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# **RELAY-CONTROL AND TOUCH SCREEN INTERFACE FOR WHELEN CORE AND HHS SIREN AND LIGHT CONTROLLERS**

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## OVERVIEW

The RCM-001 Relay Control Module and User Interface enables operators of the Whelen CORE or HHS systems to monitor and control programmed functions via both the Whelen supplied Control Head, a Touchscreen dash mounted panel or Wi-Fi connected device such as a SMARTphone.

The RCM-100 was developed for inclusion in the “Next Generation” Singapore Police Cars which are being built by ST ENGINEERING Land Systems Singapore in cooperation with EMALTE Australia and Whelen Australia. A total of 300 Next Gen Police cars will be put into service during the next 3 years.



The RCM-100 is a compact unit which incorporates the electronics module in an IP66 housing. An accompanying software application enables ICONs to be placed on the vehicles Touchscreen panel. Communications between the in-car command system and the RCM-100 are MODBUS TCP. The RCM also supports wireless communications.

The RCM-100 supports 8 Isolated Digital Inputs and 4 Digital Output Power Relays. Optical isolators prevent ground loop effects and limit damage from power surges. An Ethernet interface supports Modbus TCP protocol. A USB comm port is included for Modbus communications and configuration.

The RCM-100 is lightweight and draws very little power.

### **Prototype RCM-001 shown – production model includes both Inputs and Outputs**

The RCM-100 is an excellent enhancement for Whelen based systems enabling flexibility for the operators providing both in car Touchscreen and Wi-Fi compatible SMART device status monitoring and control.

## How does it work?

The RCM-100 connects hardwire to the Inputs and Outputs of the Core or HHS controller.

A CAT6 Ethernet cable connects to the Touchscreen PC or in car PC based system.

In the case of the Singapore Police Car Project the Touchscreen provides the User Interface to all electronic systems installed within the vehicle:

- Whelen lights and sirens
- Camera systems
- Speed detector
- Licence Plate recognition
- Other

Every Touch Screen mimic has at its base the toggle switches for the HHS4200 lightbar and lighthouse scenes and siren functions.

The operator can action the scenes or siren functions by touching the icon or by using the control head (in the case of Singapore Police a CANCTL5).

Both the touchscreen and the control head actions are synchronised with actions initiated using the hand control automatically reflecting on the touchscreen.

Communications between the in-vehicle command system and the RCM-100 is MODBUS TCP.

Operators can also communicate with the RCM-100 via WiFi and control remotely – controlling the RCM-100 and therefore the relevant Core or HHS functions using a SMARTphone.

Specifications	
Operating voltage:	10~30VDC
Power at 12VDC:	<5W
Outputs:	4 Power Relay
Inputs (opto-isolated):	8
Isolation:	5000VDC
Operating temp:	-20°C to +75°C
Protection:	IP65
Interface:	Ethernet and USB
Sampling Rate:	10 samples per second
Operating frequency:	10Hz
Software:	RCM001_V2
Cables:	
Flammability Test:	IEC60332-1 (Temp -20 to +80°C)

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