

Integrated with C-V2X and DSRC technologies, WaveConnect RSU provides a scalable and modular platform, reducing the complexity to support global Connected Mobility solutions. The AutoConnect On-board Unit (OBU) is a solution that collects real-time driving information from vehicles and roadside equipment using either DSRC or C-V2X radios. The OBU enables vehicles to communicate with each other, pedestrians and infrastructure. Integrated with various wireless technologies such as 4G, Wi-Fi, Bluetooth and the support for multiple CAN interfaces, AutoConnect serves to enhance safety and advance intelligent transportation systems.

HIGHLIGHTS

- Hybrid Hub: C-V2X and DSRC Radios
- Powered by NXP i.MX 8
- Wireless Connectivity: 4G LTE Cat-4 / Cat-M1 / NB-IoT / Wi-Fi / Bluetooth
- 4 CAN Interfaces: CAN FD / HS CAN / LS CAN
- Software Flexibility and Transparency: LINUX 5.4
- High Accuracy GNSS Module
- UWB Radio (Ultra Wide Band)
- Security: Integrated HSM and TPM

APPLICATIONS

V2V

- Lane Change
- Collision Warning
- Driver and Incident Recording

V2I

- Blind Spot visualization
- Curve Zone Warning
- Work / School Zone Warning

V2P

- Pedestrian Notifications
- Infotainment Analytics
- In-vehicle Safety

Processor Core
CPU: NXP i.MX 8 DXL
RAM: 1GB LPDDR4 (Upgradable upto 2GB)
FLASH: 8GB eMMC Flash (Upgradable upto 64GB)

V2X Radio
C-V2X PC5 with 1.28 GHz
DSRC 802.11p operates in the 5.9 GHz band

Wireless Communication
Cellular: 4G LTE Cat 4, LTE Cat M1/NB1
Wi-Fi: 802.11 a/b/g/n/ac in 2.4 GHz or 5 GHz
Bluetooth: BLE 5.0
Ultra-Wideband (UWB) wireless transceiver

Interfaces
CAN: 4 Interfaces (CAN FD / HS CAN / LS CAN)
10/100 Mbps Ethernet
RS232/RS485
K-Line/LIN Interface
Analog Input x 2
GPIOs x 4 (2DI, 2DO)

Security
Hardware Security Module (HSM)
Trusted Platform Module (TPM)

GNSS
GPS/GLONASS/BeiDou/Galileo

Software
Operating System: Linux 5.4.70
Protocol Stacks: ISO 15765-4 CAN, J1939

Sensors
Accelerometer, Gyroscope, Magnetometer
Temperature sensor

Antenna
1 x GNSS, 1 x Cellular, 1 x WiFi/BLE

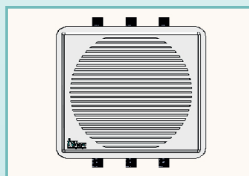
Power
12V – 36V/POE support

Connectors
Enclosure Connector: 36 Pin Micro-fit
External Fakra connector: C-V2X/DSRC
External connector: M.2 with Key B/Key E

Enclosure
Protecting Class: IP4X rated with tamper detection
Mounting Options: Cable tie
Dimension: 188 x 164 x 48 mm

Environmental
Operating Temperature: -40°C to +85°C (Excluding Battery)

RELATED PRODUCTS



WaveConnect RSU

WaveConnect, The V2X Road Side Unit is built as an rugged IP solution with the option of Power over Ethernet. The road side unit, is an hybrid V2X Solution, integrated with DSRC and C-V2X Modules. The RSU can be fit into external road infrastructure such as traffic signals and toll plazas.



Telematics Gateway

The Telematics Gateway is built with extensive interfaces: 4 CAN Interfaces, RS232, RS485, Analog Inputs and Digital Inputs. With the support for multiple protocols and powerful edge firmware, the gateway is suitable for applications ranging from heavy dirty trucks, vessels, industrial machinery and passenger cars.

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