



## AGENCY SPECIFICATIONS

### BluePRINT SYSTEM

- Must use PC configuration software to manage the relationship between input and outputs to create vehicle behaviors to improve officer and public safety
- Must be able to synchronize secondary lights to the lightbar
- System must use Visual Diagnostic Indicators and Reliability Records for Each Output:
- Must be able to test and diagnose faults which may include over-current, over-temperature, over-voltage, under-voltage, and open-load.
- Logs are also recorded for the number of times the fault has occurred since last reset to aid in the diagnosis of intermittent connections.
- Each output has to have the ability to be individually timed, this eliminates the need for an external timer
- Each output has to have the ability to be programmed to load shed when the battery reaches certain programmed voltage levels

Input Voltage: 10-16Vdc (Negative Ground)

Outputs: Up to 70 programmable outputs

Inputs: Up to 40 inputs+

The Central Controller processor stores and interprets the input and output configuration from the software application and control outputs accordingly as well as monitors outputs for fault conditions. The Central Controller is fully software configurable via PC Software app through USB connection.

The central controller is the communication hub for other system components within the EV Control System allowing for:

- A communication port for lightbar
- A communication port for 14 button control panel
- A communication port for other control system devices
- Up to 5 remote nodes
- Input node
- Up to 2 200R siren amplifiers

The central controller allows for 24 outputs for connection to vehicle devices (100 Amps max) and has:

- (4) 10-amp fused outputs - constant power
- (8) 10-amp solid state switchable outputs
- (12) 5-amp solid state switchable outputs Each output to have a status LED to show if output is active

Must have a diagnostic LED to aid in diagnosing system issues

Input Voltage: 10-16Vdc (Negative Ground)

Dimensions: 7" x 6.25" x 1"

Operating Temp: -40°C to + 65°C

IGN ON: Standby Current: 140mA

IGN OFF: Sleep Current: 0.34mA

### REMOTE NODE ENGND04101

The remote node allows for a decentralized install, creating shorter wire runs to the light heads. This creates a cleaner, more consistent install. Shorter wire runs also greatly reduce the trouble shooting of faulty light heads, because it takes much less time to trace issues

For ultimate scalability, the bluePRINT system allows for the connection of up to 5 remote nodes for a total of 70 outputs and 40 inputs.

The Remote Node provides 10 outputs for connection to...

Hermetically sealed providing protection in wet areas.

Vehicle devices (50 Amps max).

- (4) 10-amp solid state switchable outputs
- (6) 5-amp solid state switchable outputs.

The Remote Node also provides 4 inputs to control systems which are Active High/Low selectable.

Input Voltage: 10-16Vdc (Negative Ground)

IGN ON: Standby Current: 60mA

IGN OFF: Sleep Current: 0.34mA

High Voltage Protection: >16V; High Voltage Error Code Set

Low Voltage Protection: <9V; Low Voltage Error Code Set

Operating Temp: -40°C to + 65°C (85°C max current = 30Amps)

Dimensions: 6.0" x 3.4" x .8"

Weight, Boxed: 13.2 oz.

Weight, Device Only: 10.7 oz.

Valid Input Threshold High: >8.0V

Valid Input Threshold Low: <1.5V

### SIREN AMPLIFIER ENGSA03021

The nERGY Control System 200R Siren is a compact siren that has a small size and remote amplifier for tight spaces

- Class D Technology with high speed digital switching provides higher efficiency, less current draw and better reliability.
- Operates a single 100 watt speaker. A second amp can be added to create dual tone
- 20 tones (up to 5 tones can be activated from Central Controller Commands):
- Contains a horn-cut relay to disable the OEM horn when the Horn-Ring (Hands-Free) system feature is enabled.
- Public Address (PA) and (RR) volume levels set via system control panel.
- Park/Kill feature disables the siren when the vehicle is placed in Park.
- Built-in protection against over/under voltage, over temperature, short circuit and reverse polarity.
- Must have high voltage and low voltage protection
- The siren must hermetically sealed, providing protection in wet areas.

Input Voltage: 10-16Vdc (Negative Ground)



Maximum Input Current: 8 Amps @ 13.6 Vdc (100W Speaker)

Outputs: 100W

Sleep Current: <1 mA

Inputs:

1x Horn Ring Input

Operating Temp: -40°C to + 65°C

Dimensions: 2.3”H x 5.4”W x 4.6”D

Weight, Boxed: 3 lbs.

Weight, Device Only: .93 lbs.

1x Park Kill

1x CP Back Light

1x Radio Rebroadcast

1x PA

Valid Input Threshold - High >10.6V - Park Kill, PTT, Aux, Horn Ring  
>9.0V - Primary/Secondary Backlight

Valid Input Threshold - Low <0.6

**CONTROL PANEL ENGCP18001**

- The Control Panel features 8 (eight) auxiliary buttons for one-touch programming and a three-position slide switch to allow convenient switching for the most frequently used warning modes
- Control panel must have 1 programmable multi touch button
- Control panel must have a LED arrow indicator
- Control panel must have an eight-second buzzer alert to notify users that the level or auxiliary buttons are activated
- Control Panel must have dimmable green LED backlighting
- Control panel must be user programmable by either using the keypad to enter programming mode, or PC software

**Input node ENGN20001**

- Must have 20 inputs to be used as inputs in the bluePRINT system
  - 13 must have user selectable polarity to work on positive or ground side inputs
- Nforce Break out box can be used as input node at no additional charge

With use of the vehicles outputs this system can perform these functions as well as many more

Ex of inputs available	Common Action Performed	benefit
Brake*	rear facing red modules activated steady burn for added stop notification during pursuit. Note lightbar and inserts?	advance notification that leading officer is slowing down/stopping
Reverse	white mods on rear of bar or vehicle can be put on steady burn when car is put in reverse Note lightbar and inserts?	added visibility to rear while in reverse
High Beam*	activate scene, or use in matrix	trigger safety features without removing eyes from the road
Head Lights	activate low power mode	
Park	When park is engaged, it can slow down the flash pattern on vehicle	After a pursuit officer the officer may not remember to change to slide 1 to slow flash pattern down while parked on side of road, this can cause distraction to oncoming traffic and could potentially lead to an accident on the side of the road
Horn*	When horn is depressed the system can change the pattern on all the lights of the car to a faster more attention grabbing patterns.	This can help reduce accidents while going through intersections. This is timed so that after the vehicle is through the intersection, the system will default back to the pattern activated previously to the horn being triggered
Door Trigger	turn off corner mod of bar and mirror lights	help officer keep night time vision while exiting car at a night time stop
Trunk/Tailgate	automatically activate trunk lights	Lights are inactive while...
Parking Lights	activate control panel back light	
Drive*	turn arrow into warning	officer at a stop and gets a hot call, this will change arrow to warning
Left Turn	turn signal mods in LB, or on secondary lights	
Right Turn	turn signal mods in LB, or on secondary lights	
Steering wheel switches	activate outputs with the factory switches	Fords only, no need for external unit to switch polarity of switches