

ITEM OPPORTUNITY SYNOPSIS:

Supplier Scouting Number

TECHNICAL INFORMATION:	1. Describe the item:	
		Please describe the item application/ the end use of item.
	Provide the item number <u>if applicable</u>: (N95 Mask vs Protective Mask).	
	2. Summary of Technical Specifications and Performance Requirements:	a. Provide dimensions / size / tolerances / performance specifications for the item.
		b. List required materials needed to make the product, Including materials of product components, if applicable.
		c. Are there applicable certification requirements to supply this item? (i.e. ISO certification) Are there any applicable regulations that apply to the production of this item? (i.e. FDA regulations or EPA regulations) Are there any other standard requirements? (i.e. ASME Standard, IEEE Standard) Please specify.
	d. Describe the manufacturing processes (elaborate to provide as much detail as possible).	
f. Additional Comments:		
Is there other information that would impact the item's performance or usefulness? Please explain.		

BUSINESS INFORMATION:	Potential Business Volume Estimate (i.e., # Units Per Day, Month, Year):				
	Target Price / Unit Cost Information:				
Delivery Requirements:	When is it needed by? (Immediate, 30 Days, 6 months, etc.)				
	Describe packaging requirements (i.e., individually/ group packaging).				
	Where is this opportunity located? Is there a preferred shipping proximity - if applicable?				
Additional Comments:	How long would you like to leave this opportunity open to the National Network?				
	<input type="checkbox"/> 3 days	<input type="checkbox"/> 5 days	<input type="checkbox"/> 7 days	<input type="checkbox"/> 10 days	_____ Other
	Is there other information you would like to include?				

Photos or diagrams of the item (helpful but not required).

Date: 12/15/20

RE: Request for Quotation, Multiple input, Multiple Output (MIMO)
(Dual-Pigtail) CAT-M1/WiFi-GPS Antenna

1. Introduction and Requirements

Introduction

A company based in Pennsylvania designs, manufactures and smart grid and building automation edge node solutions. Most Nodes are installed inside the control panel of HVACR units and communicates to the PACE Cloud using a dual-pigtail antenna. For its next-generation edge node, we are seeking a Made in USA Contract Manufacturer (CM) for antennas meeting the following specifications.

See Section 5 for pictures. For the new node, with expected EIS 1Q21, the Node has two Bayonet Neill-Concelman (BNC) connectors. One connector for eMTC (LTE Category (CAT)-MI1) and the other for WiFi. Company strongly prefer a low-profile, puck-type Wi-Fi/Cellular combination antenna, as used with our current node solutions. However, company has customers who prefer one form of communication and would not want to have the possibility of the other, for example, a cellular (Long Term Evolution (LTE) CAT-M1) antenna without the possibility of WiFi due to security or mobility use. Therefore, company would also like indicative pricing on single lead antennas, and also on BNC connector covers, per below.

Broadband Requirements

Supports enhance Machine Type Communication (eMTC) (LTE CAT-MI1) and Dual Band WiFi 2.4 5GHz Concurrent.

The Antenna may also support:

MIMO LTE CAT-MI1/ GPS GNSS / MIMO WiFi / Bluetooth Antenna
(MIMO 2 x Wide Band Cellular 2G 3G 4G 5G LTE AWS XLTE)
(MIMO 2 x Dual Band WiFi 2.4 5GHz Concurrent)
(Wide Band Cellular 2G 3G 4G 5G LTE AWS XLTE / GPS GNSS)
(Dual Band WiFi 2.4 5GHz Concurrent / GPS GNSS)
(Wide Band Cellular 2G 3G 4G 5G LTE AWS XLTE / Dual Band WiFi 2.4 5GHz Concurrent)
HSPA/GSM/GPRS/CDMA/EVDO/UMTS/WCDMA

Frequency Bands:

Supports eMTC (LTE CAT-MI1) and Dual Band WiFi 2.4 5GHz Concurrent

The Antenna may also support:

Wide Band Cellular LTE: 3G 4G 5G LTE AWS XLTE (600MHz ~ 3800MHz)
Multi Band GPS GNSS: 1562MHz ~ 1612MHz
Wide Band Cellular: 850/900/1800/1900/2100 MHz
Dual Band WiFi / Bluetooth: 2.4GHz / 5.0GHz Concurrent

Hardware Feature Requirements:

Heavy Duty, Low-Profile, and Vandal Proof
2M RG-316
Connector Ends
Cellular – BNC male

WiFi/GPS GNSS 2.4/5.8 GHz – BNC male
IP67 and IP69K Waterproof Rating, rubberized pad for waterproof mounting
IEEE.802.11/IEEE.802.15
RoHS compliant, TAA compliant

Engineered for Enterprise Level IoT Use, all North America climate zones
For stationary and selected mobility applications (e.g., mobile refrigeration)
Color: Black, may also consider other colors, please list
Specify Warranty

The Cellular cable/connector should be labeled "Cellular", "LTE" or similar
The WiFi cable/connector should be labeled "WiFi"

With our current node antennas, the WiFi lead and (SMA) connector are smaller than for the LTE connector. This or another means of preventing the installer from connecting the LTE BNC cable to the WiFi BNC connector and vice versa, is important.

Standard antenna cable length: 3m/10 feet
Length options: Our current generation suite was stocked with 4 different lengths (4, 6, 12, 15 feet), which has been cumbersome. We would be interested in a quotation for a standard 2m 2-cable extension set.

2. Terms and Conditions

Expected MOQ: 200 units
Base Projection, 2021: 3,000 units
Payment Terms: Net-45

3. Information Required in Each Response

Quotation must include the following minimum information:
Company name and contact information
Antenna costing, 200/500/1,000 breaks
Cost for non-custom lengths (if applicable)
Cost for Cellular Antenna (If applicable/available)
Cost for WiFi Antenna (if applicable/available)
Cost for BNC Cover (if applicable/available)
Any additional costs, please specify

4. Photos & Drawings

Shown below: typical commercial HVAC unit, unit open to show PACE Node installation location, location of puck antenna on outside chassis, and example current-generation antenna -- the mounting shown is the typical vertical mount on the side of the HVAC unit cabinet, where convenient to drill a $\sim 0.6\text{cm}$ mounting hole, using a step drill bit



