

## UPS Brick

The UPSBrick delivers a high capacity UPS battery solution or temporary power source for Microhard devices. The 15,000 mAh capacity will keep a modem alive for up to 24 hours! The UPSBrick can be installed into cabinets, industrial panels or vehicles and the configurable remote power loss alarm gives you notice to get your main power source back online.

*High Capacity*

*LED Status*

*Remote Power Loss Alarm*

*12V @ 1A Output*

*15,000 mAh*



## Specifications

<b>Input Voltage</b>	8 to 28 VDC	<b>Temperature</b>	-40°C to +75°C
<b>Output Voltage</b>	12 VDC (1A nominal)	<b>Dimensions</b>	2.25" W X 2.25" H X 3.25" L
<b>Battery Capacity</b>	15,000 mAh @ 3.7V	<b>Weight</b>	1.2 lbs

## Contact Information

For more information please contact:



**BOCK OPTRONICS INC.**  
14 Steinway Blvd., Unit 7  
Toronto, Ontario M9W 6M6

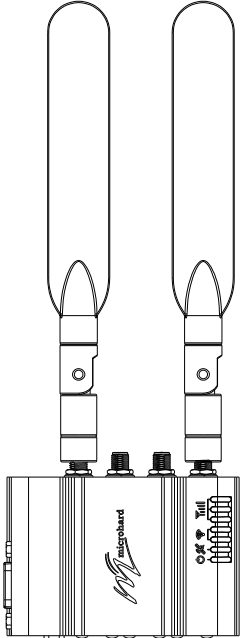
Tel: (416) 674-2804  
[sales@bockoptronics.ca](mailto:sales@bockoptronics.ca)  
[www.bockoptronics.ca](http://www.bockoptronics.ca)

Copyright 2019 Microhard Systems Inc.  
Specifications subject to change without notice.



[www.microhardcorp.com](http://www.microhardcorp.com)

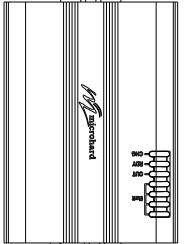
# Connection Diagram



**Microhard Modem**  
(BulletPlus Shown)

12 VDC

Output



**UPSBrick\***  
(\*Multiple units can be cascaded)

Input

8-28 VDC  
(Or Microhard Wall Adapter (12V))

# 3-in-1 2x LTE / WIFI Puck Antenna



## Dual LTE (Main + Diversity) + Dual Band WIFI Puck Antenna

This robust antenna is a rugged, all-in-one puck antenna for use with Microhard cellular modems. This antenna features 2x LTE Dual Band Antennas, as well as a integrated Dual Band 2.4/5.8GHz WIFI antenna. Ideal for applications where the antenna will be permanently mounted.

2x LTE Antennas

3 dBi Gain LTE

Dual Band WIFI

Robust Design

All-in-One Solution



## Specifications

<b>Frequency Range</b>	Dual LTE: 698 - 960 / 1710 - 2700 MHz WIFI: 2400 - 2500 / 5150-5750 MHz	<b>Temperature</b>	-40°C to +85°C
<b>Gain</b>	LTE 1: 3 dBi LTE 2: 3 dBi WIFI: 2.15 dBi	<b>Connectors</b>	LTE: SMA Male WIFI: RPSMA Male
<b>Output Impedance</b>	50 Ohm	<b>Dimensions</b>	15mm H x 80mm OD
<b>VSWR</b>	LTE: < 2.0 WIFI: < 2.5	<b>Humidity</b>	55% to 75% RH
<b>Polarization</b>	Linear	<b>Cable</b>	RG174 - 150 cm (x3)
		<b>Weight</b>	50g
		<b>Approvals</b>	RoHS Compliant

## Contact Information

Copyright 2020 Microhard Systems Inc.  
Specifications subject to change without notice.

For more information please contact:



### BOCK OPTRONICS INC.

14 Steinway Blvd., Unit 7  
Toronto, Ontario M9W 6M6

Tel: (416) 674-2804  
[sales@bockoptronics.ca](mailto:sales@bockoptronics.ca)  
[www.bockoptronics.ca](http://www.bockoptronics.ca)



[www.microhardcorp.com](http://www.microhardcorp.com)

# 3-in-1 2x LTE / GPS Puck Antenna



## Dual LTE (Main + Diversity) + GPS Puck Antenna

This robust antenna is a rugged, all-in-one puck antenna for use with Microhard cellular modems. This antenna features 2x LTE Dual Band Antennas, as well as a high gain Active GPS Antenna. The MHK035601 is ideal for applications where the antenna will be permanently mounted.

2x LTE Antennas

3 dBi Gain LTE

28 dB Active GPS

Robust Design

All-in-One Solution



## Specifications

<b>Frequency Range</b>	Dual LTE: 698 - 960 / 1710 - 2700 MHz GPS: 1575.42 ± 3 MHz	<b>Temperature</b>	-40°C to +85°C
<b>Gain</b>	LTE: 3 dBi GPS: 5 dBi (Passive) / 28 ± 2 dB (Active)	<b>Connectors</b>	2x LTE: SMA Male GPS: SMA Male
<b>Output Impedance</b>	50 Ohm	<b>Dimensions</b>	15mm H x 80mm OD
<b>VSWR</b>	LTE: < 2.0 GPS: < 2.5	<b>Humidity</b>	55% to 75% RH
<b>Polarization</b>	Linear	<b>Cable</b>	RG174 - 150 cm (x3)
		<b>Weight</b>	50g
		<b>Approvals</b>	RoHS Compliant

## Contact Information

Copyright 2021 Microhard Systems Inc.  
Specifications subject to change without notice.

For more information please contact:



### BOCK OPTRONICS INC.

14 Steinway Blvd., Unit 7  
Toronto, Ontario M9W 6M6

Tel: (416) 674-2804  
[sales@bockoptronics.ca](mailto:sales@bockoptronics.ca)  
[www.bockoptronics.ca](http://www.bockoptronics.ca)



[www.microhardcorp.com](http://www.microhardcorp.com)

# 3-in-1 GPS / LTE / WIFI Puck Antenna



## Active GPS + LTE + WIFI Puck Antenna

This robust antenna is a rugged, all-in-one puck antenna for use with Microhard cellular modems. This antenna features a Dual Band LTE Antenna, a high gain Active GPS antenna, as well as an integrated Dual Band 2.4/5.8GHz WIFI antenna. Ideal for applications where the antenna will be permanently mounted.

Dual Band LTE

3 dBi Gain LTE

3-in-1 Antenna

28 dB Active GPS

2.4 / 5.8 GHz WIFI



## Specifications

<b>Frequency Range</b>	GPS: 1575.42 ± 3 MHz LTE: 698 - 960 / 1710 - 2700 MHz WIFI: 2400 - 2500 / 5150-5750 MHz	<b>Temperature</b>	-40°C to +85°C
<b>Gain</b>	GPS: 5 dBi (Passive) / 28 ± 2 dB (Active) LTE: 3 dBi WIFI: 2.15 dBi	<b>Connectors</b>	GPS: SMA Male LTE: SMA Male WIFI: RPSMA Male
<b>Output Impedance</b>	50 Ohm	<b>Dimensions</b>	15mm H x 80mm OD
<b>VSWR</b>	GPS: < 2.5 LTE: < 2.0 WIFI: < 2.5	<b>Humidity</b>	55% to 75% RH
		<b>Cable</b>	RG174 - 150 cm (x3)
		<b>Weight</b>	150g

## Contact Information

Copyright 2021 Microhard Systems Inc.  
Specifications subject to change without notice.

For more information please contact:



### BOCK OPTRONICS INC.

14 Steinway Blvd., Unit 7  
Toronto, Ontario M9W 6M6

Tel: (416) 674-2804  
[sales@bockoptronics.ca](mailto:sales@bockoptronics.ca)  
[www.bockoptronics.ca](http://www.bockoptronics.ca)



[www.microhardcorp.com](http://www.microhardcorp.com)

**LTE (Main/Diversity) Dual Band Puck Antenna**

The Dual LTE Antenna is a rugged, dual band, dual LTE connection antenna for use with Microhard cellular modems. This dual band antenna features dual LTE connections for Main & Diversity Antennas. Available in either a permanent mount, ideal for applications where the antenna will be permanently mounted, or a temporary magnetic mount options.

*LTE / 4G Dual Band*

*Permanent or Magnetic*

*Main / Diversity*

*1-4 dBi Gain*

*Weather Proof*



**Specifications**

<b>Frequency Range</b>	700 - 960 MHz & 1700 - 2700 MHz	<b>Connector (LTE x2)</b>	SMA Male
<b>Gain</b>	1-4 dBi	<b>Dimensions</b>	45mm H x 80mm OD (Base)
<b>Output Impedance</b>	50 Ohm	<b>Humidity</b>	40% to 95% RH
<b>VSWR</b>	< 2.5	<b>Cable</b>	RG174 - 2' (Permanent) RG174 - 12' (Magnetic Mount)
<b>Polarization</b>	Linear Vertical	<b>Order Options</b>	Permanent Mount: MHS035470 Magnetic Mount: MHS035480
<b>Temperature</b>	-40°C to +85°C		

**Contact Information**

Copyright 2018 Microhard Systems Inc.  
Specifications subject to change without notice.

For more information please contact:



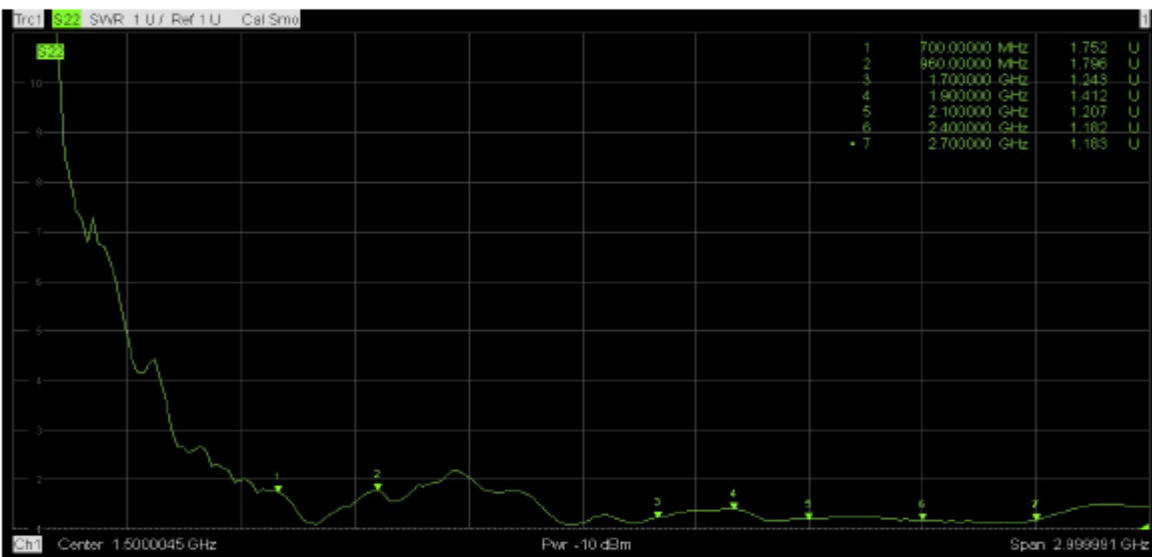
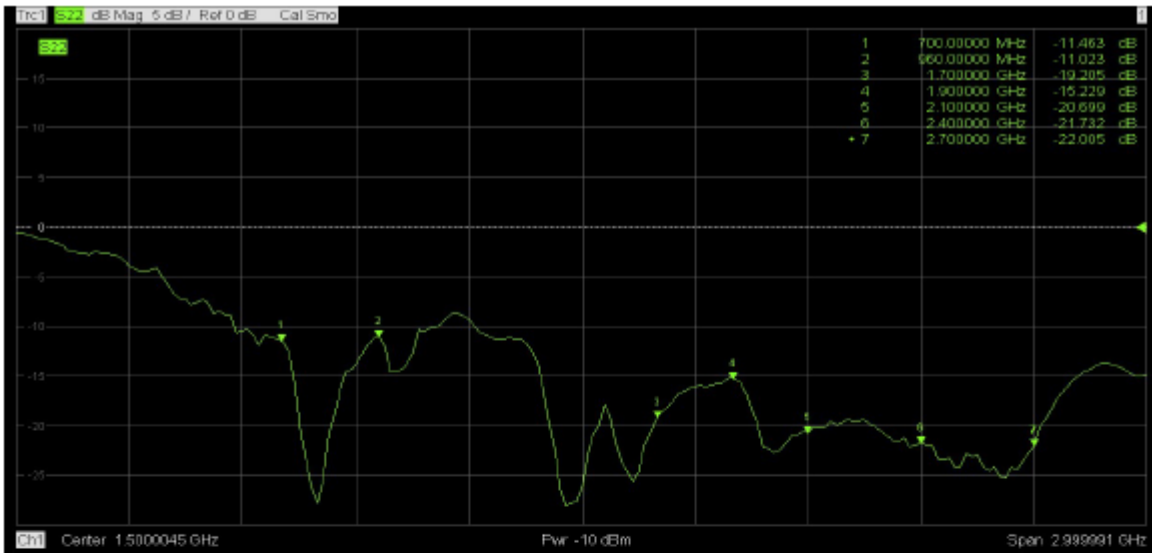
**BOCK OPTRONICS INC.**  
14 Steinway Blvd., Unit 7  
Toronto, Ontario M9W 6M6

Tel: (416) 674-2804  
[sales@bockoptronics.ca](mailto:sales@bockoptronics.ca)  
[www.bockoptronics.ca](http://www.bockoptronics.ca)

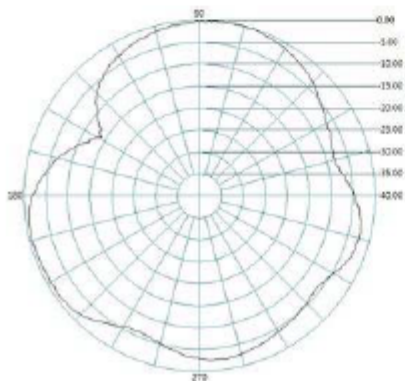


[www.microhardcorp.com](http://www.microhardcorp.com)

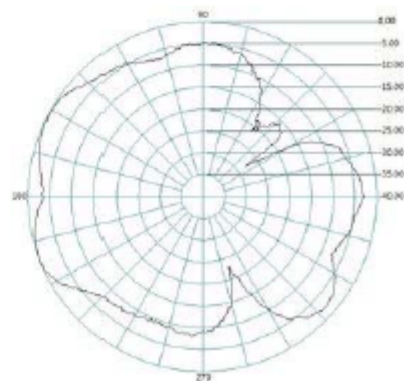
## LTE Connection #1



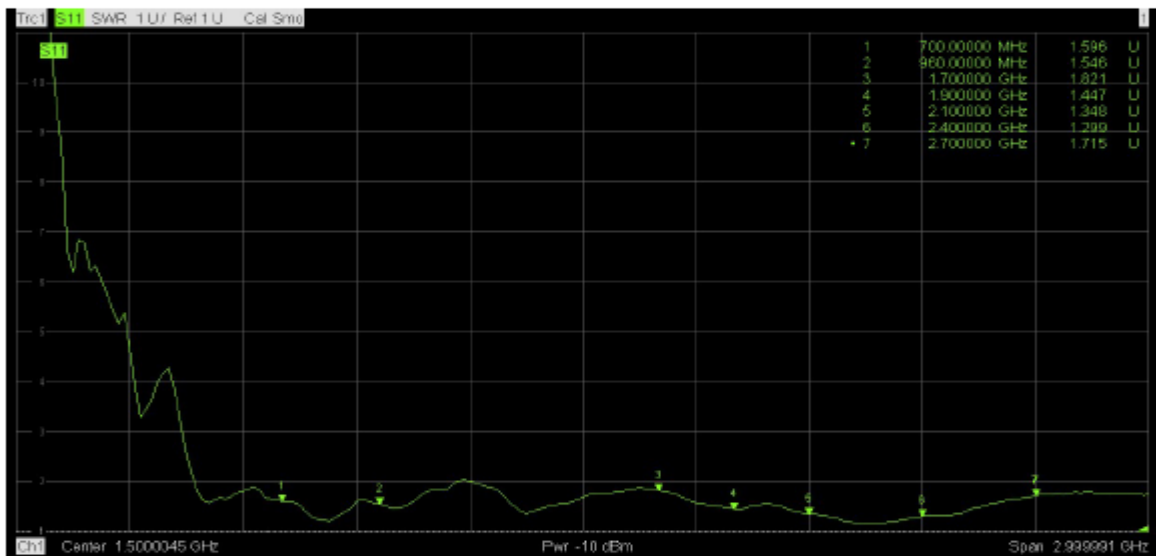
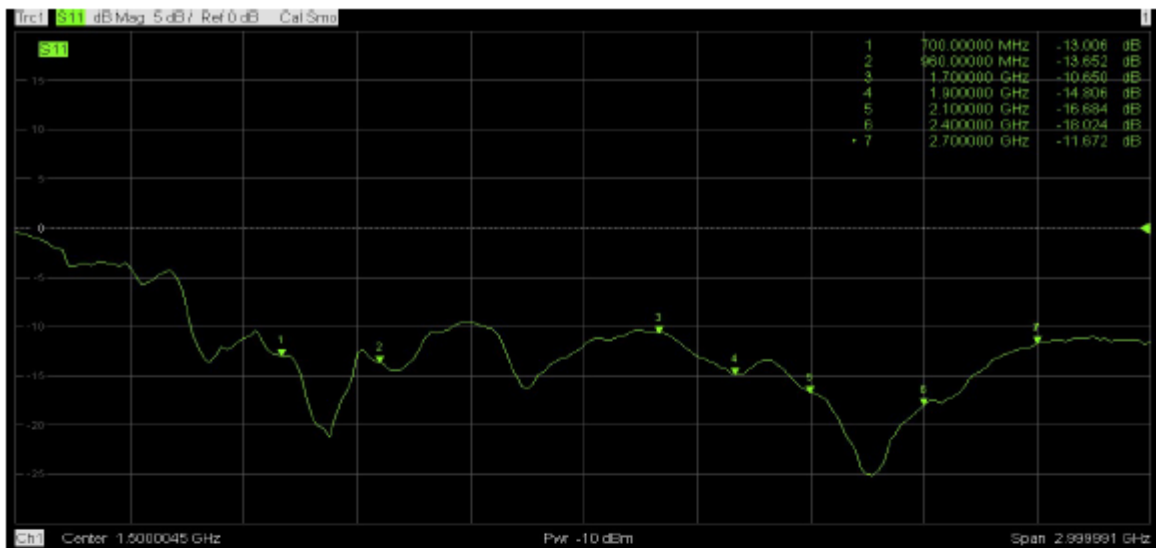
H-PLANE



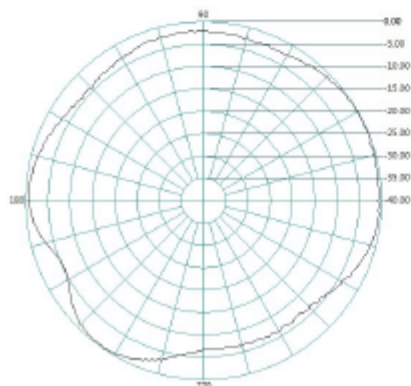
E-PLANE



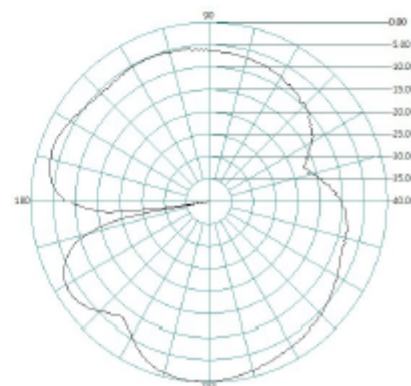
LTE Connection #2



H-PLANE



E-PLANE





# MHS035460



## LTE Dual Band Magnetic Base Antenna

The MHS035460 is a rugged, Dual Band Desktop Antenna for use with Microhard cellular modems. This antenna features a magnetic base for desktop, cabinet and external mounting, ideal for quick, mobile, or temporary installations.

*LTE / 3G Dual Band*

*Magnetic Base*

*Rugged Design*

*1-4 dBi Gain*

*Weather Proof*



## Specifications

<b>Frequency Range</b>	700 - 960 MHz & 1575 - 2700 MHz	<b>Operating Temperature</b>	-40°C to +85°C
<b>Gain</b>	1-4 dBi	<b>Connector</b>	SMA Male
<b>Output Impedance</b>	50 Ohm	<b>Dimensions</b>	25mm H x 80mm OD (Base)
<b>VSWR</b>	<= 2.3	<b>Weight</b>	90 grams (125 w/cable)
<b>Polarization</b>	Linear Vertical	<b>Cable</b>	RG174 - 2 m

## Contact Information

Copyright 2015 Microhard Systems Inc.  
Specifications subject to change without notice.

For more information please contact:

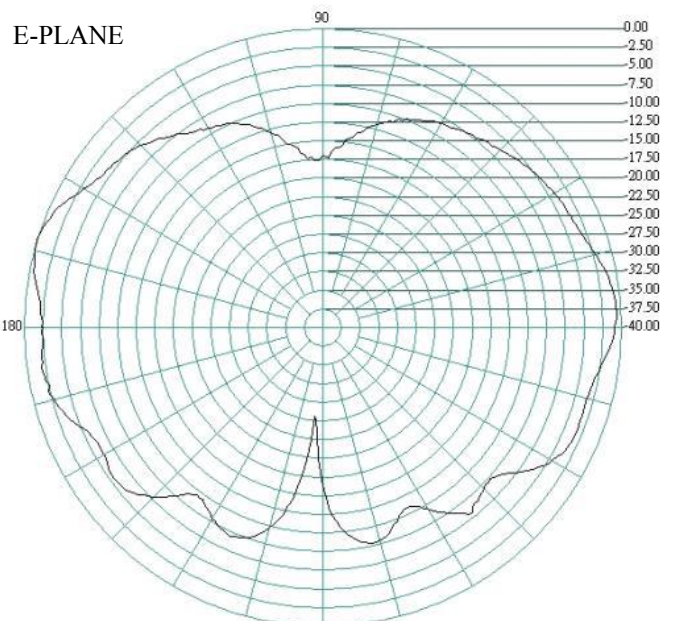
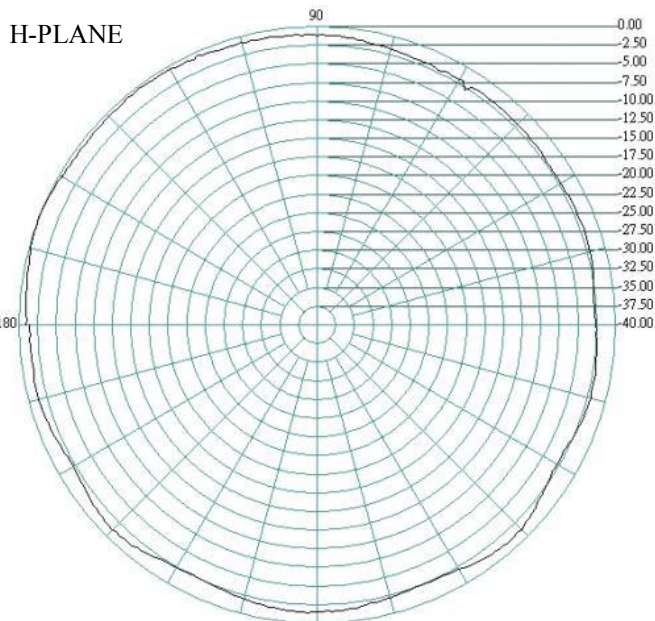
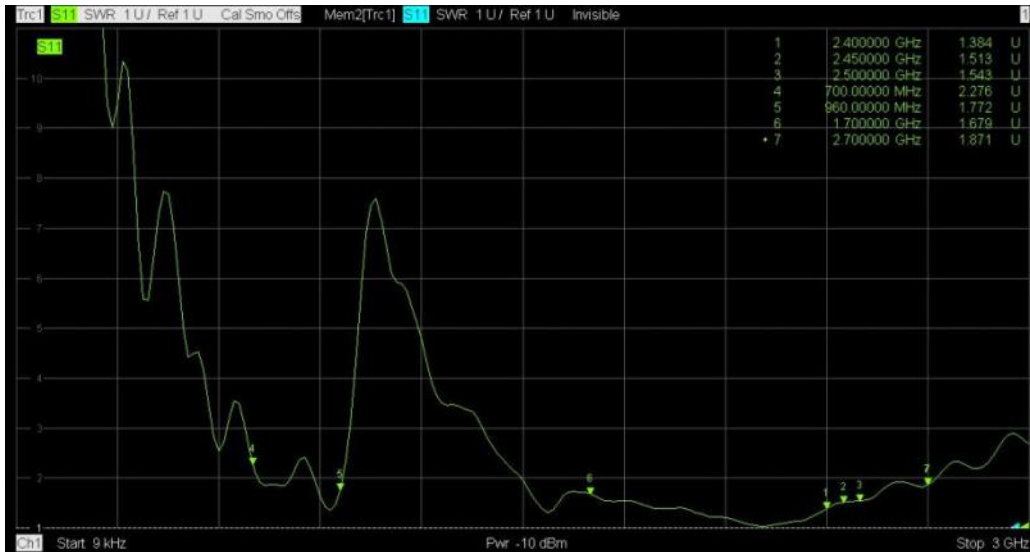
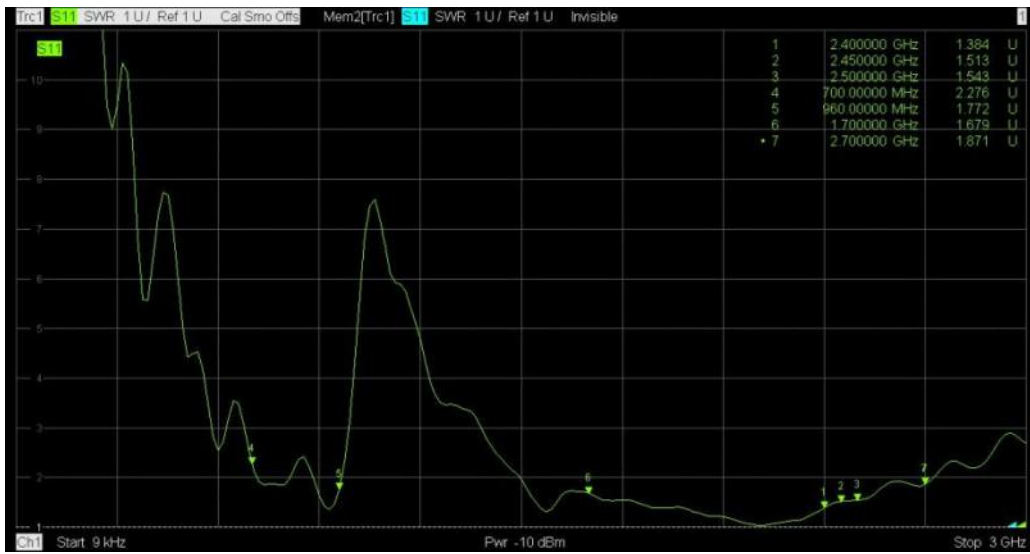


**BOCK OPTRONICS INC.**  
14 Steinway Blvd., Unit 7  
Toronto, Ontario M9W 6M6

Tel: (416) 674-2804  
[sales@bockoptronics.ca](mailto:sales@bockoptronics.ca)  
[www.bockoptronics.ca](http://www.bockoptronics.ca)



[www.microhardcorp.com](http://www.microhardcorp.com)



# LTE Patch Antenna



## Dual Band LTE Patch Antenna

The LTE Patch Antenna is a Dual Band Patch LTE antenna for use with Microhard cellular modems. This patch style antenna provides a high gain solution for applications that require an outdoor directional patch style antenna.

*LTE Dual Band*

*Directional Antenna*

*7 / 9 dBi Gain*

*Waterproof IP67*



## Specifications

<b>Frequency Range</b>	698 - 960 MHz / 1710 - 2700 MHz	<b>Polarization</b>	Vertical
<b>F/B Ratio</b>	>20dB	<b>Operating Temperature</b>	-40°C to +70°C
<b>Gain</b>	7 / 9 dBi	<b>Rated Wind Velocity</b>	60m/s
<b>Beam Width</b>	Horizontal: 30°   Vertical: 28°	<b>Connector</b>	N Female
<b>Output Impedance</b>	50 Ohm	<b>Dimensions</b>	9.85" W x 8.75" H x 2.55" D
<b>VSWR</b>	≤ 2.2	<b>Weight</b>	1.6 kg
<b>Max. Input Power</b>	50W	<b>Mounting Method</b>	Pole Mount (30-50mm)

## Contact Information

Copyright 2020 Microhard Systems Inc.  
Specifications subject to change without notice.

For more information please contact:



### **BOCK OPTRONICS INC.**

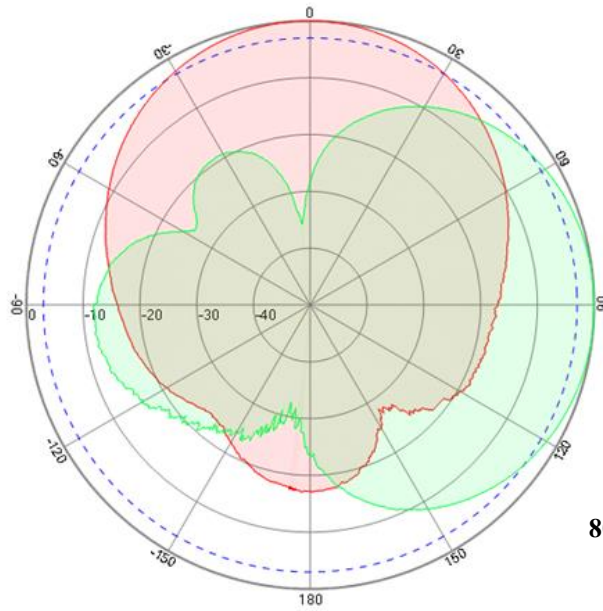
14 Steinway Blvd., Unit 7  
Toronto, Ontario M9W 6M6

Tel: (416) 674-2804  
[sales@bockoptronics.ca](mailto:sales@bockoptronics.ca)  
[www.bockoptronics.ca](http://www.bockoptronics.ca)

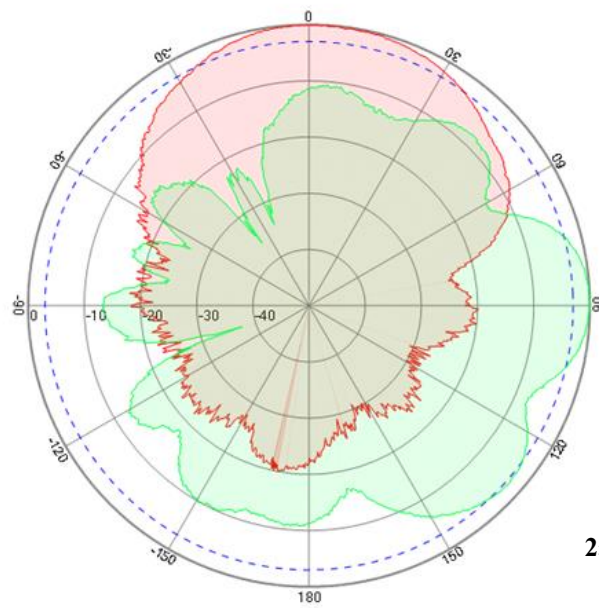


[www.microhardcorp.com](http://www.microhardcorp.com)

## Radiation Pattern

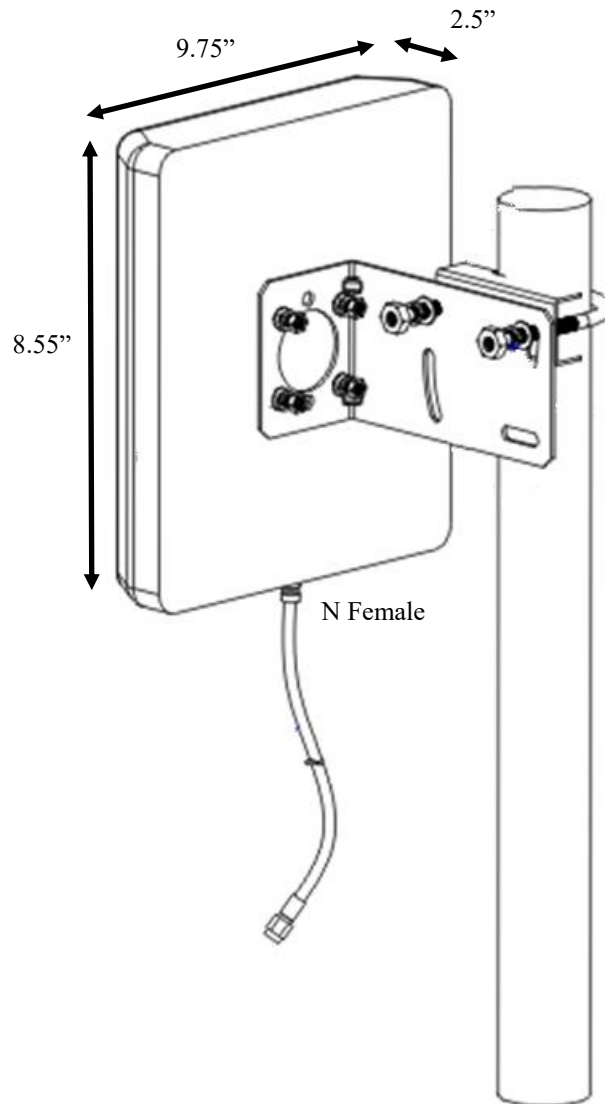


**800 MHz**



**2500 MHz**

## Assembly Diagram



Pole Mount Bracket Kit Included.

Fits up to 2" Pole

# MHS035430



## 2 in 1 - LTE Dual Band Transit w/ Active GPS Antenna

The MHS035430 is a rugged, permanent mount, 2 in 1 Antenna for use with Microhard LTE / 4G / 3G GSM cellular modems with built in GPS capabilities. This antenna offers a simple and effective all in one antenna solution.

Active GPS

LTE / 3G Dual Band

Rugged Design

3 dBi Gain (GSM)

Weatherproof



## Specifications

Frequency (GSM)	698 - 900 MHz & 1800 - 2100 MHz	Current (typical)	2.5V - 6.6mA 3V - 8.6mA 4V - 12.6mA 5V - 16.6mA
Frequency (GPS)	T1 1575.42 ± 1.023 MHz	Operating Temperature	-40°C to +85°C
Gain (GSM)	3 dBi	Connector	SMA Male x 2
Gain (GPS)	28 dB	Cable	RG174 (5m x 2)
Output Impedance	50 Ohm	Dimensions	80 x 80 x 45 mm
VSWR	2.0 Max	Weight	Approx. 30 grams
Voltage	2.3 ~ 5.5V	Mount	Permanent Screw Mount
Noise Figure	1.5 dB		

## Contact Information

Copyright 2013 Microhard Systems Inc.  
Specifications subject to change without notice.

For more information please contact:



**BOCK OPTRONICS INC.**  
14 Steinway Blvd., Unit 7  
Toronto, Ontario M9W 6M6

Tel: (416) 674-2804  
[sales@bockoptronics.ca](mailto:sales@bockoptronics.ca)  
[www.bockoptronics.ca](http://www.bockoptronics.ca)



[www.microhardcorp.com](http://www.microhardcorp.com)

# MHS035400



## LTE Dual Band Yagi Antenna

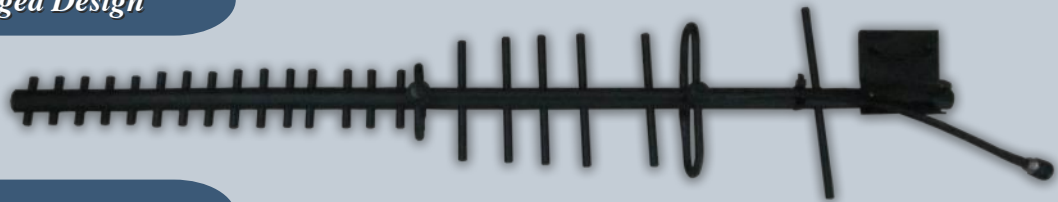
The MHS035400 is a rugged, Dual Band 10 dBi Yagi Antenna for use with Microhard cellular modems. This antenna provides a powerful solution for applications that require a directional Yagi antenna.

*LTE / 3G*

*Rugged Design*

*10 dBi Gain*

*Directional*



## Specifications

<b>Frequency Range</b>	698 - 960 MHz & 1710 - 2170 MHz	<b>Operating Temperature</b>	-40°C to +85°C
<b>Gain</b>	10 dBi	<b>Connector</b>	N-Female
<b>Output Impedance</b>	50 Ohm	<b>Dimension</b>	880mm (Length)
<b>Maximum Power</b>	50 W	<b>Weight</b>	1.1 kg
<b>VSWR</b>	< 1.8	<b>Material</b>	Aluminum
<b>Polarization</b>	Vertical		

## Contact Information

Copyright 2013 Microhard Systems Inc.  
Specifications subject to change without notice.

For more information please contact:



**BOCK OPTRONICS INC.**  
14 Steinway Blvd., Unit 7  
Toronto, Ontario M9W 6M6

Tel: (416) 674-2804  
[sales@bockoptronics.ca](mailto:sales@bockoptronics.ca)  
[www.bockoptronics.ca](http://www.bockoptronics.ca)



[www.microhardcorp.com](http://www.microhardcorp.com)

# MHS035420



## LTE Low Profile Dual Band Transit Antenna

The MHS035420 is a rugged, Dual Band LTE Transit Antenna for use with Microhard cellular modems. Available with optional permanent, magnetic and mast mount installation kits, this antenna offers an external LTE antenna solution for most applications.

LTE Dual Band

Mounting Options

Rugged Design

5.5 dBi Gain

Weather Proof



Permanent Mount

Magnetic Mount

Permanent w/Mast Mount

## Specifications

<b>Frequency Range</b>	800 - 2700 MHz	<b>Operating Temperature</b>	-40°C to +85°C
<b>Gain</b>	5.5 dBi	<b>Connector</b>	N Female (Permanent Mount) SMA Male (Magnetic Mount)
<b>Output Impedance</b>	50 Ohm	<b>Dimensions</b>	Antenna: 3.55" H x 1.55" OD Magnetic Base: 0.40" H x 2.15" OD
<b>VSWR</b>	< 1.5	<b>Weight</b>	165 grams (perm mount) 275 grams (w/mag mount kit) 550 grams (w/mast mount kit)
<b>Power (max)</b>	100 watts	<b>Mounting Hardware</b>	<b>MHS035520</b> Permanent Mount Kit (5/8") <b>MHS035510</b> Magnetic Base Kit (12' RJ58 cable) <b>MHS035530</b> Mast Mount Kit (1" to 2.4")
<b>Polarization</b>	Vertical		

## Contact Information

Copyright 2020 Microhard Systems Inc.  
Specifications subject to change without notice.

For more information please contact:



### BOCK OPTRONICS INC.

14 Steinway Blvd., Unit 7  
Toronto, Ontario M9W 6M6

Tel: (416) 674-2804  
[sales@bockoptronics.ca](mailto:sales@bockoptronics.ca)  
[www.bockoptronics.ca](http://www.bockoptronics.ca)



[www.microhardcorp.com](http://www.microhardcorp.com)



# MHS035440



## Active GPS Magnetic Antenna

The MHS035440 is a rugged, outdoor magnetically mounted GPS Antenna for use with Microhard cellular modems with GPS capabilities. The GPS antenna offers a simple and effective antenna solution for portable applications.

Active GPS

Magnetic Mount

Rugged Design

28 dB Gain

Weather Proof



## Specifications

<b>Operating Frequency</b>	T1 1575.42 ± 1.023 MHz	<b>Noise Figure</b>	1.5 dB
<b>Gain</b>	28 dB	<b>Operating Temperature</b>	-40°C to +85°C
<b>Output Impedance</b>	50 Ohm	<b>Connector</b>	SMA Male
<b>VSWR</b>	2.0 Max	<b>Cable</b>	RG174 (5m)
<b>Voltage</b>	2.3 ~ 5.5V	<b>Dimensions</b>	41.2 x 38.5 x 13.3 mm
<b>Current (typical)</b>	2.5V - 6.6mA 3V - 8.6mA 4V - 12.6mA 5V - 16.6mA	<b>Weight</b>	Approx. 30 grams
		<b>Mount</b>	Magnetic

## Contact Information

Copyright 2013 Microhard Systems Inc.  
Specifications subject to change without notice.

For more information please contact:



**BOCK OPTRONICS INC.**  
14 Steinway Blvd., Unit 7  
Toronto, Ontario M9W 6M6

Tel: (416) 674-2804  
[sales@bockoptronics.ca](mailto:sales@bockoptronics.ca)  
[www.bockoptronics.ca](http://www.bockoptronics.ca)



[www.microhardcorp.com](http://www.microhardcorp.com)