

MEPNN Supplier Scouting Opportunity Synopsis

Section 1: General Information

Scouting Number	2026-159
Item to be Scouted	BABA: Tele-Entry System
Days to be scouted	14
Response Due By	05/13/2026
Description	A door entry access tele-entry system is basically a telephone-based access control and intercom system that lets visitors at a door or gate call a tenant or staff member, who can then remotely unlock the entrance.

Section 2: Technical Information

Type of supplier being sought	Manufacturer
Reason	BABA
Describe the manufacturing processes (elaborate to provide as much detail as possible)	<p>1-Design the System Architecture Define the functional blocks and communication pathways of the tele-entry system. -Specify audio, keypad, display, relay outputs, and communication modules -Choose between POTS, cellular, or IP/VoIP communication -Determine enclosure size, mounting method, and environmental rating (IP55–IP65) -Finalize electrical ratings and compliance requirements (UL 294, FCC Part 15)</p> <p>2-Develop Electronic Schematics & PCB Layout Create the circuitry for audio, keypad scanning, microcontroller, and relay control. -Design PCBs for main control board, audio board, and power supply -Integrate microcontroller, memory, and communication chips -Add surge protection, filtering, and isolation components -Prepare Gerber files for PCB fabrication</p> <p>3-Fabricate and Assemble PCBs Produce the printed circuit boards and populate them with components. -PCB fabrication using FR-4 substrate with copper traces -SMT pick-and-place for microcontrollers, amplifiers, and logic ICs -Through-hole soldering for relays, connectors, and terminal blocks -AOI (Automated Optical Inspection) for quality verification</p> <p>4-Manufacture the Enclosure and Mechanical Parts Build the outdoor-rated housing that protects the electronics. -Die-cast aluminum or stainless steel for vandal-resistant units -Polycarbonate or ABS for indoor/light-duty units -CNC machining for openings (speaker grill, keypad, camera window) -Apply powder coating or weatherproof finish</p> <p>5-Assemble Subsystems (Audio, Keypad, Display) Integrate user-interface components into the enclosure. -Install speaker, microphone, and noise-canceling components -Mount keypad or touchscreen module -Install camera (if video tele-entry) -Route wiring harnesses and secure with strain reliefs</p> <p>6-Install Firmware and Configure Communication Load the operating firmware and set up communication protocols. -Flash microcontroller firmware -Configure SIP/VoIP stack, cellular modem, or PSTN interface -Load directory management software -Test DTMF decoding and relay activation logic</p>

	<p>7-Final Assembly and Wiring Combine electronics, enclosure, and wiring into a complete unit. -Mount PCBs inside enclosure with standoffs -Connect power supply, relays, and communication modules -Seal enclosure with gaskets for weather resistance -Add tamper switches if required</p> <p>8-Functional Testing & Certification Verify performance, safety, and regulatory compliance. -Audio clarity test (speaker/mic) -Keypad and display test -Relay activation test for door strike/maglock -FCC Part 15 EMI/EMC testing -UL 294 access control certification -Environmental tests: temperature, humidity, vibration</p> <p>9-Packaging and Final QA Prepare the system for shipment with protective packaging. -Add foam inserts and anti-static bags -Include wiring diagrams, manuals, and mounting hardware -Perform final visual inspection and serial number logging -Seal and label boxes for distribution</p>
Provide dimensions / size / tolerances / performance specifications for the item	Your typical access system for a 48 Unit Apartment building. Please respond with all available options.

List required materials needed to make the product, including materials of product components

1. Entry panel hardware
Metal or plastic faceplate:
Materials: Stainless steel, aluminum, or UV-stable polycarbonate
Keypad assembly:
Materials: Metal or polycarbonate keys, silicone rubber membrane, PCB with dome switches
Speaker & microphone:
Materials: Weather-resistant speaker, electret or MEMS microphone, protective mesh
Display / directory:
Materials: Backlit LCD/OLED or small TFT, polycarbonate window, backlight diffuser
Call / function buttons:
Materials: Tactile switches, metal or plastic caps, LED backlighting

2. Control & logic electronics
Main PCB (controller board):
Materials: FR-4 PCB, copper traces, solder mask, silkscreen
Microcontroller / processor:
ARM, PIC, or similar MCU
Memory:
Flash, EEPROM for directory, settings, logs
I/O components:
Optocouplers, level shifters, GPIO expanders
Real-time clock (RTC):
With crystal and backup capacitor/battery
Relays / solid-state relays:
For door strike, maglock, or gate operator control
Input protection:
TVS diodes, resistors, fuses for line and I/O protection

3. Communication modules
Depending on system type (POTS, cellular, IP):
POTS/analog telephony interface:
DAA module, isolation transformers, line protection components
Cellular module (if used):
LTE/4G module, SIM holder, antenna, RF cables
Ethernet / IP module:
Ethernet PHY, RJ45 jack with magnetics, status LEDs
Wi-Fi / Bluetooth (optional):
RF module, antenna (chip, PCB, or external)

4. Power supply & backup
AC/DC power supply or DC input stage:
Transformer or SMPS, rectifier, filter capacitors, regulators (buck/linear)
Voltage regulators:
12 V, 5 V, 3.3 V rails as needed
Battery backup (optional):
Small sealed lead-acid or Li-ion pack, charge controller, protection circuit
Surge & lightning protection:
MOVs, gas discharge tubes, TVS diodes (especially for gate/door lines and outdoor installs)

5. Enclosure & mechanical components
Main enclosure:
Materials: Stainless steel, aluminum, or powder-coated steel; sometimes vandal-resistant cast housing
Gaskets & seals:
EPDM or silicone for weatherproofing (IP-rated)
Mounting hardware:
Steel or stainless screws, wall anchors, back box or surface mount box
Tamper switches:
Microswitches or magnetic sensors to detect opening of the housing
Sun shield / rain hood (optional):
Formed metal or plastic cover

Are there applicable certification requirements?	No
Are there applicable regulations?	No
Are there any other standards, requirements, etc.?	No
Additional Technical Comments	This is for a three story 48 Unit Multifamily apartment over a one-story parking garage.

Section 4: Business Information

Estimated potential business volume	1 provided at main entry.
Estimated target price / unit cost information (if unavailable explain)	\$500
When is it needed by?	July 2027
Describe packaging requirements	A tele-entry system's packaging must protect sensitive electronics, prevent corrosion, survive shipping impacts, and meet regulatory labeling rules. Video units and large metal housings require heavier-duty packaging, while audio-only systems can use lighter materials.
Where will this item be shipped?	Blaine Minnesota

Additional Comments

Is there other information you would like to include?	
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