

# iW-Rainbow-G41

## V2X Connectivity Hub



Integrated with C-V2X and DSRC technologies, the hybrid V2X Connectivity Unit provides as a scalable and modular platform reducing complexity to support global Connected Mobility solutions. Equipped with various wireless technologies such as 4G, Wi-Fi, Bluetooth and the support for multiple CAN interfaces, the hub serves to enhance safety and advance intelligent transportation systems. Designed to serve a plethora of V2X Applications, the V2X Gateway can be positioned as an On-Board Unit (OBU) or as a Road-Side Unit (RSU).

### HIGHLIGHTS

- Hybrid Hub: C-V2X and DSRC Radios
- Powered by NXP i.MX 8
- Positioned as an OBU (On-Board Unit) and RSU (Road Side Unit)
- Wireless Connectivity: 4G LTE Cat-4 / Cat-M1 / NB-IoT / Wi-Fi / Bluetooth
- 4 CAN Interfaces: CAN FD / HS CAN / LS CAN
- High Accuracy GNSS Module & UWB Radio (Ultra Wide Band)
- Security: Integrated HSM and TPM
- M.2 Expansion Connector: 5G / Wi-Fi 6

### 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)

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

GNSS
GPS/GLONASS/BeiDou/Galileo

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

Sensors
Accelerometer, Gyroscope, Magnetometer
Temperature sensor

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

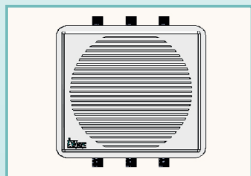
Power
12V – 36V/POE support

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: IP66 with tamper detection
Mounting Options: Pole Mounting/Cable Tie Slots

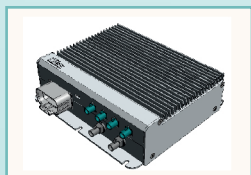
Environmental
Operating Temperature: -40°C to +85°C (Excluding Battery)

## 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.



### AutoConnect OBU

AutoConnect, The V2X On board Unit is integrated with DSRC & C-V2X radio technologies. Integrated with 4 CAN Interfaces & a multitude of wireless technologies such as 4G, Wi-Fi and Bluetooth. The OBU can enable Vehicle to Vehicle communication and the next generation of connected mobility solutions.

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#### INDIA

iWave Systems Technologies Pvt Ltd.  
#7/B, 29th Main, BTM Layout 2nd Stage,  
Bangalore - 560 076, INDIA.  
Ph: +91-80-26683700, 26786245  
mktg@iwavesystems.com

**iwavesystems.com**

#### JAPAN

iWave Japan Inc.  
8F Kannai Sumiyoshi Building, 3-29 Sumiyoshi-cho,  
Naka-ku, Yokohama Kanagawa, JAPAN  
Ph: 045-227-7626  
info@iwavejapan.co.jp

#### EUROPE

International Sales and Marketing Europe  
Venkelbaan 55 2908KE Capelle aan den  
Ijssel, The Netherlands  
Ph: +31 10 28403383  
info@iwavesystems.eu

#### USA

iWave USA  
1692 Westmont Ave.  
Campbell, CA95008 USA  
Ph: 408-206-5958  
info@iwavesystems.us