Intelligent Transport Management System (iTraMS)
A smart answer to connected mobility
**iTraMS: Intelligent Transport Management System**

iTraMS is an end-to-end Vehicle to Infrastructure (V2I) ecosystem, designed to address the challenges of modern-day transportation and management of vehicles.

Leveraging on its years of mobility solutions experience, Bosch has the edge to provide insights on vehicle health management and performance. Through data analytics a customer can get valuable insights on vehicle performance, usage and health.

### Key Use Cases

- **Trip and order management:** Optimize route and vehicle availability to improve vehicle usage and save delivery time
- **Remote fault / performance:** Remotely monitor the health of your vehicle modules like engine temperature, battery status, brakes and get relevant alerts
- **Asset / Machine usage:** Ensure effective usage of operational assets by monitoring asset usage patterns
- **Scheduled and preventive:** Coordinate and manage vehicle maintenance needs by scheduling activities based on parameters such as miles driven, remote faults
- **SFDE:** OEM / Supplier gets to understand more about the usage patterns of the vehicle and components (system) as a real-time feedback from the vehicle which will help to design system better in focus with end-user
- **Over the Air update:** Self update and End-ECU update
- **Trip and order management:** Optimize route and vehicle availability to improve vehicle usage and save delivery time
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### Solution Overview

**End-to-end Solution**

On Board Unit

M2M device management framework

Web Analytics & Visualization

Smart Vehicle Function

Value added Service

**Connectivity Control Unit**

**Product Portfolio: Gen 1**

- **4G LTE with 3G/2G fallback**
- **GNSS - GPS, GLONASS, Galileo and Beidou**
- **Wi-Fi, Bluetooth, USB, Ethernet**
- **I/O Options and dedicated Panic Button Input**
- **Secondary Battery**
- **eSIM support**
- **Inertial Sensor**
- **Multiple CAN channels**
- **Camera Integration**

**Product Portfolio: Gen 2**

- **4G LTE**
- **Wi-Fi, Bluetooth, USB, Ethernet**
- **I/O Options**
- **eSIM support**
- **Inertial Sensor**
- **Multiple CAN channels**
- **Camera Integration**

**The feature highlights**

- **Product status:** In Series (since May 2016)
- **Key customers:** OEM’s in India
- **Devices in field:** 10000+ (Tractors, Construction, CV)

- **Product status:** Series Planned in Q1/Q2 2019
- **Key customers:** In South Korea, EU and NA region

**Product Compliances**

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<th>No</th>
<th>Capability</th>
<th>Description</th>
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<tr>
<td>1</td>
<td>Manufacturing</td>
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<td>2</td>
<td>Certifications</td>
<td>Fully AEC qualified components &amp; RoHS AIS 004, E-marking, CE Certification</td>
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<td>Environmental standards</td>
<td>ISO 16750</td>
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**Our Value Proposition**

**Automotive Grade Connectivity Control Unit**

Automotive Grade Telematics connectivity HW, that shall meet all the relevant validations that are expected out of the system. This capability is also backed up by world-class in-house design house and validation experts.

**Security**

Bosch gives emphasis on security with a robust in-house security validation and clearance for every product. In line with the Product Engineering Process we also have clearly defined policy and framework for Security Engineering Process where risk, threats and data is scrutinized for any vulnerabilities that exists.

**Machine/Engine function expertise**

Bosch, being a premier automotive company brings its expertise in engine and Machine Management Systems into telematics domain. This helps in value add for features like remote diagnostics, FOTA (ECU Flashing over the Air) and preventive maintenance.