C-V2X On-Board Unit

C-V2X-based OBU units installed in vehicles are designed for communication with surrounding vehicles, pedestrians, and traffic infrastructure, while also enabling access to cellular data.

APPLICATION AREAS

- Monitoring and directing traffic with V2V and V2I capabilities

- Immediate road condition and safety alerts

- Smart city initiatives

- Location-based services

- Enhancing pedestrian safety through the V2P feature.

GENERAL FEATURES

- Communication between C-V2X-based RSU and OBU units in the context of V2X applications.

- 3GPP Release 15 compliance

- LTE and 5G compatibility

- Wi-Fi 6 and Bluetooth 5.2 compatibility

- GNSS compatibility

- Seamless integration

- Hardware Security Module compatibility

- Elevated reliability

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SUPPORTED SCENARIOS

Roadworks Warning, In Vehicle Signage, In Vehicle Speed Limit, Emergency Vehicle Approaching, Weather Conditions, Slow or Stationary Vehicle Warning, GLOSA, Emergency Electronic Brake Light, Traffic Jam Ahead Warning, Hazardous Location Notification, Shockwave Damping, Signalviolation, Intersection safety, Traffic Signal Priority Request by Designated Vehicles, Off street parking information, On street parking information and management, Park & Ride information, Information on AFV fueling & charging stations, Traffic information and smart routing, Zone access control for urban areas, Vulnerable road user protection (pedestrians and cyclists), Cooperative collision risk warning, Motorcycle approaching indication, Wrong way driving, Limited access warning, detour notification, Decentralized floating car data, Vehicle software, data provisioning and update, Local electronic commerce, Media Downloading

WIRELESS CONNECTIVITY

C-V2X	Quectel AG550Q
Cellular Network	5G/ 4G LTE/ 3G/2G/LPWA
Wifi	802.11 a/b/g/n/ac/ax
Bluetooth	v5.2

CONNECTION INTERFACES

Antenna

C-V2X: Fakra, GNSS/5G/4G LTE/ 3G/2G/LPWA: Fakra, Wifi/Bluetooth: Fakra

Power Micro-fit 3.0 4 pin connector

Data Can-FD
Ethernet: 1000 Base-T RJ45
Otomotiv Ethernet: 1000 BASE-T1 D-Sub

PACKAGE CONTENTS

Antennas

2 x C-V2X, 2 x GNSS/5G/4G LTE/ 3G/2G/LPWA, 2x Wifi/Bluetooth

KEY ATTRIBUTES

Processor	4 çekirdekli 1.4 GHz ARM Cortex-A53
Operating System	Embedded Linux
RAM	768 MB
Flash / Storage	32 GB eMMC
Ethernet	10/100/1000 Mbps
Power Supply	9V-36V DC
Receiver Sensitivity	C-V2X:-95 dBm
Maximum Transmit Power	C-V2X:23 dBm
Bandwidth	10 & 20 MHz
GNSS Services	GPS, GLONASS, BeiDou, Galileo
GNSS Sensitivity	-143 dBm, 1.5m doğruluk
Operating Temperature	-40°c + 85°c
Dimensions	145mm x 135mm x 50mm

In the final functional product, there may be variations in the provided standards and scenarios.