USER MANUAL

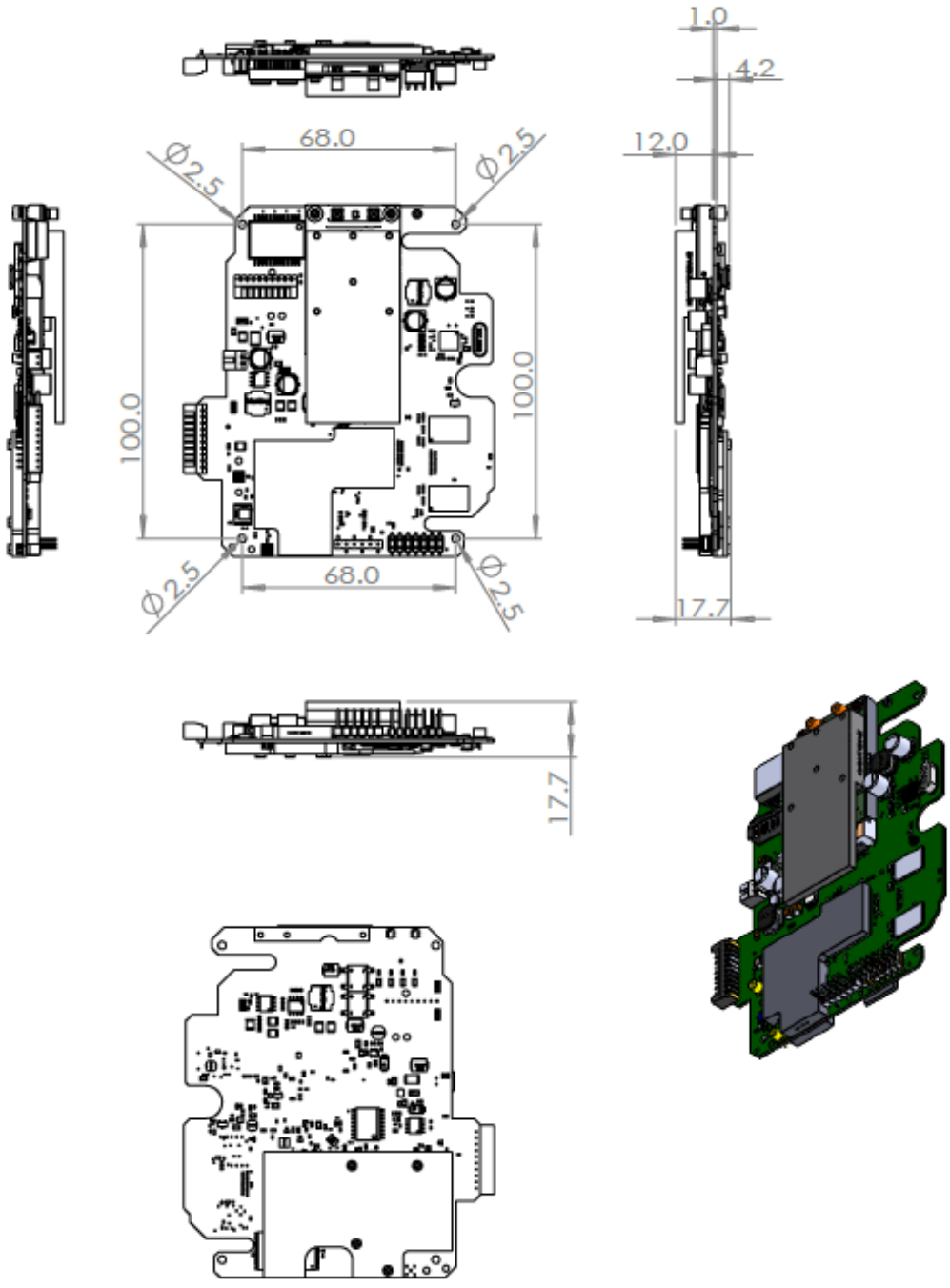
MODEL RJ-2106
BRAND VIZMONET
FCC ID VJA-RJ2106
IC 7382A-RJ2106

RJ-2106 is an IEEE 802.11b/g/n Radio Module engineered for carrier class long range high data capacity applications. With superior TX power efficient RF design, the product supports high TX Power offering best-in class EVM performance at higher modulation schemes. This facilitates to achieve long range without compromising on data throughput. With well-engineered RX Design, RJ-2106 offers ultra-low receive sensitivity to achieve long range.

TECHNICAL SPECIFICATION

RADIO MODULE – GENERAL INFO	
Chipset	QCA 9550-AT4B (CPU) & AR 8033-AL1B (Ethernet PHY)
Memory NOR Flash NAND Flash RAM	 SPI Flash, 16MB NAND Flash, 256 MB DDR2, 200 MHz, 256 MB (64Mx16x2)
Operating Frequency	2412 MHz to 2462 MHz (Operating Channels)
Data Rate Legacy 11a 11n HT20/HT40-1S (SISO) 11n HT20/HT40-2S (MIMO)	**Data Modulation** 6Mbps, 9Mbps, 12Mbps, 24Mbps, 36Mbps, 48Mbps,54Mbps MCS0, MCS1, MCS2, MCS3, MCS4, MCS5, MCS6, MCS7 MCS8, MCS9, MCS10, MCS11, MCS12, MCS13, MCS14, MCS15
Channel Bandwidth	20 MHz/40 MHz
INTERFACE SPECIFICATIONS	
Power in	Power Over Ethernet
Operating Voltage	9V to 30V
RF Antenna connector	x4 N Bulk Head Female Connector
ENVIRONMENTAL SPECIFICATIONS	
Operating Temperature Range	-40 deg C to +85 deg C
REGULATORY INFORMATION	
Compliance	FCC, IC, CE

MECHANICAL SPECIFICATIONS



Federal Communications Commission Interference Statement (FCC ID VJA-RJ2106)

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced technician for help.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance 20 cm between the radiator & your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

This device is intended only for OEM integrators under the following conditions:

- The antenna must be installed such that 20 cm is maintained between the antenna and users, and
- The transmitter module should not be used co-located with any other transmitter or antenna.

IMPORTANT NOTE:

In the event that these conditions cannot be met (for example certain laptop configurations or co-location with another transmitter), then the FCC authorization is no longer considered valid and the FCC ID cannot be used on the final product. In these circumstances, the OEM integrator will be responsible for re-evaluating the end product (including the transmitter) and obtaining a separate FCC authorization.

End Product Labeling

This transmitter module is authorized only for use in devices where the antenna may be installed such that 20 cm may be maintained between the antenna and users.

The final end product must be labeled in a visible area with the following:

"Contains FCC ID: VJA-RJ2106 and IC: 7382A-RJ2106"

WARNING: This device has been tested with a MMCX connector and antennae as listed in the table below. When integrated into the OEM products, these fixed antennae require professional installation, preventing end users from replacing them with non-compliant antennae.

Antenna Installation: It is installer's responsibility to ensure that when using the authorized antennae in the United States (or where FCC rules apply); only those antennae certified with the product are used. The use of any antenna other than those certified with the product is expressly forbidden in accordance to FCC rules CFR47. The installer should configure the output power level of antennas, according to country regulations and per antenna type. Professional installation is required of equipment with connectors to ensure compliance with health and safety issues.

Antenna information:

This radio transmitter (IC: 7382A-RJ2106) has been approved by Industry Canada to operate with the antenna types listed below with the maximum permissible gain indicated. Antenna types not included in this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

2400 MHz to 2483.5 MHz	Trade name：RAJANT
	Type: External type (Omni)
	Model name：KMA-2400-5-NM
	Max. Gain : 5 dBi

This modular transmitter complies with the FCC rule Part 15.209. The modular transmitter specification is as below.

Frequency band: IEEE 802.11 b/g, n20 (HT 20), n40 (HT40)

Modulation Type: OFDM

Frequency	Country	RED EIRP [dBm]	FCC conducted Peak Power [W]
2412MHz to 2462MHz	USA, Canada	-----	0.937
2412MHz to 2472MHz	Europe	19.82	-----

(FCC/IC) Notice to OEM Integrator:

This device is meant to be used only in host devices that meet the FCC/ISED RF exposure regulations , which means that the device is installed and used at the distance of 20 cm from persons.The end user manual must include FCC Part15/ISED RSS GEN compliance statements related to the transmitter as shown in this manual.

Host manufacturer is responsible for compliance of host system with module installed with all other applicable requirements for the system such as Part15B, ICES003. Host manufacturer is strongly recommended to confirm compliance with FCC/ISED requirements for the transmitter when the module is installed in the host.

The final product must use a physical label stating as

FCC ID: VJA-RJ2106 and IC: 7382A-RJ2106.

Cet appareil est destiné à être utilisé uniquement dans des appareils hôtes conformes aux réglementations d'exposition aux RF FCC/ISED, ce qui signifie que l'appareil est installé et utilisé à une distance de 20 cm des personnes. Le manuel de l'utilisateur final doit inclure FCC Part15/ISED RSS Déclarations de conformité GEN relatives à l'émetteur, comme indiqué dans ce manuel.

Le fabricant de l'hôte est responsable de la conformité du système hôte avec le module installé avec toutes les autres exigences applicables pour le système telles que Part15B, ICES003. Il est fortement recommandé au fabricant de l'hôte de confirmer la conformité aux exigences FCC/ISED pour le transmetteur lorsque le module est installé dans l'hôte.

Le produit final doit utiliser une étiquette physique indiquant comme

ID FCC : VJA-RJ2106 et IC : 7382A-RJ2106.

Industry Canada (IC: 7382A-RJ2106)

This device complies with Industry Canada licence-exempt RSS standard(s).

Operation is subject to the following two conditions:

1. This device may not cause interference.
2. This device must accept any interference, including interference that may cause undesired operation of the device.

This product meets the applicable Innovation, Science and Economic Development Canada technical specifications.

CAN ICES-003 (A)/NMB-003(A)

This device complies with Industry Canada license-exempt RSSs. Operation is subject to the following two conditions:

1) This device may not cause interference, and

2) This device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

1) l'appareil ne doit pas produire de brouillage;

2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, meme si le brouillage est susceptible d'en compromettre le fonctionnement.

Radiation Exposure Statement:

This equipment complies with IC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20 cm between the radiator & your body.

Déclaration d'exposition aux radiations:

Cet équipement est conforme aux limites d'exposition aux rayonnements IC établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de 20 cm de distance entre la source de rayonnement et votre corps.

CE (Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey)