

# Blackhawk M2M and IoT Antennas

Blackhawk Antennas offer premium antenna solutions for M2M and the Internet of Things (IoT) applications.

With Blackhawk you get superior performance, maximum range and the ultimate in reliability. They are used by RF professionals who specialise in monitoring and telemetric applications.

Blackhawk Antennas are premium grade, quality tested and ideal for all types of environments to improve your coverage - providing efficiency matched with high gain. Not all antennas are equal – so speak to your specialist antenna supplier and ask for Blackhawk.



## Blackhawk M2M Omni Antenna 3G/4G (BH-MM-102)

Provides a 4dBi gain across 700 to 2700MHz

This is a compact antenna for GSM/HSPA/LTE with an omni-directional antenna designed for mission critical M2M and IoT applications.

- Supports 698-2700 MHz
- compact design without compromising on performance
- bracket mount
- Low Loss LMR195 x 3m cable with SMA Male connector
- Antenna has a diameter of 48mm with a height of 82mm

### SPECIFICATIONS

Electrical		Mechanical	
Frequency Range	698-960/1710-2700MHz	Dimensions	Ø48x82mm
Band width	262/990MHz	Weight	220g
Gain 1	4dBi / 698-960MHz	Operating Temperature	-40°C to +70°C
Gain 2	4dBi / 2400-2700MHz	RoHS Compliant	YES
V.S.W.R	≤2.0		
Radiation	Omni-direction		
Polarization	Vertical		
Lightning Protection	DC-Grounded		
Maximum Input Power	50W		
Impedance	50Ω		
Connector	SMA Male		
Cable Type	LMR195		
Cable Length	3m		
Antenna Radome Material	ABS		
Mount way	Wall Mount		



## Blackhawk M2M Puck Antenna 3G/4G/Wi-Fi + GPS (BH-MM-101)

Provides a 2dBi gain across 700 to 2700MHz

The low profile antenna for GSM/3G/LTE/WIFI/GPS is an omni-directional antenna designed for mission critical M2M and IoT applications.

- Supports cellular 698-2700 MHz, Wi-Fi 2.4GHz and GPS
- IP66 rated
- compact low profile design without compromising on performance
- Stud Mount
- Low Loss RG174 3m cable with SMA Male connectors
- Antenna has a diameter of 80mm with a height of 15mm

### SPECIFICATIONS

GPS:		Mechanical	
Frequency Range	1575.42MHz±3 MHz	Housing	Black
V.S.W.R	1.5:1	Cable	RG174
Polarization Type	RHCP	Length	3M
Impedance	50Ω	Connector	3xSMA Male
LNA Gain	28±2dB Typical	Working Temp	-40°C~+85°C
Noise Figure	1.5dB	Humidity	55%-75%RH
DC Voltage	2.2-5.0V	Waterproof	IP67
DC current	5-15mA	Antenna Radome Material	ABS
WIFI:		Mount way	Screw
Frequency range	2400-2500MHz	Antenna Dimension	Ø80x15 mm
V.S.W.R	2.0:1	Weight	150g
Gain	3dB	RoHS Compliant	YES
LTE:			
Frequency range	698-960MHz, 1710-2700MHz		
V.S.W.R	2.0:1		
Gain	2dBi		



## Blackhawk M2M Low Profile Omni 3G/4G (BH-MM-301)

Provides a 5dBi gain across 700 to 2700 Mhz

The low profile antenna for GSM/HSPA/LTE is an omni-directional antenna designed for mission critical M2M and IoT applications.

- Supports 698-2700 MHz
- IP67 rated
- compact low profile design without compromising on performance
- Stud Mount or optional bracket mount
- Low Loss RG58 3m cable with SMA Male connector
- Antenna has a diameter of 143.6mm with a height of 65mm

### SPECIFICATIONS

Frequency Range	698-2700MHz	Mount way	Screw/Stick
Gain	5dBi	Dimensions	Ø143.6x65mm
V.S.W.R	≤1.8	Weight	1.2KG
Radiation	Omni-direction	Operating Temperature	-40°C to +70°C
Polarization	Vertical	RoHS Compliant	YES
Maximum Input Power	50W		
Impedance	50Ω		
Connector	SMA Male		
Cable Type	RG58U		
Cable Length	3m		
Antenna Radome Material	PC/ABS		



# Blackhawk M2M Low Profile 3G/4G/Wi-Fi + GPS (BH-MM-302)

**Provides a 3dBi gain across 700 to 2700Mhz**

The low profile antenna for GSM/3G/LTE/WIFI/GPS is an omni-directional antenna designed for mission critical M2M and IoT applications.

- Supports cellular 698-2700 MHz, Wi-Fi 2.4/5GHz and GPS / GLONASS
- IP67 rated
- compact low profile design without compromising on performance
- Stud Mount or optional bracket mount
- Low Loss RG58 3m cable with SMA Male connector
- Antenna has a diameter of 143.6mm with a height of 65mm

## SPECIFICATIONS

### GPS (GLONASS):

Frequency Range	1575.42 MHz $\pm$ 3 MHz / 1602-1610 MHz
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V.S.W.R	2.5
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Polarisation Type	RHCP
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Impedance	50 $\Omega$
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LNA Gain	28 $\pm$ 2dB Typical
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Noise Figure	1.5dB
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DC Voltage	2.2-5.0V
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DC current	5-15mA
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### WIFI

Frequency range	2.4/5GHZ
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V.S.W.R	2.5
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Gain	3dBi
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Polarisation	Linear
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Impedance	50 $\Omega$
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### GSM3G/LTE

Frequency range	698-960MHz / 1710-2700MHz
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V.S.W.R	2.0:1
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Gain	3dBi
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Housing	Black
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Cable	RG174 (GPS), RG58U (WiFi/ LTE)
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Length	3m
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Connector	SMA Male (LTE/GPS), RP-SMA (WiFi)
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Working Temp	-40 $^{\circ}$ C~+85 $^{\circ}$ C
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Humidity	55%-75%RH
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Waterproof	IP67
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Antenna Radome Material	ABS
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Mount way	Screw
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Antenna Dimension	$\Phi$ 143.6x65 mm
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Weight	1.2KG
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# Blackhawk M2M Low Profile Antenna - MIMO 3G/4G/Wi-Fi + GPS (BH-MM-303)

**Provides a 3dBi gain across 700 to 2700Mhz**

The low profile antenna for GSM/3G/LTE/WIFI/GPS is an omni-directional antenna designed for mission critical M2M and IoT applications.

- Supports MIMO cellular 698-2700 MHz, MIMO Wi-Fi 2.4/5GHz and GPS
- IP67 rated
- compact low profile design without compromising on performance
- Stud Mount or optional bracket mount
- Low Loss RG58 3m cable with SMA Male connector
- Antenna has a diameter of 143.6mm with a height of 65mm

## SPECIFICATIONS

### GPS

Frequency Range	1575.42 MHz $\pm$ 3 MHz
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V.S.W.R	<2.0
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Polarisation Type	RHCP
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Impedance	50 $\Omega$
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LNA Gain	28 $\pm$ 2dB Typical
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Noise Figure	1.5dB
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DC Voltage	2.2-5.0V
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DC current	5-15mA
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### WIFI

Frequency range	2.4/5GHZ
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V.S.W.R	2.5
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Gain	3dBi * 2
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Polarization	Linear
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Impedance	50 $\Omega$
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### GSM/3G/LTE

Frequency range	698-960 MHz / 1710-2700 MHz
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V.S.W.R	2.0:1
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Gain	3dBi * 2
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Housing	Black
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Cable	RG174 (GPS), RG58U (WiFi/ LTE)
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Length	3m
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Connector	SMA Male (LTE/GPS), RP-SMA (WiFi)
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Working Temp	-40 $^{\circ}$ C~+85 $^{\circ}$ C
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Humidity	55%-75%RH
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Waterproof	IP67
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Antenna Radome Material	ABS
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Mount way	Screw
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Antenna Dimension	$\Phi$ 143.6x65 mm
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Weight	1.2KG
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## Blackhawk Rubber Stubby (BH-MM-602)

5dB gain for 2400-2500 MHz

Rubber Stubby antenna suited for direct connection to Wi-Fi routers and access points for 2.4GHz Wi-Fi Applications.

**Connector** : RP SMA Male with adjustable right angle base.

**Dimension** : 195x14 mm



## Blackhawk Paddle Antenna (BH-MM-601)

- 2dBi gain for 698-960 MHz

- 2dBi gain for 1710-2700 MHz

- 5dB gain for 2500-2700 MHz

Wideband stubby paddle antenna suited for direct connection to modems for M2M applications.

**Connector** : SMA Male with adjustable right angle base.

Covers all mobile bands and 2.4GHz Wi-Fi.

**Dimension** : 160x20 mm



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