The design approach of our telematics platforms is a response to rapidly changing and growing market needs: vehicle manufacturers, public authorities and insurance companies have expressed their intention to use telematics to monitor green driving, improve road safety and offer tailored insurance policies. Just to name a few of the high number of applications that can be developed.

The reliability of the gathered data is a clear requirement: this depends on the quality of integration of the unit in the vehicle. This is where the core competencies of Vodafone Automotive lies, thanks to its long-term partnership with vehicle manufacturers and its ability to follow the global telematics technology evolution and integrate it.

The uniqueness of the Vodafone Automotive value proposition in the telematics industry consists in its ability to provide end-to-end connectivity by managing:

- the telematics unit
- the global Vodafone m2m platform
- the telematics server-based infrastructure
- the network of National Service Providers and Secure Operating Centres in 44 European countries (incl Russia), South Africa, Malaysia, Singapore, the USA and Canada.

The present catalogue provides an overview of all our hardware capabilities enabling theft management, Usage Based Insurance and fleet services.
Telematics technology has brought about substantial changes in the automotive world. Vodafone Automotive stands out as an early pioneer in this field. Its rich and versatile palette of proposals is the result of more than 20 years experience and intense R&D activities in telematics.

SCD30 is the latest high-performance telematics platform designed for the insurance telematics and aftermarket segment. Together with Vodafone Automotive telematics infrastructure, GDSP SIM connectivity over the Vodafone network and Vodafone Automotive Secure Operating Centres across 44 European countries, SCD30 is the ideal product to enable theft management and insurance telematics services including:

- Driver profiling/scoring
- Crash reconstruction
- Emergency services
- Stolen vehicle recovery

**Description**

A telematics unit with embedded high-performance GPS and quad-band GSM/GPRS antennas. Allow for multiple applications in the automotive domain.

**Key features**

- Compact design and small housing
- Embedded state-of-the-art high-sensitivity GPS receiver and dual band GSM/GPRS modem
- Embedded accelerometer for circuit sleep-to-wake-up use
- Embedded GSM/GPRS and GPS antennas
- Powerful built-in backup battery; provides supply and allows for circuit sleep-to-wake-up in the event of sabotage of the vehicle battery
- Built-in led for auto-diagnosis
- System health check
- Input for alerts from external devices
- Output for engine lock relay
- Input for b-call pushbutton

**Benefits**

- To be fitted inside the passenger compartment, wherever a clear view of the sky is ensured
- Plug-and-play Event Recorder optional for crash event notification
- Complies with and excels the requirements of most stringent automotive and insurance industry standards

**Product positioning**

- **Installation time**: 1 to 5 (1=20 minutes)
- **Protection**: 1 to 5
- **Comfort**: 1 to 5
Kit main parts
- Central unit
- Universal wiring harness
- External 12V relay
- Quick reference user guide

Security – main alerts
- Tamper: attempt to tamper the device by disconnecting the vehicle battery
- Unauthorised movement: unauthorised vehicle movement at ignition key off
- GSM jamming: detection of GSM jammer attacks
- External alarm: reception of alert triggered by external devices
- Panic button: alert triggered by customer in case of emergency

Comfort – main alerts
- Backup battery low: detection of internal backup battery low voltage
- Vehicle battery low: detection of vehicle battery low voltage
- Vehicle speed limit: exceeding of a defined vehicle speed limit
- Zone in: detection of unauthorised entry of the vehicle in a defined geographic zone
- Zone out: detection of unauthorised exit of the vehicle from a defined geographic zone

Product data

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal operating voltage (VDC)</td>
<td>12</td>
</tr>
<tr>
<td>Operating voltage (VDC)</td>
<td>9 – 16</td>
</tr>
<tr>
<td>Operating temperature range (°C)</td>
<td>-40 + 85</td>
</tr>
<tr>
<td>Current consumption (mA)</td>
<td></td>
</tr>
<tr>
<td>min. (with modem connected to GSM network)</td>
<td>&lt;5</td>
</tr>
<tr>
<td>max. (GPRS transmission)</td>
<td>&lt;100</td>
</tr>
<tr>
<td>Dimensions (mm)</td>
<td>80x60x25</td>
</tr>
<tr>
<td>Weight (g)</td>
<td>110</td>
</tr>
<tr>
<td>Waterproof box rating</td>
<td>IP40</td>
</tr>
<tr>
<td>Origin</td>
<td>made in Italy</td>
</tr>
<tr>
<td>Warranty</td>
<td>24 months</td>
</tr>
</tbody>
</table>

Compliances
- ECE R10 (equivalent to 2009/19/EC Automotive EMC Directive)
- 99/5/EC RTTE Directive
- Thatcham Cat. 6 / UK

Package
- Carton box
- Single package dimensions (mm): 185x145x58
- Single package weight (g): 285
- Quantity per shipping package (pcs): 24

Theft management services
Vodafone Connex Recovery services including access to MyConnectedCar application for end users
Telematics technology has brought about substantial changes in the automotive world. Vodafone Automotive stands out as an early pioneer in this field. Its rich and versatile palette of proposals is the result of more than 20 years experience and intense R&D activities in telematics.

SCD30 is the latest high-performance telematics platform designed for the insurance telematics and aftermarket segment. Together with Vodafone Automotive telematics infrastructure, GDSP SIM connectivity over the Vodafone network and Vodafone Automotive Secure Operating Centres across 44 European countries, SCD30 is the ideal product to enable theft management and insurance telematics services including:

- Driver profiling/scoring
- Crash reconstruction
- Emergency services
- Stolen vehicle recovery

### Description
A telematics unit with embedded high-performance GPS and quad-band GSM/GPRS antennas. Allow for multiple applications in the automotive domain and can be versioned in a number of different configurations.

### Key features
- Driver cards for automatic driver recognition
- Compact design and small housing
- Embedded state-of-the-art high-sensitivity embedded GPS receiver and dual band GSM/GPRS modem
- Embedded accelerometer for circuit sleep-to-wake-up use
- Powerful built-in backup battery: provides supply and allows for circuit sleep-to-wake-up in the event of sabotage of the vehicle battery
- Built-in LED for auto-diagnosis
- System health check
- Input for alerts from external devices
- Input for b-call pushbutton
- Output for engine lock relay

### Benefits
- High security level for arming and disarming thanks to the driver cards for automatic driver recognition
- To be fitted inside the passenger compartment, wherever a clear view of the sky is ensured
- Plug-and-play Event Recorder optional crash event notification
- Complies with and excels the requirements of most stringent automotive and insurance industry standards

### Product positioning

#### Installation time
1 to 5 (1=20 minutes)

#### Protection
1 to 5

#### Comfort
1 to 5
Kit main parts
Central unit with two driver cards
Universal wiring harness
External 12V relay
Quick reference user guide

Security – main alerts
Tamper: attempt to tamper the device by disconnecting the vehicle battery
Unauthorized movement: unauthorized vehicle movement at ignition key off
GSM jamming: detection of GSM jammer attacks
External alarm: reception of alert triggered by external devices
Panic button: alert triggered by customer in case of emergency

Comfort – main alerts
Backup battery low: detection of internal backup battery low voltage
Vehicle battery low: detection of vehicle battery low voltage
Vehicle speed limit: exceeding of a defined vehicle speed limit
Zone in: detection of unauthorized entry of the vehicle in a defined geographic zone
Zone out: detection of unauthorized exit of the vehicle from a defined geographic zone

Product data
| Nominal operating voltage (VDC) | 12 |
| Operating voltage (VDC) | 9 – 16 |
| Operating temperature range (°C) | -40 + 85 |
| Current consumption (mA): | |
| min. (with modem connected to GSM network) | <5 |
| max. (GPRS transmission) | <100 |
| Dimensions (mm) | 80x60x25 |
| Weight (g) – driver cards included | 145 |
| Waterproof box rating | IP40 |
| Origin | made in Italy |
| Warranty | 24 months |

Package
Carton box
Single package dimensions (mm) 185x145x58
Single package weight (g) 320
Quantity per shipping package (pcs) 24

Theft management services
Vodafone Connex Guardian Personal services including access to MyConnectedCar application for end users

Compliances
ECE R10 (equivalent to 2009/19/EC Automotive EMC Directive)
99/5/EC RTTE Directive
Thatcham Cat. 5 / UK
SCM TT04 /The Netherlands
INCERT T 021C/ Belgium
Telematics technology has brought about substantial changes in the automotive world. Vodafone Automotive stands out as a pioneer in this field. Its rich and versatile palette of proposals is the result of more than 10 years’ experience and intense R&D activities in telematics. SCD2X is the latest high performance telematics platform designed for security and safety applications. This platform has been specifically designed to meet the installation requirements of aftermarket fitters: fast installation thanks to integrated GSM/GPRS antennas, flexible installation position to fit all cars. The SCD2X platform has been designed for vehicles with original remote controls and CAN platform.

### Description
Telematics unit with high performance GPS and quad-band GSM/GPRS antennas. The system is designed to be fully compatible with a wide range of CAN bus vehicles.

### Key features
- Compact design and small-sized (114x78x29mm) housing
- Embedded GSM/GPRS antenna
- External GPS antenna
- Ability to receive OE-CAN BUS commands/information
- Embedded accelerometer for circuit sleep-to-wake-up use
- Powerful back-up battery: provides supply and allows for circuit sleep-to-wake-up in the event of sabotage of the vehicle battery
- Embedded led for system diagnosis
- Embedded state-of-the-art high-sensitivity GPS receiver and dual band GSM/GPRS modem
- Built-in led for auto-diagnosis
- System health check
- Input for alerts from external devices
- Output for engine lock relay

### Benefits
- Complies with and excels the requirements of most stringent automotive and insurance industry standards (such as Thatcham/UK, SCM/The Netherlands, Pimot/Poland)
- Arming and disarming by operating the control door locking system with original remote controls
- It can be fitted everywhere inside the passenger compartment thanks to the external GPS antenna

### Product positioning

<table>
<thead>
<tr>
<th>Installation time</th>
<th>Protection</th>
<th>Comfort</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 to 5 (1=20 minutes)</td>
<td>1 to 5</td>
<td>1 to 5</td>
</tr>
</tbody>
</table>

---

Cobra AK2220 2016
Kit main parts

Central unit
Universal wiring harness
External GPS antenna
External 12V relay
Quick reference user guide

Security main alerts

Tamper: attempt to tamper the device by disconnecting the vehicle battery

Unauthorised movement: unauthorised vehicle movement at ignition key off

GSM jamming: detection of GSM jammer attacks

External alarm: reception of alert triggered by external devices

Panic button: alert triggered by customer in case of emergency (hijack)

Perimeter protection: reception of alerts for boot/bonnet/doors opening

Comfort main alerts

Backup battery low: detection of internal backup battery low voltage

Vehicle battery low: detection of vehicle battery low voltage

Vehicle speed limit: exceeding of a defined vehicle speed limit

Zone in: detection of unauthorised entry of the vehicle in a defined geographic zone

Zone out: detection of unauthorised exit of the vehicle from a defined geographic zone

Product data

<table>
<thead>
<tr>
<th>Nominal operating voltage (VDC)</th>
<th>12 – 24</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating voltage (VDC)</td>
<td>9 – 32</td>
</tr>
<tr>
<td>Operating temperature range (°C)</td>
<td>-40 + 85</td>
</tr>
</tbody>
</table>
| Current consumption (mA) :  
  min. (with modem connected to GSM network) | <5 |
  max. (GPRS transmission) | <300 |
| Dimensions (mm)               | 114x78x29 |
| Weight (g)                    | 140     |
| Waterproof box rating         | IP67    |
| Origin                        | made in Italy |
| Warranty                      | 24 months |

Compliances

ECE-R10 (equivalent to 2009/19/EC Automotive EMC Directive)
RTTE Directive (99/5/EC)
Thatcham TQA Cat 6/ UK
PIMOT Profesjonalna / Poland

Accessories (last digit not required for ordering)
01RE0037*: 24V relay for engine lock

Package

Carton box
Single package dimensions (mm) 185x145x58
Single package weight (g) 350
Quantity per shipping package (pcs) 24

Theft management services

Vodafone Connex Guardian Private services including access to MyConnecterCar application for end users
Telematics technology has brought about substantial changes in the automotive world. Vodafone Automotive stands out as a pioneer in this field. Its rich and versatile palette of proposals is the result of more than 10 years’ experience and intense R&D activities in telematics.

SPD10 is the new telematics platform designed for theft management and recovery of high value mobile assets. Together with Vodafone Automotive telematics infrastructure, GDSP SIM connectivity over the Vodafone network and Vodafone Automotive Secure Operating Centres across 44 European countries, SPD10 is the ideal product to manage assets that need to be deployed for long periods without external power supply.

The unit is installed in a covert position and is virtually impossible to detect as the GPS and GSM/GPRS modules remain in sleep mode most of the time. This innovative on-demand theft assistance service can be offered as a standalone solution, or as a backup to the main vehicle tracking product, thus increasing the level of security.

**Description**

A self powered telematics unit with embedded high-performance GPS and GSM/GPRS antennas. It can be used for multiple applications in the automotive market and is available in a number of different configurations.

**Key features**

- Self powered wireless telematics unit
- Operates through non rechargeable internal battery
- Compact design and waterproof housing (IP66)
- Embedded GPS and GSM/GPRS modules
- Integrated GPS and GSM antennas
- Embedded secure global Vodafone M2M SIM card
- Set up and configuration via sms
- Magnetic switch (reed reyly) for power on and reset
- Embedded led for system diagnostic
- Light socket for optical fiber

**Benefits**

- Virtually self installable: although professional fitting is recommended to guarantee the product performance, it takes just a few minutes to install the unit
- Simplified service activation process
- Versatile: can be used in automotive environment and in other industries to manage and protect mobile assets (construction, rental equipment etc)
- Exceptional response time: via Vodafone’s M2M platform and strong network coverage
- Difficult to detect/locate with electronic tools as communication modules remain in sleep mode most of the time for security reasons – to avoid the risk of unit tampering

**Product positioning**

<table>
<thead>
<tr>
<th>Installation time</th>
<th>1 to 5 (1=20 minutes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Protection</td>
<td>1 to 5</td>
</tr>
<tr>
<td>Comfort</td>
<td>1 to 5</td>
</tr>
</tbody>
</table>
Kit main parts
Central unit

Main functions
A highly sensitive GPS receiver allows the unit to perform pinpoint tracking of the equipped vehicle on demand. GSM Cell ID tracking function enables to obtain a vehicle position in case the GPS is not available. This function is restricted to countries where the Vodafone M2M Location Based Services are supported.
The product is designed to enable the recovery of stolen vehicles via the Vodafone Automotive telematics platform.

Theft management
- Theft tracking on demand only
- No automatic alert

Battery duration
- Depending on the service and unit configuration, the battery duration will change
- Wakeups from sleep mode to check SMS reception are typically done once or twice a day
- SMS with GPS position are typically sent once a week

Configuration examples are provided in the following table:

<table>
<thead>
<tr>
<th>Daily wake up (GSM fix)</th>
<th>Weekly SMS (GSM/GPS fix)</th>
<th>Battery/Service duration (months)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>1</td>
<td>12</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>24</td>
</tr>
</tbody>
</table>

Other functions
System health check
Internal temperature sensor

Product features
High-Sensitivity indoor GPS receiver
Four band GSM/GPRS modem
Built-in led for auto-diagnosis
1600 mA/h Ni-Mh internal backup battery
Three-axes accelerometer sensor
System health check

Product data

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimensions (mm)</td>
<td>55x70x30</td>
</tr>
<tr>
<td>Weight (g)</td>
<td>140</td>
</tr>
<tr>
<td>Non rechargeable battery</td>
<td>3.6V/6600mAh (Li-SOCl2)</td>
</tr>
<tr>
<td>Waterproof rating</td>
<td>IP66</td>
</tr>
<tr>
<td>Origin</td>
<td>Italy</td>
</tr>
<tr>
<td>Warranty</td>
<td>24 months</td>
</tr>
</tbody>
</table>

Compliances
RTTE Directive (99/5/EC)

Package
Carton box
Single package dimensions (mm) 185x145x58
Single package weight (g) 160
Pieces per shipping package (n°) 80

Theft management service
VVD (Vodafone Vehicle Defence) 24-1
VVD (Vodafone Vehicle Defence) 12-1

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### AM – telematics

**Cobra parts and accessories**

Vodafone

Power to you

<table>
<thead>
<tr>
<th><strong>RC2221NMSA</strong></th>
<th><strong>RC2216NMSA</strong></th>
<th>??</th>
<th>???</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central unit for AK2221</td>
<td>Central unit for AK2216</td>
<td>Central unit AK2220</td>
<td>Central unit AK2230/AK2231</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>4T2791AB</strong></th>
<th><strong>03CB0966</strong></th>
<th><strong>03CB0755</strong></th>
<th><strong>RV0125NMSA</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Drive card for AK2221/AK2233</td>
<td>Main wiring harness for AK2221, AK2220 CAN</td>
<td>Main wiring harness for AK2216</td>
<td>Wired 12V relay for AK2216</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>01RE0037</strong></th>
<th><strong>03CB0967</strong></th>
<th><strong>03CA0447</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>24V relay for AK2216</td>
<td>Wired NC/NA relay for AK2221, AK2220</td>
<td>GPS antenna for AK2221, AK2220</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>??</th>
<th>??</th>
<th>??</th>
</tr>
</thead>
<tbody>
<tr>
<td>+ NUOVI RICAMBI 2220</td>
<td>+ NUOVI RICAMBI 2230</td>
<td></td>
</tr>
</tbody>
</table>

*Last digit not required for ordering*
## AM telematics

### Products comparison table

<table>
<thead>
<tr>
<th>Products</th>
<th>Cobra AK2231</th>
<th>Cobra AK2233</th>
<th>Cobra AK2200</th>
<th>Cobra AC5777</th>
</tr>
</thead>
<tbody>
<tr>
<td>Key features</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Compact design and small housing</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Driver cards</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Embedded GPS receiver and dual band GSM/GPRS modem</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>External GPS antenna</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Built-in back-up battery</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>CAN bus</td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Built-in led for auto-diagnosis</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>System health check</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Embedded accelerometer for circuit sleep-to-wake up use</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Output for engine lock relay</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Security main alerts</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tamper: attempt to tamper the device by disconnecting the vehicle battery</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Unauthorised movement: unauthorised vehicle movement at ignition key off</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>GSM jamming: detection of GSM jammer attacks</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>External alarm: recognition of alert triggered by external devices</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Comfort functions</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Back-up battery low: detection of internal back-up battery low voltage</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Vehicle battery low: detection of vehicle battery low voltage</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Vehicle speed limit: exceeding of a defined vehicle speed limit</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Zone in: detection of unauthorised entry of the vehicle in a defined geographic zone</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

Telematics products comparison table
<table>
<thead>
<tr>
<th>Zone out: detection of unauthorised exit of the vehicle from a defined geographic zone</th>
<th>✓</th>
<th>✓</th>
<th>✓</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theft management services</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vodafone Connex Recovery Private</td>
<td>✓</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Vodafone Connex Recovery Personal</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Vodafone Connex Guardian Private</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Vodafone Connex Guardian Personal</td>
<td>✓</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Vodafone Vehicle Defence 24-1</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Vodafone Vehicle Defence 12-1</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
</tbody>
</table>