

# n-Core<sup>®</sup> Sirius OBD

Device for the development and deployment of Car Diagnostics over IEEE 802.15.4/ZigBee networks

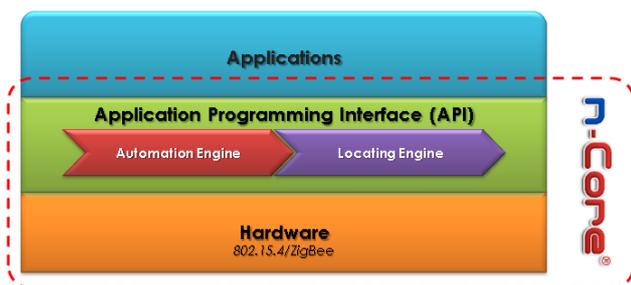
## Overview

The all-new *Sirius OBD* is a flexible expansion board that offers **full access to the On-Board Diagnostics (OBD) interface** of a wide diversity of vehicles, including cars, trucks and forklifts.

The *Sirius OBD* works together with the *n-Core Sirius RadION* device to transmit the vehicle's parameters wirelessly.



The new *Sirius OBD* device is part of the **n-Core platform**, developed by Nebusens. The n-Core platform offers a complete set of hardware and software tools that can fit all your necessities when developing and deploying wireless networks based on the IEEE 802.15.4/ZigBee international standard.



## Main Features

- Standard form factor.
- Fully compatible with the *n-Core Sirius RadION* device.
- Multiple protocols supported:
  - SAE J1850-PWM
  - SAE J1850-VPW
  - ISO 9141-2
  - ISO 14230-4 (slow)
  - ISO 14230-4 (fast)
  - ISO 15765-4 (CAN)
  - SAE J2411 (SWCAN)
  - SAE J1939 (250kbps)
  - SAE J1939 (500kbps)
- Automatic protocol search mode.

## Benefits & Applications

The all-new *Sirius OBD* is a versatile device that facilitates the development of different types of custom applications. It is a multipurpose solution with **an outstanding potential to create a wide diversity of testing and monitoring applications for vehicles**. The *Sirius OBD* is ideal for use in a multiple variety of applications, for example:

- Vehicle diagnostics and maintenance.
- Remote failure and breakdown detection.
- Indoor location of vehicles in underground and sheltered parkings.
- Location of forklifts in industrial units and warehouses.



These and other applications can be quickly deployed by using the dynamic and scalable mesh topology of the ZigBee™ international standard.

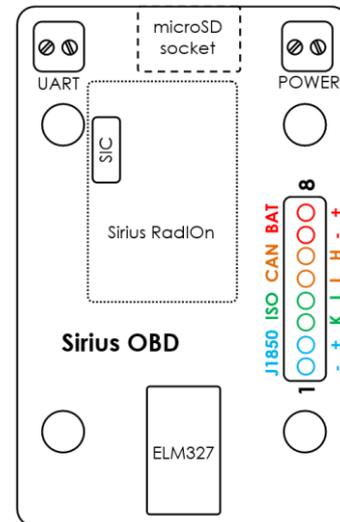
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## Technical Features

n-Core Sirius IO n (Development)	
Electrical features	
External Power Supply (BAT and POWER Connector)	12V - 24V
UART	3 to 3.7V
Physical characteristics	
Dimensions (mm)	41 x 42 x 15
Connectivity	
SIC	Via Sirius RadIOn
OBD connectivity	
SAE J1850	1-2 Pin (blue)
ISO 9141-2 and 14230-4	3-4 Pin (green)
CAN ISO 15765-4	5-6 Pin (orange)
Power supply from Battery	7-8 Pin (red)
OBD core controller	
ELM 327	V1.3
n-Core Sirius	RadIOn @2400MHz

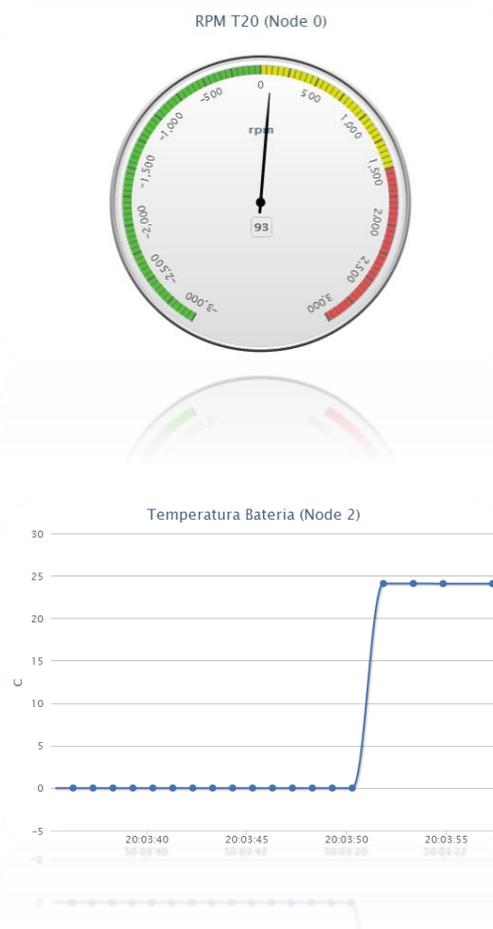
## Reference Schematics



## Development Tools

n-Core offers a complete Application Programming Interface (accessible from different platforms like C/C++, .Net or Java, under Windows and Linux) to easily create end-user applications from any compatible Integrated Development Environment. n-Core also offers through this API **two powerful engines** that highly facilitates the development of specific applications:

- Locating engine.** It offers additional functionalities for developing **Real-Time Locating Systems**. Includes powerful algorithms that calculate the position of any n-Core device with an exceptional accuracy, both indoors and outdoors.
- Automation engine.** Control and monitoring of any sensor or actuator connected to the system. Consists of a set of dynamic link libraries (DLLs) with basic functions ranging from networking to automatic data collection.



## Contact Information



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