MEPNN Supplier Scouting Opportunity Synopsis

Section 1: General Information

Scouting Number	2025-230
Item to be Scouted	2070-7G Universal Time Base Module
Days to be scouted	30
Response Due By	08/09/2025
Description	The 2070-7G Time Base Module provides programmable, real-time control for various cabinet operations. It's designed to synchronize and automate functions like flashing beacons, street lighting, or other scheduled operations with consistent, daily, weekly, or seasonal scheduling. The module can store multiple programmable schedules or events (like turning on/off lights, enabling special flash modes for school zones, etc.). The 2070-7G is designed to plug into the 2070 controller cabinet's backplane, following NEMA TS2 or Caltrans TEES standards. It supports serial or other forms of communication with the 2070 controller, ensuring updates and time synchronization can be handled smoothly. Battery-backed memory ensures the time and date settings are retained in case of a power outage. LED status indicators to show operational status or faults.

Section 2: Technical Information

Type of supplier being sought	Manufacturer
Reason	SABA
Describe the manufacturing processes (elaborate to provide as much detail as possible)	The manufacturing process for a typical 2070-7G Universal Time Base Module includes component sourcing to final assembly and testing. 1) The components are sourced from global suppliers, ensuring they meet quality and safety standards. Electronic Components includes RTC IC, microcontroller, memory, crystals, capacitors, resistors. PCB substrate FR4 or better, Copper foil for PCB layers, Battery or supercapacitor for RTC backup. 2) PCB Assembly: Surface Mount components are placed using automated pick-and-place machines. Through-hole components (like relays, large capacitors) are manually inserted or robotically placed. 3) Soldering: Surface Mount parts are soldered via reflow soldering (oven heating to melt solder paste). Through-hole components often use wave soldering (board passes over molten solder). 4) Final Assembly and Programming, Environmental and Functional Testing, Quality Assurance (QA) and Final Inspection.
Provide dimensions / size / tolerances / performance specifications for the item	Dimensions: 1.15" W, 9.5" H (±0.06 in), 7.0" D (±0.06 in) Operating Temperature (-40?°C to +85?°C); Power Supply (12 VDC nominalm draws ~50–100 mA); RTC Timekeeping Accuracy (±1–2 ppm, equivalent to ±1 minute/year drift with high-accuracy RTC IC); Time-based Events (Typically supports up to 64–128 programmable events, depending on firmware and memory size); Battery Backup (Coin-cell or supercapacitor, maintains RTC and event data for up to 5–10 years typical); LED Indicators (2–4 LEDs to display status: Power, Fault, Activity behavior defined by manufacturer firmware); RTC Backup Retention (Typically 5–10 years, depending on battery type and quality). Ship Weight ~ 0.5–0.8 lb. per 2070-7G Universal Time Base Module.
List required materials needed to make the product, including materials of product components	The 2070-7G Universal Time Base Module is typically built from: PCB (FR4 fiberglass, copper clad), Microcontroller, Real-Time Clock IC (DS3231 or equivalent), Crystal Oscillator for RTC, Main Oscillator / Clock Crystal, Non-Volatile Memory (EEPROM or Flash), Battery / Supercapacitor, Voltage Regulator, Connectors / Edge Card Interface, LED Indicators, Tactile Buttons (for setup), Resistors, Capacitors, Inductors / Ferrites, Diodes, Transistors / MOSFETs, Headers / Jumpers, Silkscreen & Labeling.
Are there applicable certification requirements?	No
Are there applicable regulations?	No
Are there any other stndards, requirements, etc.?	Yes
Details	Caltrans TEES 2020

Additional Technical Comments	

Section 4: Business Information

Estimated potential business volume	2-5 year contract. 150-250/year
Estimated target price / unit cost information (if unavailable explain)	$693 each
When is it needed by?	4/29/2026
Describe packaging requirements	Individually boxed (individual boxes within larger box if bulk order).
Where will this item be shipped?	Sacramento, California

Additional Comments

Is there other information you would like to include?	Agency - Federal Highway Authority (FHWA) Contact - Andrew Bianchi, Project Delivery North Team Leader, Federal Highway Administration, California Division andrew.bianchi@dot.gov