V2X Radio Module

- Automotive-grade V2X Transceiver Module
- Compliant to IEEE 802.11p and ETSI ITS G5
- Suitable for EU,US and Korean market
- Communication range of > 1km
- Used in the Worlds largest V2X Trial Project
- Used exclusively in Korean C-ITS Project.
- Worlds Maximum used V2X Module
- Capable of advanced Channel Switching
- Provision for multiple service channels
- Supports Single Radio or Dual Radio
- Supports Single Antenna or Dual Antenna

Description

The BR1 V2X Radio Module is a compact, Automotive-grade embedded software designed Radio (SDR) module facilitating the development of electronics for Vehicle -to-Infrastructure and Vehicle -to-Vehicle communication systems.

The BR1 V2X Radio Module provides communication Interfaces according to the standards ETSI ITS G5, IEEE 802.11p and IEEE 802.11a/n and Korean C-ITS.

The state of the art BR1 V2X Radio Module has the unique capability of switching to multiple service channels(SCH) after a control channel (CCH) request. This advance feature allows designers to use multiple service channels simultaneously and thereby reducing the communication congestion issue otherwise a major issue in V2X communication.

The BR1 V2X Radio includes an integrated Baseband/MAC/LLC processor as well as the required RF front-end components. It requires a connection to a host processor, which can be established through a combination of USB, SPI and GPIO interfaces. The BR1 V2X Radio provides superior performance in comparison to V2X systems based on consumer-grade WiFi chipsets (COTS), especially at high vehicle speeds and in none-line-of-sight conditions.

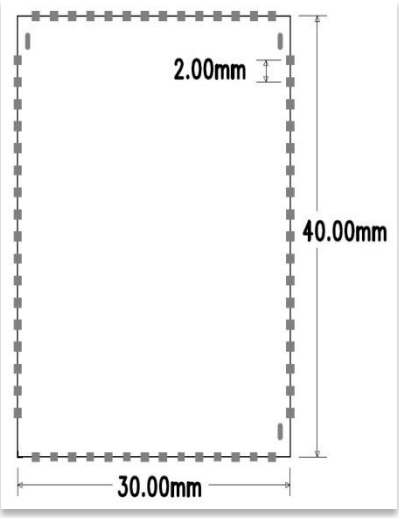
Applications

- Traffic safety (Car-to-Car)
- Intelligent traffic management (Car-to-Infrastructure)
- Entertainment and convenience (Car to CE device)
- Electronic Fee collection (Car-to-Infrastructure)

Block Diagram

Confidential

Dimension



Brief Technical Specifications

Standards	ITS G5, IEEE 802.11p, Korean C-ITS
Frequency Range	5.860 - 5.920 GHz
Channel Bandwidth	10 Mhz
Output Power	+16 dBm
Receiver Sensitivity	-98dB@3mbps
Host Interfaces	USB 2.0, High Speed SPI, GPIO
Antenna	2 antenna pads for external 5 GHz antennas
Power Supply	5 V, 3.3 V
Operating Temperature	-40 °C to +85 °C
Firmware	Loaded during boot sequence
Certifications	KCC, FCC
Dimensions (L x W x H)	40 x 30 x 4 mm

Manufacturing and Quality Control

The BR1 V2X Module is manufactured at an Automotive qualified , fully automatic manufacturing facility . The production facility is qualified with SQ certification and TS16949 .

The zero defect quality policy forces modules to be tested individually before packing .

The module are reel packed.

Warning

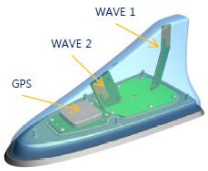
This module complies with FCC Rules. FCC Part 95

This device complies with part 15 of the FCC Rules. Operation is subject to the condition that this device does not cause harmful interference.

This module complies with FCC radiation exposure limits set forth for an uncontrolled environment.

Any changes or modifications to this device not explicitly approved by manufacturer could void your authority to operate this equipment.

This module must be installed and operated with minimum distance of 20 cm between the radiating element and the user. This module must not be co-located with any other transmitters or antennas.
An antenna of device should be installed same gain(or lesser) and similar type.

Type: 

Antenna gain(Including cable loss): 1 dBi

To satisfy the exterior labeling requirements, the following text must appear on the exterior of the end product.
Contains transmitter module FCC ID: 2ADQJ-EWBP1BR1

Contact Info

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