



novero

DOLPHIN

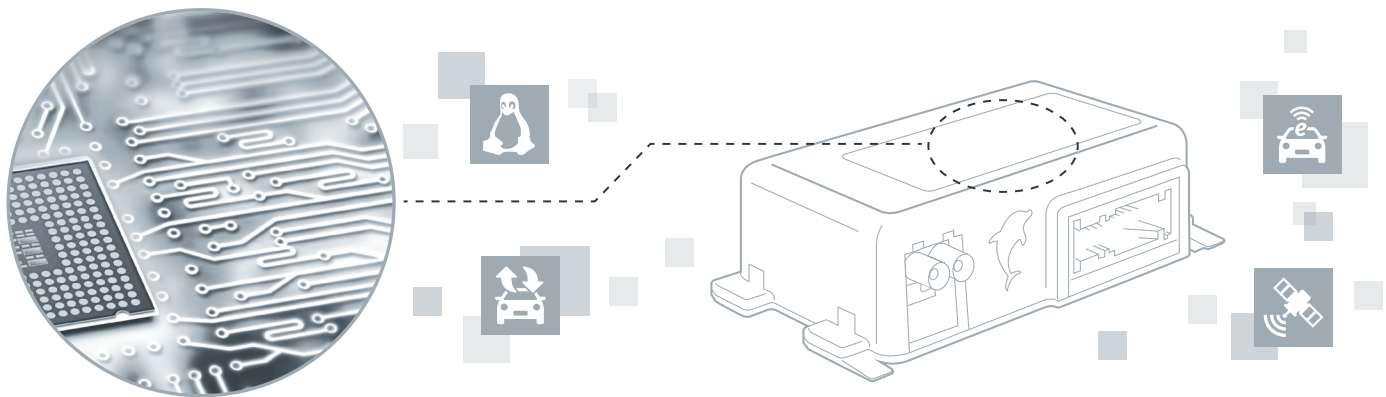
EMBEDDED HIGH END TELEMATICS PLATFORM FOR CONFIGURABLE VEHICLE GATEWAYS

Dolphin is a modular high-end telematics platform based on Linux, which can be customized optimally to any vehicle class and various conditions, defined individually by the OEM. It scales from simple Telematics Control Units to full featured Car Connectivity Platforms incl. local connectivity.

The core of Dolphin uses a Smartphone System Architecture with an integrated Application Processor on the Cellular Subsystem. The Software Environment for services is based on embedded Linux (optionally Java). A dedicated microcontroller based on AutoSAR connects Dolphin to the vehicle buses.

Vehicle Gateways based on Dolphin operate with all the current connectivity technologies and can be upgraded comfortably.

Dolphin is designed for the rapid implementation of complex customer-specific product variants. Hardware components can be individually added to a product variant and adjusted to required scenarios. The product and the software are developed according to the customer's configuration. Furthermore, new components can be added as needed.



Novero NAD Modules

- › Multi-RAT cellular modem chipset with embedded application MCU on the cellular baseband chip
- › High performance multi-constellation GNSS solution
- › Integrated power management and audio codecs
- › RF frontend
- › 128MB LPDDR2 RAM (up to 2GB possible)
- › 128MB NAND Flash (bigger configuration up to 512MB possible)

Cellular Multimode Modem based on Marvell PXA1801 chipset

- › GSM / EDGE / WCDMA (UMTS) / HSPA+ / LTE
- › Inband Modem support (3GPP TS 26.267 / ETSI TS 126 267 for eCall)
- › HSPA+ Performance DL 42Mbps / UL 5.6Mbps
- › Integrated Application MCU – Armv7 Core, embedded VFPU
- › High Speed Host Interface HSI / USB 2.0
- › Power efficient implementation – 40nm low power technology
- › Wireless Trusted Platform Security Module (WTM)





GNSS Variants

- › GPS + GLONASS + Compass + Galileo (in any combination)
- › Dead Reckoning
- › Ext. or internal GNSS antenna / External + Int. back-up antenna

SIM Variants

- › Up to 2 embedded M2M SIM Cards (eSIM) / MFF2
- › 2xReader (e.g push/push)

Car Interface Variants

- › Up to 6 CAN High / Low
- › Up to 6* LIN
- › MOST 150
- › 10/100 Ethernet incl. RJ45 connector
- › BroadReach Ethernet

European eCall Components

- › Support for EU eCall and ERA GLONASS eCall
- › Backup Battery
- › Backup antennas (GNSS / Cellular)
- › Audio Support (Amp / Spk)
- › Airbag interface
- › Energy Monitoring

Subsystems

- › WLAN 802.11n / 802.11ac (2.4 and 5GHz)
- › Bluetooth 3.0 / Bluetooth Low Energy
- › USB: Device-mode / OTG 500mA / OTG 2.000mA
- › NFC reader with connector for external antenna
- › VTS functionality: antenna manipulation detection (Cellular + GNSS), Card reader radio (traditional 433 / 866MHz solution instead of BTLE), Motion sensor (accelerometer)
- › Car2X Communication: 802.11p

The telematics software platform is based on a Linux environment and modularly adapted according to the customer's requirements. In addition, various in-vehicle interfaces can be integrated depending on the specifications, as well as service provider backends and 3rd Party APIs.

Embedded Linux provides the ideal platform for:

- › IP based telematics services
- › IP based connectivity – wireless or wired (WiFi, Cellular, Ethernet)
- › Multimedia and CE device connectivity via USB, Bluetooth, WiFi
- › Hardware abstraction via Linux Kernel

About Novero

Novero develops and manufactures flexible automotive solutions for telematics, car communication, multimedia connectivity and mobile device integration. The company is a pioneer and driver in the field of connected car engineering and combines hardware expertise with an outstanding knowledge about the application of leading edge technologies.

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