

# M2M Low Profile

## Double Cell IP67 Antenna with GNSS

M2M Low Profile is a fully rugged outdoor antenna designed specifically for M2M applications. This antenna provides best in class performance with two high gain cellular/LTE, and GNSS antennas inside a single robust and compact housing.

- 2 x Wideband Cellular/LTE Elements (MIMO)
- 1 x GNSS Antenna
- Leading LTE performance while in coexistence with multiple other embedded antenna technologies
- Lower profile and smaller footprint than competing solutions
- Ground plane independent
- Available in black or white
- US Patent 10109918

### Descriptions/Applications

The M2M Low Profile antenna builds on the best in class RF performance, leading design, features, and extended product life tradition of this highly successful product line. Ideal for kiosks, digital signage, wireless ATMs, vending machines, NEMA enclosures, industrial metering and other wireless machine to machine applications. This antenna has been designed to mount externally to an M2M or IoT enabled asset, and requires no servicing through its life time.



Optimal MIMO Performance for LTE

Compact and Robust UV Resistant Housing

Full Outdoor Installation Ready

Customizable Cables and Connectors

Low loss cable accessories

Fast custom turnaround time

GNSS



### Standard Configurations

<b>AP-M2M-LP-CCG-Q-BL-6</b>	MIMO Cell/LTE x 2 & GNSS, Threaded bolt mount, SMA, Black, 6ft coax
<b>AP-M2M-LP-CCG-A-BL-6</b>	MIMO Cell/LTE x 2 & GNSS, Adhesive mount, SMA, Black, 6ft coax

**Electrical Data**

Frequency Range	Antennas 1 & 2	698-960/1700-2700 MHz	
	Antenna 3	1550~1610 MHz	
Operational Bands	Antennas 1 & 2	LTE/Cellular	
	Antenna 3	GPS L1/GALILEO E1/GLONASS G1/BeiDou B1/QZSS L1	
Peak Gain: Isotropic	Antennas 1 & 2	698-960 MHz	2.0 dBi
		1710-2700 MHz	4.0 dBi
	Antenna 3	30.5 dBi	
Isolation	Antennas 1 & 2	> 10 dB	
Correlation Co-efficient	Antennas 1 & 2	< 0.1	

**Environmental Data**

Hazardous Substances	RoHS Compliant
Temperature	-40°C to 65°C (-40°F to + 149°F) Operating and Storage conformance to IEC 60068
Humidity (Non-Condensing)	5% to 96% Operating and Storage conformance to IEC 60068
Water Ingress	IP67
Military Spec	MIL-STD 810 conformance to vibration

**Mounting Data**

Dimensions	Height	1.13" (28.6mm)
	Width	2.66" (67.6mm)
	Length	6.88" (174.8mm)
Color	Black (BL) or White (WH)	

**Cable Data- Cell/LTE**

Type	CFD195 Low Loss
Diameter	0.195" (4.953 mm)
Length	1 feet (0.3 m)
Termination	SMA Male

**Cable Data- GNSS**

Type	RG-174U
Diameter	0.100" (2.54 mm)
Length	1 feet (0.3 m)
Termination	SMA Male

**GNSS Data - Ceramic Patch Antenna Specification**

Bandwidth	1561 – 1602 MHz
Gain@Zenith	2.5 dBi
Polarization	R.H.C.P.
Axial Ratio	3.0 dB Typ.

**GNSS Data - LNA Specification**

Noise Figure	1.2 dB
Gain	28 dBi
Voltage	3.3V~5.6V
Current	9.6±1mA@3.3V