

QUOTE REQUEST FY19-002b

For

PUBLIC SAFETY VEHICLE OUTFITTING

Submitted by:

Name of Company:

Mailing Address:

City/State/Zip:

Phone (including area code):

E-mail:

Submittal Deadline: BY Friday, August 3, 2018 at 3:00 P.M.

(may be submitted earlier)



QUOTE REQUEST FY19-002

DESCRIPTION

1.1. SCHEDULE

This Quote request must be submitted no later than Friday, August 3 at 2PM. They may be scanned and emailed to cfay@cityofgriffin.com or delivered to City of Griffin, Procurement Department (3rd Floor), 100 S Hill Street, PO Box T, Griffin, GA 30223. Email is the preferred method of delivery and should have a subject of "Public Safety Vehicle Outfitting". Deadline for submittals is the 3rd, but quotes can be submitted any time prior to the deadline.

1.2. SCOPE OF WORK

GENERAL REQUIREMENTS: The Police department is scheduled to purchase thirteen (13) vehicles this fiscal year. Ten (10) of these be for Uniform Patrol and the other three (3) will be for Criminal Investigations, which will have slightly different outfitting. The goal of this request is to find a 'one stop shop' for the outfitting and for the vehicles to be road-ready when delivered to the City. Depending on location of the selected supplier, the vehicles with either be delivered to outfitter and the outfitter will deliver to the City or the outfitter will handle transportation from and back to the dealer (in Winder, GA) and the dealership will deliver to the City.

In addition to the requested information regarding the outfitting and graphics, the City is also concerned about after the delivery. Detail how post-installation warranty and non-warranty maintenance and repairs will be handled.

All questions regarding this project must be in writing. The technical contact on this project is Captain Michael Natale (mnatale@cityofgriffin.com). Technical questions sent to Captain Natale should be cc'd to Procurement.

Other questions will go directly to Procurement (<u>cfay@cityofgriffin.com</u>), who will serve as the administrative contact.

1.2.1. OUTFITTING SPECIFICATIONS FOR CRIMINAL INVESTIGATIONS

- (3) 2019 Dodge Chargers
- (3) Sound Off Signal nFORCE® 8 module Interior Windshield Lightbar, Full 1 Piece or Split 2 Piece Shroud, 6 LEDs—Single Color Blue. MFG Part Number: ENFWBF (6 LED)
- (3) Sound Off Signal nFORCE® 8 module Rear Interior Windshield Lightbar, Full 1 Piece or Split 2 Piece Shroud, 6 LEDs—Single Color Blue. MFG Part Number: ENFWBF (6 LED)
- (3) Sound Off Signal nERGY® 400 Series Multi-Function Siren w/ Button Control, 10-16v for one 100 watt speaker. MFG Part Number: ETSA481CSP
- (3) Sound Off Signal 100N Series Composite Speaker w/ Universal Bail Bracket 100 watt. MFG Part Number: ETSS100N
- (6) Sound Off Signal mpower® 4" Fascia Light w/ Quick Mount, 18" hard wire w/ sync option, SAE Class 1 & CA Title 13, 9-32 Vdc, Black Housing, 12 LED, Dual Color Red/Blue mounted by the tag. MFG Part Number: EMPS2QMS4J
- (6) Sound Off Signal nFORCE® Single Surface Mount Light, SAE Class 1, 10-16v, Black Housing, 6 LED, Single Color Blue. Mounted in the Grill. MFG Part Number: ENFSSS1B
- (6) Code 3 4 Pack Hide A Blast mounted to all four corners of the car. MFG Part Number: HB4PAK-B
- (3) Havis 2011-2018 Dodge Charger Police Package Vehicle Specific 24" Console. MFG Part Number: C-VS-2400-CHGR-2 with (10) total C-CUP2-I Internal Cup Holders, (10) total C-ARM-103 Arm Rest for Top Mount, Console, Large Pad, (10) total C-AP-0325 3" Accessory Pocket, (10) total C-MD-112, 11" Slide Out, Locking Swing Arm with Motion Adapter and (10) total C-HDM-204, 8.5" Heavy Duty Telescoping Pole, Side Mount, Short Handle.
- (3) Setina Manufacturing Dual T-Rail Mount 2 Universal XL, MFG Part Number: GK10342USSCAXL
- (3) Setina Manufacturing T-Rail Free Standing Mount Kit, MFG Part Number: GF1092CGR11
- (3) Motorola APX4500 Mobile 700/800 MHZ, Radio Complete with P25 FDMA & TDMA software, 3DB Low-Profile Antenna, remote mount option included, O2 control head, and AES encryption and a 5-year manufacturer's warranty
- (3) Install Kits for MISC loom, wire, hardware and connectors.
- (3) Complete Installs to include all of the above and the City of Griffin Supplied WiFi
- (3) Delivery Fees to include having the Cars Delivered from Akins Dodge to suppliers location and then from Suppliers location to the City of Griffin Police Department Road Ready.

Any Shipping Charges for the Vehicle Equipment.

1.2.2. OUTFITTING SPECIFICATIONS FOR UNIFORM PATROL

(10) 2019 Dodge Chargers

(10) Sound Off Signal 48" nFORCE® LED Lightbar (ENFLB) w/ Take Downs & Alleys - Clear Lenses with Duo Blue / White Front and Sides, Blue / Amber Rear and (2) of the Rear Blue / Amber / Red. 12 LED Inboard & 24 LED Corners. MFG Part Number: ENFLB, Gold Edition.

Lightbar shall have all of the following features: Multiple Driver Control Boards so lightbar keeps working if a board is damaged, 4 Driver Control Boards, completely customizable color configurations: Dual Color modules shall be available with 12 LED inboard (6 LEDs of each color) and 24 LED corner (12 LEDs of each color), and tri color modules shall be available with 18 LEDs inboard module (6 LEDs of each color). Lightbar shall have 4 programmable flash pattern modes, capable of being PC programmed though software and able to be cloned to other lightbars. Lightbar shall have full color and pattern control on each individual module. Lightbar shall include a breakout box, with 22 user selectable voltage and polarity inputs. Lightbar shall have cruise and low power settings. Lightbar shall have dual I-Beam construction, allowing for lower weight and improved structural integrity over a one piece extruded aluminum base. Lightbar shall have a Geloy performance engineered automotive grade polymer top cover.

(10) Sound Off Signal bluePRINT Control System - Gold Package contains (20) total ETSS100N Speakers, (20) total ENGND04101 Remote Nodes, (10) total ENGCC01241 Central Controller, (10) total ENGSA07152 Siren 480 series 200w amp, (10) total ENGCP18002 Control Panel, (20) total ENGHNK02 Remote Node Harness and (10) total ENGHNK01 Central control Harness. MFG Part Number: ENGKTGD001.

BluePrint MUST Include:

Improve Officer Safety and Efficiency

Officers are constantly occupied with technology and other distractions that require a shift in concentration and a refocus of the eyes and hands. bluePRINT allows officers to stay focused on the task at hand while keeping their eyes on the road and hands on the wheel. Light and siren configurations are pre-programmed and prioritized to respond to emergency situations without the officer having to hastily determine which buttons and switches to activate while driving.

Eliminate Point-to-Point Wiring

each of these modules communicates over a serial data bus (multiplex). The Central Controller, the Remote Nodes, the Input Node, and the 200R Sirens all share a single wire bus that can run the length of the vehicle. This eliminates the need for point-to-point wiring between lighting and siren components. Separate LIN data bus connections are provided for plug-and-play compatibility with existing SoundOff Signal Exterior Lightbars, nForce Interior Lightbars/Traffic Arrows, and Siren components.

Improve System Reliability and Convenience

current switching within the Central Controller and Remote Nodes uses Solid State Transistors to eliminate mechanical switching. Relays and other electro-mechanical components are often the most frequent failure within a switching system. Most are incapable of detecting faults and can be damaged by wiring faults such as an overcurrent. Solid State switching offers the advantage of no moving parts, no arc bridging, and self-diagnostic capabilities.

• Overall System Description

The BluePrint Control System is a member of the nERGY product line and a network of programmable components that will reduce installation wiring, add officer safety benefits, add programmable input to output relationships, and numerous diagnostic features. Each of these modules communicates over a serial data bus (multiplex). The

Central Controller and the Remote Nodes, all share a single wire bus that can run the length of the vehicle. This eliminates the need for point-to-point wiring between lighting and speaker components. Separate LIN data bus connections are provided for plug-and-play compatibility with existing SoundOff Signal Exterior Lightbars, and Siren components.

System Technical Specifications Summary

Tech Specs	nERGY Control System						
Input Voltage:	10-16Vdc (Negative Ground)						
Outputs:	p to 70 programmable outputs						
Inputs:	o to 40 inputs						
Operating Temp:	40°C to + 65°C						
Total System Inputs	Up to 40 total:						
	 Remote Nodes: 4 (up to 5 Remote Nodes can be used throughout vehicle) Input Node: 20 Additional inputs are available through the Control Panel buttons and slide switch 						
Total System Outputs:	Up to 74 total:						
	 Central Controller: 4 fixed, 20 programmable Remote Nodes: 10 (up to 5 Remote Nodes can be used throughout vehicle) 						
Total Switching	Up to 350 Amps total:						
Current:	 Central Controller 100Amps total Remote Node 50Amps each (up to 5 Nodes) 						
Software	PC or Tablet (used only for initial programming and diagnostics):						
Requirements:	 Windows Vista® SP1 or later Pentium 1GHz or higher Minimum 512MB RAM Minimum disk space 1GB .NET 4.0 Library (will be prompted to download if not already installed, additional 2GB needed) – XP compatibility not guaranteed USB 1.1 or higher, cable with Type B plug 						

System Components

Central Controller (Central PDU)

Description

The Central Controller is the primary network controller for the Blueprint Emergency Vehicle Control System. It stores all of the settings for the network behavior and communicates with the other modules on a single wire LIN bus.

Technical Specifications Summary

Tech Specs	nERGY Control System Central Controller				
Maximum Input Current:	100 Amps				
Outputs (Sum of ALL used Outputs Shall Not Exceed 100Amps)	 4x 10Amp Fused Battery 8x 10Amp Solid State, Switched 12x 5Amp Solid State, Switched 				
IGN ON Standby Current:	140mA				
IGN OFF Sleep Current	0.34mA				
Inputs:	1x Ignition Input Active High				
Physical:	7" x 6.25" x 1", 1 lb. 7oz.boxed, 14.9oz device only				

User Interface

Diagnostic Indicators-

Diagnostic LED (red) Output Status LEDs – Programmable Outputs (red)

One LED for each of the twenty outputs (1 to 10, 15 to 24) LED is lit when output is on Output Status LEDs – Constant Power Outputs (red)

- One LED for each of the twenty outputs (11 to 14)
- LED is lit when system is powered (ignition high) and output is on

Control System Communications LED (red)

- Indicates data communications between Central Controller and any Remote Nodes,
 Input Node, or 200R Sirens that are connected
- LED is lit with activity on this port and times out in 2 seconds of no activity

Lightbar Communications LED (red)

LED is lit with activity on this port and times out in 2 seconds of no activity Control Panel Communications LED (red)

LED is lit with activity on this port and times out in 2 seconds of no activity USB Communications LED (red)

LED is lit with activity on this port and times out in 2 seconds of no activity Siren Communications LED (red)

LED is lit with activity on this port and times out in 2 seconds of no activity

Mechanical

- Nylon with glass fill for operation over specified temperature range
- To be mounted in dry interior vehicle location away from direct sunlight exposure
- Maximum 90% relative humidity, non-condensing

- Rib placed between high current power and ground connections to avoid accidental short conditions
- Aluminum base plate
- Conformal coated PCB
- PCB: High temp FR4, 4 layer 2oz copper

REMOTE NODE (REMOTE PDU)

Description

The Remote Node has 4 inputs and 10 outputs and will respond to commands from the Central Controller on the single wire LIN bus. Up to five can be used on the dedicated network and can be configured as addresses 1 through 5.

Technical Specification Summary

Tech Specs	nERGY Control System Remote Node					
Maximum Input Current:	50 Amps (30Amps at 85C)					
Outputs (Sum of ALL used Outputs Shall Not Exceed 50Amps)	 10 Outputs: 4x 10Amp Solid State, Switched 6x 5Amp Solid State, Switched 					
IGN ON Current	60mA					
IGN OFF Sleep Current	0.34mA					
Inputs:	 4 Inputs: 3x Active High/Low Inputs 1x Active High/Low Input w/ System Wake UP 					
Physical:	6.0" x 3.4" x 1.05", 13.2oz boxed, 10.7 oz. device only					

User Interface

- Diagnostic Indicators
 - Diagnostic LED (red)
 - Address LED (red) / Address Select

Mechanical

- Potted to provide IP67 ingress protection. Can be mounted in interior or exterior location away from direct sunlight exposure and away from high temperature components such as engine block and radiator.
- Material: Nylon 6.6 plus 30% glass fiber
- Robust mounting tabs that will not break when over-torqued
- Rib placed between high current power and ground connections to avoid accidental short conditions

- Aluminum base plate
- Conformal coated PCB
- PCB: High temp FR4, 4 layer 2oz copper

CONTROL PANEL

 Same specifications as existing siren remote 4XXRSP – no changes. Completely hardware and firmware equivalent.

System Features Matrix

General Features

	Feature	Central Controller	Remote Node	Input Node	200R Siren	PC Software Application
4.1.1	Any Input can be mapped to trigger any output or combination of outputs	Yes	Yes	Yes	Park Kill, Horn Ring, and Backlight settings only	Yes
4.1.2	Device naming using text string (stored in non-volatile memory and software setup files)	Inputs, Outputs	Remote Names, Inputs, Outputs	Inputs	No	Yes
4.1.3	Matrix capability to allow Boolean combinations of input and current output states to trigger outputs (along with latch and programmable delay capability)	Yes	Yes	Yes	N/A	Yes
4.1.4	Support For nForce (with pattern sync when identical pattern families selected) and EPL/Magnum/Apex lightbars	Yes	N/A	N/A	N/A	Yes
4.1.5	Low voltage shutdown	Warning at <9Volts, Outputs turn off at <7V	Warning at <9Volts, Outputs turn off at <7V	<9Volts	<9Volts	N/A
4.1.6	High voltage detection	>16Volts	>16Volts	No (40V transorb on power input)	>30Volts	N/A
4.1.7	Total devices allowed on system	1 (also communicates with 1 control panel or handheld remote and 1 legacy lightbar or up to 2 nForce lightbar products)	Up to 5	1 (Input Node or Breakout Box)	Up to 2	Yes

	Feature	Central Controller	Remote Node	Input Node	200R Siren	PC Software Application
4.1.8	USB Configurable (USB 1.1 or higher) Note: FTDI is warning against USB 3.0 ports	Yes	N/A	N/A	N/A	Yes (communicate all settings to/from Central Controller and log PC timestamp of last update)

Port Output Features

	Feature	Central Controller	Remote Node	Input Node	200R Siren	PC Software Application
4.2.1	High Side Switched Solid State Outputs	8 @ 10Amps 12 @ 5Amps	4 @ 10Amps 6 @ 5Amps	0	0	Yes
4.2.2	Non switched outputs	4 always on protected with onboard 10Amp mini-fuse	0	0	0	No
4.2.3	Internal Horn Cut Relay	No	No	No	Yes	Yes
4.2.4	Fault Monitoring:					
4.2.4.1	Programmable current limits (measured by A/D in firmware. 700msec delay after inrush. Logged. Requires reset to recover.	Yes for switched outputs.	Yes for all outputs.	N/A	N/A	Yes (10% extra margin allowed on maximum current 11A/5.5A)
4.2.4.2	Over current limit monitors limits after initial inrush spike. Internal to SmartFET, chip will retry internally, if still a fault, logged and requires reset to recover.	Yes for switched outputs.	Yes for all outputs.	N/A	N/A	Yes
4.2.4.3	Over load limit allows extreme initial inrush and monitors for short circuit condition. Internal to SmartFET, chip will retry internally, if still a fault, logged and requires reset to recover.	Yes for switched outputs.	Yes for all outputs	N/A	N/A	Displays fault
4.2.4.4	Under voltage monitoring. Logged and self recovers.	Yes for switched outputs	Yes for all outputs	N/A	N/A	Displays fault
4.2.4.5	Over temperature monitoring. 500msec debounce. Logged. (firmware OR'ing of OTS which turns off outputs until reset and OTW which turns off outputs until temperature fault stops)	Yes for switched outputs	Yes for all outputs	N/A	N/A	Displays fault
4.2.4.6	Open load detection. Logged if change in state.	Yes for switched outputs	Yes for all outputs	N/A	N/A	Displays fault

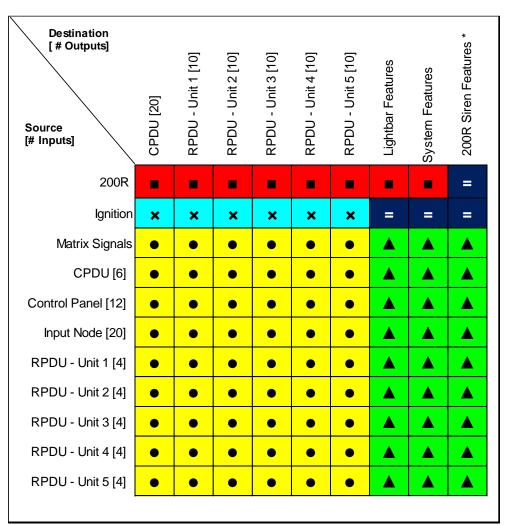
	Feature	Central Controller	Remote Node	Input Node	200R Siren	PC Software Application
4.2.5	Ability to flash outputs based on patterns: Quint, Warp, Inter-cycle, Double, Power Pulse, Road Runner, Slow Runner, Q-switch, Warp 123, Alternate Quad, Random Pattern	Yes for switched outputs	Yes for switched outputs	N/A	N/A	Yes
4.2.6	Resistive load switching up to programmable limit	Yes for switched outputs	Yes for all outputs	N/A	N/A	Displays fault
4.2.7	Incandescent, halogen, and xenon lamp switching within SmartFET inrush profile	Yes for switched outputs. Xenon profile only allowed on outputs 2,7,16, and 21.	Yes for all outputs. Xenon profile only allowed on outputs 2 and 7.	N/A	N/A	Displays fault
4.2.8	Heavy capacitive and inductive load switching	No, inrush current must fall within SmartFET programmable limits	No, inrush current must fall within SmartFET programmable limits	N/A	N/A	Displays fault
4.2.9	Ability to PWM outputs (ability to output directly, in cruise, and low power modes). Recommended settings for secondary will be published. "Cruise keep on" can be set to toggle between 2 power levels rather than cruise/off. Low Power settings are ignored if set to greater than constant duty cycle setting.	Yes for switched outputs (100Hz switching, cruise 0% to 100%, one constant and two low power modes 5% to 100%)	Yes for switched outputs (100Hz switching, cruise 0% to 100%, one constant and two low power modes 5% to 100%)	N/A	N/A	Yes
4.2.10	Individually programmable shutdown delay after ignition off	Yes for switched outputs (0 to 18hours)	Yes for switched outputs (0 to 18hours)	N/A	N/A	Yes
4.2.11	Load shed - individual outputs can be configured to switch off when battery voltage falls below limit	Yes (programmable in 0.5V increments from 9V to 12V)	Yes (programmable in 0.5V increments from 9V to 12V)	N/A	N/A	Yes
4.2.12	Output flashing phase control (Each group of 5 outputs on a SmartFET will be turned on simultaneously rather than using the chips built in phase shift. This allows cleaner transitions on 5wire lights.)	By default, all even system outputs flash together and alternate with odd outputs (can be individually configured as well)	By default, all even system outputs flash together and alternate with odd outputs (can be individually configured as well)	N/A	N/A	Yes
4.2.13	2 outputs have series diodes to prevent back feed	Yes, outputs 15 and 24 (5Amps each)	N	N/A	N/A	N/A
4.2.14	Outputs have clamp diodes for reverse inductive spikes	Yes, all 20 programmable outputs	Yes, all 10 programmable outputs	N/A	N/A	N/A

Port Input Features

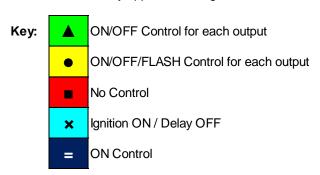
	Feature	Central Controller	Remote Node	Input Node	200R Siren	PC Software Application
4.3.1	Ability to configure inputs to trigger with active high or active low	No (ignition is active high only)	All inputs	Minimum of 10 active low inputs and minimum of 10 active high inputs	N/A Aux input active low only and plays wail or airhorn tone per Control Panel Setting	Yes
4.3.2	Inputs are analog to allow future threshold adjustments or processing	No - ignition is digital	Yes	Yes	N/A	N/A
4.3.3	Programmed high level thresholds	>=8.5V	>=8.0V	>=7.5V	Park kill, PTT, Aux and hornring >=10.6V; Primary/Se condary and backlight >= 9.0V	N/A
4.3.4	Programmed low level thresholds	N/A	<=1.5V	<=1.5V	Park kill, PTT, Aux and hornring <=0.6V	N/A
4.3.5	Ability to assign priority levels 1 through 5 (highest) to override other input events. See Section o for order of processing within same priority level	Yes	Yes	Yes	Parkkill and Hornring inputs have highest priority	Yes
4.3.6	Inputs can trigger events after ignition off (for period of time as set in App)	Ignition	Yes	Yes	N/A	Yes

	Feature	Central Controller	Remote Node	Input Node	200R Siren	PC Software Application
4.3.7	Ignition input from multiple sources	Local or remote ignition can be configured	Input 1 can be configured as ignition to wake system	Input 12 can be configured as ignition to wake system	No	Yes
4.3.8	Ability to monitor nForce exterior/interior nForce Breakout Box inputs as equivalent to Input Node capabilities	Yes	N/A	Emulated by Breakout Box (input thresholds are <0.7Vdc, remote ignition not supported)	N/A	Yes
4.3.9	Ability to trigger events with nForce lightbar photo-sensor	Yes	N/A	N/A	Receives as amp'd input	Yes
4.3.10	Response time from input event to output state change (can be more if packets are lost)	Typically 60msec to 200msec	Typically 60msec to 200msec	Typically 60msec to 200msec	N/A	N/A
4.3.11	PA audio input	No	No	No	Yes (received as amp'd input from preamp)x`	N/A

Input to Output Mapping Capabilities



^{*} Mapping from discrete wires only applies to configurations without a control panel.



Order of Precedence for Priority Contention

Priority Setting	1 - Lowest
	5 - Highest

Inputs Type 1 - Lowest RPDU Inputs #5 Inputs 2 RPDU Inputs #4 Inputs 3 RPDU Inputs #3 Inputs 4 RPDU Inputs #2 Inputs 5 RPDU Inputs #1 Inputs 6 Input Node Inputs 7 **Control Panel Inputs** 8 Central controller Inputs 9 Matrix Signals 9 - Highest 200R Inputs

Input Number 1 - Lowest Input Wire # 1 20 - highest Input Wire # 24..

Output Control 1 - Lowest Turn output off 2 - Flash Flash Output 3 - Highest Turn output steady on For each PRIORITY from 1 to 5 $\,$

For Each REMOTE NODE 5 to 1

For Each INPUT 1 to 4

Turn OFF

Enable FLASH

Turn ON

For Each CONTROL PANEL INPUT 1 to 12

Turn OFF

Enable FLASH

Turn ON

For Each CONTROL PANEL INPUT (Ign, PS INPUT 1 to 5)

Turn OFF

Enable FLASH

Turn ON

For Each MATRIX OUTPUT SIGNAL 1 to 8

Turn OFF

Turn ON

Enable FLASH

Siren Specific Features

	Feature	Central Controller	Remote Node	Input Node	200R Siren	PC Software Application
4.6.1	Support for dual tone and synchronization (primary and secondary 200R sirens)	N/A	N/A	N/A	Yes	Yes
4.6.2	Stock SoundOff PA Pre- amplifiers and Control Panel "Siren 48XRSP Remotes" are compatible with Blueprint without changes. Input commands will be rerouted to lightbar and amplifier.	Yes	N/A	N/A	Yes	Yes
4.6.3	Support Park Kill Enable and Park Kill Latch features	Yes	N/A	N/A	Yes	Yes
4.6.4	Support existing alternate mode Hornring	Yes	N/A	N/A	Yes	Yes
4.6.5	Support new Advanced Hornring features (See Advanced Horn Ring)	Yes	N/A	N/A	Yes	Yes
4.6.6	Populate circuitry for LIN data communications port on 200R	N/A	N/A	N/A	Yes	N/A

Diagnostic Features

	Feature	Central Controller	Remote Node	Input Node	200R Siren	PC Software Application
	Ability to turn on each output manually	Yes (includes lightbar states, Siren outputs only if Control Panel is unplugged)	Yes	N/A	Yes (Siren outputs only if Control Panel is unplugged)	Yes
4.7.2	PCB/Enclosure temperature measurement	Yes (in addition to SmartFET temperature)	Yes (in addition to SmartFET temperature)	N/A	N/A	
4.7.3	Ability to report battery voltage	Yes	Yes	No	Yes (sent to Central Controller but not available in App)	Yes
4.7.4	Ability to report input and output states	Yes	Yes	Yes	Yes	Yes
4.7.5	Report approximate steady state current on outputs	Yes (+/- 5%) SmartFET requires calibration	Yes (+/- 5%) SmartFET requires calibration	N/A	N/A	Yes
4.7.6	Ability to log quantity of fault events on each output (up to 255) since last count reset	Yes	Yes	No	No	Yes (sends PC timestamp to Central for logging reset date)
4.7.7	Device serial number can be retrieved	Yes	Yes	No	No	Yes
4.7.8	Firmware and bootloader versions can be retrieved	Yes	Yes	Yes	Yes	Yes
4.7.9	Ability to detect speaker short and open	Yes (displayed on control panel LEDs)	N/A	N/A	Yes	No
4.7.10	Log USB communication fault due to invalid CRC	Yes	No	No	No	No
4.7.11	Log SPI communication fault due to SmartFET error	Yes	No	No	No	No
4.7.12	Show count of how many times a configuration upload has occurred	Yes	N/A	N/A	N/A	Yes

o Other Requirements

	Feature	Central Controller	Remote Node	Input Node	200R Siren	PC Software Application
4.8.1	uC Watchdog	Yes	Yes	Yes	Yes	N/A
4.8.2	uC Bootloader	Yes	Yes	Yes	Yes	N/A
4.8.3	uC Brown Out	Yes	Yes	Yes	Yes	N/A

	Feature	Central Controller	Remote Node	Input Node	200R Siren	PC Software Application
4.8.4	Fuse/Circuit Breaker requirements	Circuitry capable of 140 Amps total (+40 Amps on always on four outputs), but maximum allowed current and required protection is 100 Amps	Circuitry capable of 70 Amps total, but maximum allowed current and required protection is 50 Amps	Maximum of 3Amp fuse required	Maximum of 10Amp fuse required	N/A
4.8.5	SmartFET outputs turn off with loss of onboard communication with processor	Yes	Yes	N/A	N/A	N/A
4.8.6	Outputs retain last known state with loss of LIN communications	N/A	Yes (for 10 minutes)	N/A	Yes (for 20 seconds if tone is active)	N/A
4.8.7	Read and write password protection	Yes	N/A	N/A	N/A	Yes (individually configurable)
4.8.8	Ability to configure nForce Breakout Box through USB connection to central controller	Yes	N/A	N/A	N/A	Yes (integrates nForce config Modules and Patterns tabs)
4.8.9	Software configuration files are encrypted	Yes	N/A	N/A	N/A	Yes
4.8.10	Low power sleep current	<1mA after ignition timeout	<1mA after ignition timeout	<1mA after ignition timeout	<1mA after ignition timeout	N/A
4.8.11	Non-volatile memory for retaining configuration settings	Yes	Yes	Yes	N/A	N/A

Software Application Specific Features

	Feature	Central Controller	Remote Node	Input Node	200R Siren	PC Software Application
4.9.1	Ability to save all settings to file and restore when loaded again	N/A	N/A	N/A	N/A	Yes
4.9.2	Ability to generate report showing input to output mapping and output type (on, off, flash) – EXPAND?	N/A	N/A	N/A	N/A	Yes

Environmental Requirements

Weather/Environmental

Water Ingress Protection

- Remote Node and 200R Sirens these modules are intended for interior or exterior use and rated to IP67 when installed properly.
- Central Controller and Input Node are interior use only. Maximum of 99% relative humidity, non-condensing.
- Mechanical Loading:
 - Mechanical Shock Products will withstand mechanical shock found in normal use such as potholes, minor collisions, and door closures. Tests shall be conducted according to IEC 60068-2-27 Ea.
 - Random Vibration: Products shall withstand random vibration found in normal use induced by rough roads. The tests shall be conducted according to ISO 16750-3:2007 Chapter 4.1, Test IV passenger car, sprung masses (vehicle body). During vibration load testing, the system should be simultaneously subjected to temperature cycles according to the vibration test temperature cycle. The Lightbar should be "ON" and continuously monitored during test. Temp cycle per ISO 16750-3:2007, General
- Design for Manufacturing and Assembly

Compliance Requirements

o Electrical

- Emissions compliant to 2004/104EC, radiated immunity to ISO 11452-2, and conducted immunity to ISO 7637-2.
- Input Voltage: 10-16Vdc / Load Dump Rated to SAE J2139
- Reverse Polarity: The Central Controller and Remote Nodes are marginally protected with onboard Transorb devices. WARNING TAPE WILL BE PLACED ACROSS THE POWER TERMINALS TO REMIND INSTALLERS. The circuitry will endure a very fast (less than 1 second depending on wiring) accidental connection but cannot sustain a reverse polarity connection. Transorbs are designed to fail as a short to protect downstream circuitry in the event of this type of failure. This will render the device inoperable but allow factory servicing to restore operation.
- Over current protection Devices must be protected with external fuses or circuit breakers as specified above. Internal protection in the SmartFETs on each of the Central Controller and Remote Nodes will allow a single short on an output line and turn off that pin to prevent circuit damage. Each output also includes inline SMT fuses to act as another line of protection if the SmartFET were to fail.
- Over-voltage protection withstand dual battery jump start GMW3172

Advanced Horn Ring Functions

The advanced horn ring configuration that is being implemented in bluePRINT will allow the user to setup horn-ring via the software application, and provide a way to customize siren behavior for all levels of pursuit mode (slide switch off, 1, 2, and 3).

Horn Ring Operations:

а	No Change
b	Turn Horn ring tone off
С	Change to Wail button tone
d	Change to Yelp button tone
е	Change to Tone button tone
f	Change to Airhorn button tone
g	Change to Manual button tone
h	Change to Horn ring tone
i	Alternate between current and next priority tones
j	Scroll Advance to next priority tone (W-Y-T-W)
k	Scroll Advance to next priority tone (W-Y-T-A-W)
I	Scroll Advance to next priority tone with off (W-Y-T-OFF-W)
m	Scroll Advance to next priority tone with airhorn and off (W-Y-T-AOFF-W)
n	Toggle between Wail and Yelp button tones
0	Advance to next priority tone (W-Y-T)
р	Advance to next priority tone including airhorn (W-Y-T-A)

a) No Change

• This function will disable any currently playing horn ring controlled tone. The siren will revert to the tone command from the control panel. This operation will cancel the horn ring tone on both speakers. The duration setting also does not apply for this operation.

b) Turn horn ring tone off

• This function will play the assigned wail button tone on the speaker as specified in the speaker setting for the duration as defined in the duration setting.

c) Change to wail button tone

• This function will play the assigned yelp button tone on the speaker as specified in the speaker setting for the duration as defined in the duration setting

d) Change to yelp button tone

• This function will play the assigned tone button tone on the on the speaker as specified in the speaker setting for the duration as defined in the duration setting

e) Change to tone button tone

• This function will play the assigned airhorn button tone on the on the speaker as specified in the speaker setting for the duration as defined in the duration setting

f) Change to airhorn button tone

• This function will play the assigned manual button tone on the speaker as specified in the speaker setting for the duration as defined in the duration setting

g) Change to manual button tone

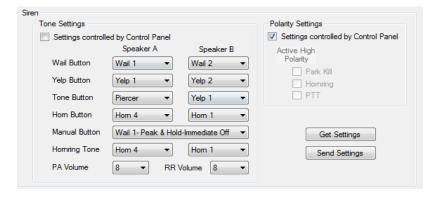
 This function will play the assigned horn ring tone on the speaker as specified for the duration as defined in the duration setting.

- h) Change to horn ring setting tone
 - This function will play the assigned horn ring tone on the speaker as specified for the duration as defined in the duration setting.
 - The horn ring tone is configured much like tones for the other control panel buttons although there is not a physical button for the tone.
- i) Alternate between current and next priority tones
 - This operation will toggle between the current tone and the next priority tone with each press of the horn while the operation is active on the speaker as specified in the speaker setting for the duration as defined in the duration setting.
 - This function assumes that the horn tone is not advanced by any other method. Undefined behavior might exist if the horn ring tone is manipulated by other horn ring operations while this function is active.
- j) Scroll to the next priority tone (operations j-m)
 - These operations will scroll to the next priority tone as listed in the description on the speaker as specified in the speaker setting for the duration as defined in the duration setting.
 - The highest priority tone is selectable as tone, airhorn or off.
 - Wail tone is played as a response to a horn press when the previous tone was the highest enabled priority tone.
- k) Toggle between wail and yelp tones
 - This operation will toggle between yelp and wail tones on the speaker as specified in the speaker setting for the duration as defined in the duration setting.
 - The base tone will be wail if triggered when the siren is silent. Base tone will be yelp in all other cases
- Advance to next priority tone (W-Y-T)
 - This function will advance to the next priority tone on the speaker as specified in the speaker setting for the duration as defined in the duration setting.
 - The highest priority tone is that of the tone button.
 - This function does not scroll back to the lowest tone after the highest priority tone has been activated. Additional horn presses when the highest priority tone is playing will result in no change.
- m) Advance to next priority tone (W-Y-T-A)
 - This function will advance to the next priority tone on the speaker as specified in the speaker setting for the duration as defined in the duration setting.
 - The highest priority tone is that of the airhorn button.
 - This function does not scroll back to the lowest tone after the highest priority tone has been
 activated. Additional horn presses when the highest priority tone is playing will result in no
 change.

Advanced Horn-ring Configuration Global Settings Get Hom Ring Send Hom Ring Siren Tone Active In: Levels 1, 2 & 3 Only ▼ Park Kill Latch Enabled HR Timeout: 8 seconds Horn Ring Settings Siren On Siren Button Tone Siren Off, HR Tapped: OFM Horn will sound Siren Off, HR Held: **OEM Hom will sound** Siren On, HR Tapped: OFM Horn will sound Siren On, HR Held: OEM Hom will sound Hom Transfer Hom Ring for Park Kill Speaker Output Behavior Duration ✓ Siren Off OEM hom only ✓ Siren On Siren Button Tone Siren Off, HR Tapped: Change to Manual button tone While pressed, then turn off Siren Off, HR Held: Change to Manual button tone Both While pressed, then turn off Siren On, HR Tapped: Alternate between current and next priority tones Latched until control panel button change Siren On, HR Held: Change to Manual button tone Both While pressed, then revert to siren tone Speaker Output Behavior Hom Ring for Park Kill OEM hom only Siren On Siren Button Tone Siren Off, HR Tapped: Change to Manual button tone Both While pressed, then turn off Siren Off, HR Held: Change to Manual button tone Both While pressed, then turn off Siren On, HR Tapped: Alternate between current and next priority tones Both Latched until control panel button change Siren On, HR Held: Change to Manual button tone Both While pressed, then revert to siren tone Hom Ring for Park Kill ✓ Siren Off OEM hom only ✓ Siren On Siren Button Tone Siren Off, HR Tapped: Change to Manual button tone Both While pressed, then turn off Siren Off, HR Held: Change to Manual button tone Both While pressed, then turn off Giren On, HR Tapped: Alternate between current and next priority tones Both Latched until control panel button change Siren On, HR Held: Change to Manual button tone While pressed, then revert to siren tone

Tone Mapping

While not specific to horn-ring functions, the Central Controller and Software App will have the ability to map tones to the Control Panel buttons. If the "Settings controlled by Control Panel" checkbox is active, then the Control Panel internal settings will determine the tones (default 400 Series Siren behavior). Similarly, the polarity of the Park-kill, horn-ring, and PTT can be set to follow the default behavior in the Control Panel or to map according to the Blueprint settings below:



(80) Sound Off Signal mpower® 3" Fascia Light w/ Quick Mount, 18" hard wire w/ sync option, SAE Class 1 & CA Title 13, 9-32 Vdc, Black Housing, 8 LED, Dual Color - Blue/White. Lights to be mounted on the LOWER FOG LIGHT / SIDE OF PUSH BUMPER / (2) PER EACH SIDE OF CAR; UNDER DRIVER & PASSENGER DOORS. MFG Part Number: EMPS1QMS3E

Requirements:

The light shall meet SAE J845 Class 1 standards. The light shall have (4) blue Gen 3 LED's and (4) white Gen 3 LED's mounted behind a Dow Corning, ClearDuty silicone lens. The light flasher is integrated into the light and is able to synchronize to other SoundOff Signal LED's. The light shall be 9-32vdc and have an operating temperature of -40C-+65C. The manufacturer shall include a guad flash pattern as an option.

Dimensions and Mounting:

The light shall be a minimum of 3.04" L x 0.92" H x 0.47" D (from mounting surface) and be able to mount on any smooth, flat surface. The light shall have the necessary 3M adhesive tape pre-applied to the unit.

(20) Sound Off Signal mpower® 4" Fascia Light w/ Quick Mount, 18" hard wire w/ sync option, SAE Class 1 & CA Title 13, 9-32 Vdc, Black Housing, 18 LED, Tricolor - Red/Blue/White mounted beside the tag. MFG Part Number: EMPS2QMS5RBW

Requirements:

The light shall meet SAE J845 Class 1 standards. The light shall have (6) Red Gen 3 LED's and (6) Blue Gen 3 LED's and (6) White Gen 3 LED's mounted behind a Dow Corning, ClearDuty silicone lens. The light flasher is integrated into the light and is able to synchronize to other SoundOff Signal LED's. The light shall be 9-32vdc and have an operating temperature of -40C-+65C. The manufacturer shall include a quad flash pattern as an option.

Dimensions and Mounting:

The light shall be a minimum of 4.04" L x 0.92" H x 0.47" D (from mounting surface) and be able to mount on any smooth, flat surface. The light shall have the necessary 3M adhesive tape pre-applied to the unit.

- (10) Westin Push Bumper Elite for the Dodge Charger 2011-2018. MFG Part Number: 36-2035
- (10) Westin Elite Light Chanel for (2) Sound Off Signal lights. LFG Part Number: 36-6005S2
- (20) Sound Off Signal nFORCE® 12 LED Replacement Warning Module for nFORCE® Perimeter Lighting, SAE Class 1, 10-16v, Dual Color Blue/White to be mounted in upper channel of the Westin 36-2035. MFG Part Number: ENFRMS3E
- (20) Sound Off Signal nFORCE® Replacement Warning Module Light, SAE Class 1, 10-16v, Black Housing, 12 LED, Dual Color Blue/White to be mounted in upper channel of the Westin 36-2035. MFG Part Number: ENFRMS3E.

Requirements:

The light shall meet SAE J845 Class 1 standards. The light shall have (6) blue Gen 3 LED's and (6) white Gen 3 LED's that are mounted so they flash up into a (1) piece curved mirror reflector. The light flasher is integrated into the light and is able to synchronize to other Soundoff Signal LED's. The light shall be 12.8vdc and have an operating temperature of -40C-+65C.

Mounting:

The light shall be able to mount in a Westin channel designed for SoundOff Signal nForce modules.

- (20) Code 3 4 Pack Hide A Blast mounted to all four corners of the car. MFG Part Number: HB4PAK-B
- (10) Havis 2011-2018 Dodge Charger Police Package Vehicle Specific 24" Console. MFG Part Number: C-VS-2400-CHGR-2 with (10) total C-CUP2-I Internal Cup Holders, (10) total C-ARM-103 Arm Rest for Top Mount, Console, Large Pad, (10) total C-AP-0325 3" Accessory Pocket, (10) total C-MD-112, 11" Slide Out, Locking Swing Arm with Motion Adapter and (10) total C-HDM-204, 8.5" Heavy Duty Telescoping Pole, Side Mount, Short Handle.

- (10) Setina Manufacturing Dual T-Rail Mount 2 Universal XL, MFG Part Number: GK10342USSCAXL
- (10) Setina Manufacturing #10XL Uncoated Polycarbonate, MFG Part Number: PK1129CGR11SCA
- (10) Brooking Industries Floor Pan Covers A.B.S. floor pan for 2011+ Dodge Charger. MFG Part Number: VF-DC2
- (20) Pro Gard Rubber Insert. MFG Part Number: 3S601
- (10) Brooking Industries A.B.S. prisoner transport seat for 2011+ Dodge Charger. MFG Part Number: VS-DC2
- (10) Brooking Industries Universal Seat Belt Extender Fits any vehicle Not guaranteed to work with other manufacturer's transport seats. MFG Part Number: PT-SBE
- (10) Brooking Industries Door Panel Covers A.B.S. door skins for 2011+ Dodge Charger: MFG Part Number: DP-DC2
- (10) Brooking Industries Steel Window Bars Powder coated steel window barriers (set) 2011+ Dodge Charger Horizontal bar design. MFG Part Number: RWB-DC2
- (10) Digital Ally DVM-800 with, (10) 001-000010-20 WIFI ADAPTER, (10) 008-01443-00 CABLE, DVM-800 TO 12XC CAMERA, (10) 012-00035-00 PREMIUM PACKAGE OPITON, (10) 566-00134-00 CAMERA, SURFACE MT. (IP69) and (10) 566-00138-00 CAMERA, PCAM 12X with a 3-YEAR WARRANTY
- (10) Sets of Custom City of Griffin Police Department Decals to match current 2018 Dodge Charger Fleet.
- (10) Motorola APX4500 Mobile 700/800 MHZ, Radio Complete with P25 FDMA & TDMA software, 3DB Low-Profile Antenna, remote mount option included, O2 control head, and AES encryption and a 5-year manufacturer's warranty
- (10) Install Kits for MISC loom, wire, hardware and connectors.
- (10) Complete Installs to include all of the above and the City of Griffin Supplied WiFi
- (10) Delivery Fees to include having the Cars Delivered from Akins Dodge to suppliers location and then from Suppliers location to the City of Griffin Police Department Road Ready.

Any Shipping Charges for the Vehicle Equipment.

FY19-002 PRICE SUBMITTAL: Public Safety Vehicle Outfitting

Company Name	Bid Price Valid Through	
PRICE STRUCTURE – Complete the following and inequoted.	clude associated information spe	ecifics for the cost
Address of nearest Service Center to 30223		
Total outfitting price-Criminal Investigations vehicles p	er unit \$ x3	\$
Total outfitting price-Uniform Patrol vehicles per unit	\$ x10	\$
Any other charges/fees not included above (list)	total	\$
Any other charges/fees not included above (list)	total	\$
Total outfitting price for all thirteen vehicles, including	any delivery, etc fees	\$
Warranty period on installation and graphics		
List (and explain) how post-delivery maintenance/repa	irs will be handled:	_
**************************************	*********	******
ANTICIPATED DELIVERY timetable after receipt of the ***********************************		
Additional comments/recommendations:		
The City reserves the right to accept or reject any or all quobidding. The City reserves the right to accept the BEST-EV, which may or may not be the lowest monetary bid.		
NOTE: Once a quote has been accepted, the supplier will issuance. Information on becoming a registered supplier will link: https://vrapp.vendorregistry.com/Vendor/Register/Index/gribeen included as a separate document.	th the City can be found on our we	bsite using the following
COMPLETED BY: Company Name:		
Contact Person:		
(Signature)	(Printed Name)

FAILURE TO RETURN THIS PAGE AS PART OF YOUR SUBMISSION MAY RESULT IN REJECTION OF RESPONSE



SUPPLIER DISCLOSURES

All solicitations MUST contain signed and notarized statement of Non-Collusion and non-Conflict of Interest. Any YES response for other disclosures must be detailed and attached to this sheet as part of your submittal. Reference to 'Supplier' denotes the organization submitting the response as well as the principal representing the organization.

Collusion. Collusion exists when two or more parties act together to achieve a fraudulent or unlawful act. Collusion inhibits free and open competition and is in violation of antitrust laws.

I certify that this bid response is genuine and is not a collusive or sham proposal. I further state that:

- The prepared response is made without prior understanding, agreement, or connection with any corporation, firm, or person submitting a bid or offer for the same supplies, labor, services, construction, materials or equipment to be furnished or professional or consultant services, and is in all respects fair and without collusion or fraud; and
- The price(s) submitted has/have been arrived at independently and without consultation, communication or agreement with any other supplier, supplier or potential responder to the solicitation; and
- No attempt has been made or will be made to induce any company or person to refrain from responding to this solicitation, or to induce them to submit a budget that is higher than the budget in this solicitation, or to submit any intentionally high or noncompetitive response or other form of nonresponsive submittal; and
- o I understand collusive bidding is a violation of city, state and federal law and can result in fines, prison sentences, and civil damages awards. I also certify that I am authorized to sign for this Supplier.

Conflict of interest. A Conflict of Interest exists when personal interests interfere in any way with the best interest of the City. This can arise if any agent of the City or their families will receive a monetary or other type of benefit based on the award of this project or if any supplier has an unfair competitive advantage over other suppliers. A conflict is also perceived if any previous history would make it impossible for the supplier to objectively fulfill the obligations associated with this project.

I certify that there is no known conflict of interest with the City or any employee or agent of the City. There is presently no interest and no interest shall be acquired that would directly or indirectly conflict in any manner with the performance of this solicitation, should it be awarded.

Company Name		
Signature of Authorized official of company	Printed Name	
Sworn to and subscribed before me this day of	, 20 .	
Notary Public:		
County:		
Commission Expires:		

OTHER SUPPLIER DISCLOSURES (Yes or No.)

Any response of 'Yes' must be explained in full (separate sheet may be used).

Debarment. Supplier certifies that neither it or its subcontractors is presently debarred, suspended, proposed for debarment, declared ineligible, or otherwise excluded from doing business with any government agency. Has the Supplier been deemed ineligible from participating in any business with any government agency in the past five (5) years?

Litigation. Within the past five (5) years, has the Supplier been the subject of or party to any civil or criminal proceedings or investigations based on wrongful death, fraud, theft, breach of contract, safety, misrepresentation or any other conduct?

_	_		nstrates that the Supplier has the resources to complete and the of the subsequent contract. Has any petition of bankruptcy, orders the past five (5) years?		
_	-	certain problems or delays associated with	s are types of compensation designed to reimburse the City for a project; it serves as protection to both parties in the form of oplier been assessed any liquidated damages or defaulted on any five (5) years?		
_	_	OSHA. Has the Supplier been cited for any O	SHA violations in the past five (5) years?		
SUPPLIER ACKNOWLEDGEMENTS (please initial)					
_	_	Resources. We agree that we have the resource	ces needed for the satisfactory completion of the project.		
_	_		is RFP must be expressly stated in writing and attached as an assures the City of their full agreement and compliance with all its and obligations of this RFP.		
_	-	Occupational Tax License. If a City of Griffin we will obtain such license prior to the confirma	Occupational Tax License is needed in order to fulfill the project, tion of contract.		
_	-	Insurance. We understand the insurance requendorsements for these requirements prior to the	rements noted and are prepared to supply the required insurance ne confirmation of contract.		
_	_	Terms and Conditions. The specifications, as be incorporated as an integral part of the final of	well as the terms and conditions of this Request for Proposal shall ontract.		
unles	s sp eting				
	-		_		
	Add	dendum No dated Acknowled	gement		
		Supplier's receipt of any addendum will resu	any issued addenda. Responses which fail to acknowledge It in the rejection of the bid if the addendum contained		
		<u>information which substantiv</u>	ely changes the City's requirements.		
		BID RESPON	NSE SIGNATURE		
I am re		ered (and compliant) with the City's online registrace City cannot award to a supplier that is not regis			
NAME C	F CC	OMPANY:			
MAILIN	G AD	DDRESS:			
CITY /S	TATE	E/ZIP:			
PHONE	(incl	luding area code):	E-MAIL:		
		AUTHORIZED SIGNATURE	TITLE		
	N.	NAME (PRINTED)	TITLE (PRINTED)		