## Car Advanced Technology - Volvo Specific

# CARAT Switch Systems

Developed in conjunction with Volvo's SPA platform and compatible with most 60 & 90 Series cars from 2019, new 40 Series models as well as the Poletsar electric range

CMP DEVICE

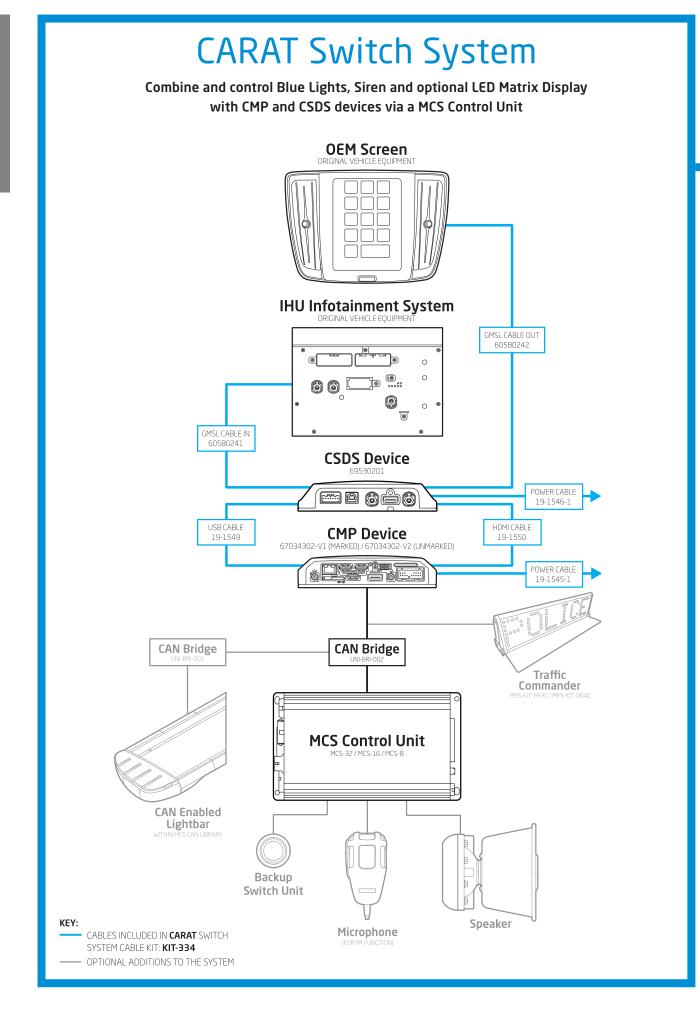




MCS DEVICE









## **CARAT Switch System**

Contains: CMP Device, Operating Software, Cables (KIT-334) and Software License. Also requires CSDS device - order separately.

| Note: The system is to be matched to the vehicle type - Marked or Unmarked                                                                                                           |             |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--|
| DESCRIPTION                                                                                                                                                                          | PART NUMBER |  |
| CARAT Control System for Marked Vehicle with Matrix Messages function.                                                                                                               | KIT-CMP-V1  |  |
| CARAT Control System for <b>Unmarked</b> Vehicle with Matrix Messages function.                                                                                                      | KIT-CMP-V2  |  |
| MCS CAN Bridge with CAN connections to interface with CAN controlled lightbars.<br><b>Note:</b> The lightbar must be within the lightbar CAN library of the MCS configurator editor. | UNI-BRI-001 |  |
| MCS CAN Bridge with CAN connections (telematics and remote control interface).<br><b>Note:</b> Required to interface CMP with MCS.                                                   | UNI-BRI-002 |  |
| DESCRIPTION                                                                                                                                                                          | PART NUMBER |  |
| CSDS Device (Center Stack Display Switch) - Volvo - Hardware - No Cables                                                                                                             | 69530201    |  |

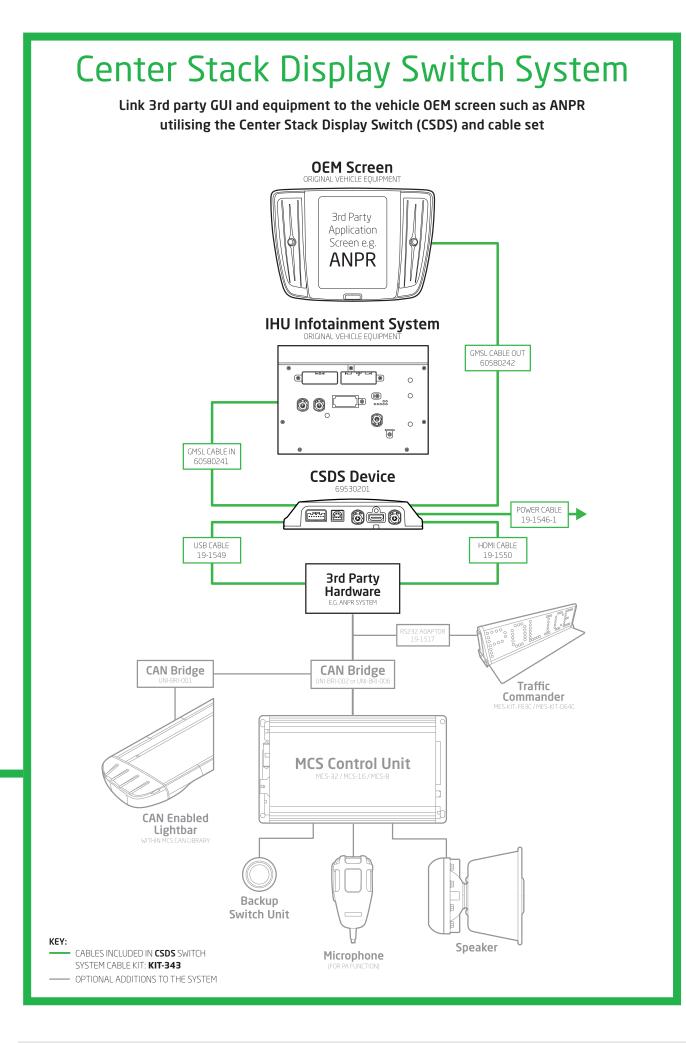


## Center Stack Display Switch System

Contains: Center Stack Display Switch (CSDS) and Cables (KIT-343). For use by 3rd party application - typically ANPR e.g. Cleartone or Attobus.

| DESCRIPTION                                                                                                                                                                     | PART NUMBER   |             |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|-------------|
| CSDS Center Stack Display Switch - Volvo - Hardware - No Cables                                                                                                                 | 69530201      | 69530201    |
| Cable kit for CSDS/ANPR System (does not include the CSDS device) includes:                                                                                                     | KIT-343       | KIT-343     |
| CSDS Power Cable - 19-1546-I                                                                                                                                                    | (Not required |             |
| CSDS - USB Cable to CMP - 19-1549                                                                                                                                               | when CMP      |             |
| CSDS - HDMI Cable to CMP - 19-1550                                                                                                                                              | Controller is |             |
| CSDS - GMSL Cable IN - 6 metres - 60580241                                                                                                                                      | specified)    |             |
| CSDS - GMSL Cable OUT - 6 metres - 60580242                                                                                                                                     |               |             |
| MCS CAN Bridge with CAN connections to interface with CAN controlled lightbars<br>Note: The lightbar must be within the lightbar CAN library of the MCS<br>configurator editor. | UNI-BRI-001   | UNI-BRI-003 |
| MCS CAN Bridge with USB A connection (telematics and remote control interface).                                                                                                 | UNI-BRI-003   | UNI-BRI-001 |
| MCS CAN Bridge with DB9 connection (telematics and remote control interface).                                                                                                   | UNI-BRI-006   |             |
| Traffic Commander - Matrix Display RS232 Adaptor.                                                                                                                               | 19-1517       | 19-1517     |







# **CARAT Switch Systems** Volvo Cars Ready Made Solutions

#### OVERVIEW

CARAT Switch Systems make it possible to display switch graphics (GUI - Graphical User Interface) generated within the CMP device on to the Volvo OEM display via the CSDS (Center Stack Display Switch) which acts as a video mixing unit for the associated video source. Noting this is all achieved by utilising a MCS control unit.

CARAT Switch Systems integrate with the vehicle infotainment display to provide a clean and driver safe GUI, allowing discreet monitoring and control of vehicle and emergency services equipment.

The CSDS Device of the CARAT system can also be independently utilised with other 3rd party solutions so system integrators can have more independence to apply their own integral GUI with the OEM screen. Noting for these applications some extra 3rd party cables and switches maybe required.

Developed in conjunction with Volvo's SPA platform and compatible with most 60 & 90 Series cars from 2019, new 40 Series models as well as the Polestar electric range.

#### BENEFITS

- A unique solution that is integrated into Volvo's infotainment system
- Double tapping the home button switches to the external source view
- Discreet overview control of hazard warning equipment
- Provides a clean and safe driver environment

#### CARAT SWITCH SYSTEM BUTTON LAYOUT: Marked Vehicle



The CMP and CSDS links with a MCS device to control in-house and/or 3rd party blue lights and sirens.

#### **CARAT Switch System**

A Standby RSG exclusive offering to combine and control Blue Lights, Siren and LED Matrix Display via a CMP and CSDS Devices. Solutions available for both marked and unmarked vehicles, see button layouts below.

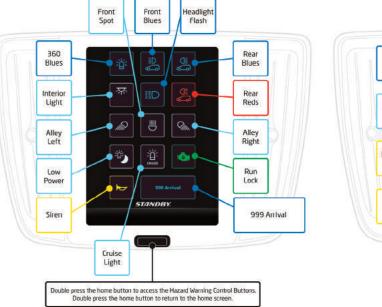
#### Center Stack Display Switch (CSDS) System

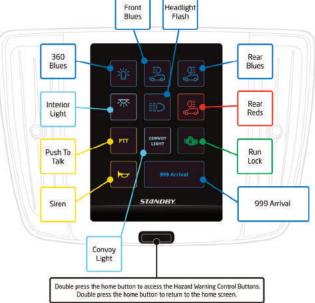
To meet 3rd party applications e.g. ANPR the CSDS alone can be utilised to link 3rd party GUI and equipment to the vehicle OEM screen. To avoid operational ambiguity, each distinct application would have its own 'easy access' and unique 'operational screen' and if appropriate Sub Menu sets.

Standby RSG can provide technical support to assist in 3rd party applications via the CSDS.



#### CARAT SWITCH SYSTEM BUTTON LAYOUT: Unmarked Vehicle







## How to Order

#### Complete pre-sales questionnaire (C-10669-A).

To ensure your system is specified correctly please complete the pre-sales questionnaire where our sales or technical staff will be happy to assist.

- **Notes: 1. Complete CARAT System:** To make-up a complete Standby CARAT Switch System a **CSDS** device plus the relevant **CMP** device is required
  - **2. CSDS Solution:** For 3rd party applications only a **CSDS** device is required plus a **cable kit** if necessary

## Component Part/Spares

| PART NUMBER   |
|---------------|
| 69530201      |
| KIT-CMP-V1    |
| KIT-CMP-V2    |
| 67034302-V1   |
| 67034302 - V2 |
| 19-1545-l     |
| 19-1546-l     |
|               |

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| DESCRIPTION                      | PART NUMBER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| CSDS – USB Cable to CMP          | 19-1549                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| CSDS – HDMI Cable to CMP         | 19-1550                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| CSDS – GMSL Cable IN – 6 metres  | 60580241                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| CSDS – GMSL Cable OUT – 6 metres | 60580242                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

| DESCRIPTION                                                                    | PART NUMBER   |
|--------------------------------------------------------------------------------|---------------|
| Cable kit for CARAT Switch System (does not include the CSDS device) includes: | KIT-334       |
| CMP CARAT Power Cable - 19-1545-I                                              | (Not required |
| CSDS Power Cable - 19-1546-I                                                   | when CMP      |
| CSDS - USB Cable to - CMP 19-1549                                              | Controller is |
| CSDS - HDMI Cable to - CMP 19-1550                                             | specified)    |
| CSDS - GMSL Cable IN - 6 metres - 60580241                                     |               |
| CSDS - GMSL Cable OUT - 6 metres - 60580242                                    |               |



CARAT Switch System Combine and control Blue Lights, Siren and LED Matrix Display via CMP and CSDS Devices. Solutions available for both marked and unmarked vehicles.



#### Standby RSG UK Limited

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