms
Polarization	Hybrid	Hybrid

### MECHANICAL SPECIFICATIONS

Size	Size 6" d x 3" h
Weight	1.4 lbs
Connector	TNC (F) see table
Top attach	6X 7075-T6 bushings 0.200" clearance holes
Bottom attach	5 X #8-32 threaded inserts
Magnets	20 lbs (side connector versions)
Radome	Chemically resistant, high impact plastic (white)
Housing 6061-T6	MIL-DTL-5541, CI 1A

### QUALIFICATION TESTING

MIL STD 810G	501.6 storage temperature, high (85 C)
MIL STD 810G	502.6 storage temperature, low (-55 C)
MIL STD 810G	507.6 humidity, Procedure II (aggravated, 10 days)
MIL STD 810G	514.7 vibration, category 9 CH47D, UH-60 combined, external stores CH47D, UH-60 combined, external stores (sine on random, 4hrs each axis)

### CONNECTOR OPTIONS

	SIDE	BOTTOM
FA00431-01	X	
FA00432-01	X	
FA00437-01		X
FA00438-01		X

### FEATURES

- > Hemispherical coverage
- > 5 decibels peak gain
- > 80 percent peak efficiency
- > Voltage standing wave ratio (VSWR) <3:1
- > Maximum power: 8 watts
- > 1.4 pounds

#### Monopatch Antenna

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