USER MANUAL

MODEL RJ-2402
BRAND VIZMONET
FCC ID VJA-RJ2402
IC ID 7382A-RJ2402

HW Version# 2402.0201
SW Version# viz_sw_01_0001_08

RJ-2402 is an IEEE 802.11b/g/n/ac/ax, miniPCIe 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 achieving long range without compromising on data throughput. With well-engineered RX Design, RJ-2402 offers ultra-low receive sensitivity to achieve long range.

TECHNICAL SPECIFICATION

Chipset	QUALCOMM QCN-9072-1
EEPROM	2-Mbit serial I²C bus EEPROM
Host Interface	Mini PCIe interface with PCIe 3.0
Operating System	Linux, supports open source ath11K Linux driver
Security	AES-CCMP at 128/256 bits, AES-GCMP at 128/256 bits WEP, TKIP hardware encryption, WAPI-2 hardware encryption WPA/WPA2-Personal/WPA2-Enterprise and WPA3 Personal
Operating frequency (11a/n/ac/ax)	2412 MHz to 2472 MHz
Data rate-11b/g Data rate-11n Data rate-11ac Data rate-11ax	1 Mbps, 2 Mbps, 5.5 Mbps, 6 Mbps, 9Mbps, 12Mbps, 18 Mbps, 24Mbps, 36Mbps, 48Mbps, 54Mbps MCS0, MCS1, MCS2, MCS3, MCS4, MCS5, MCS6, MCS7 MCS0, MCS1, MCS2, MCS3, MCS4, MCS5, MCS6, MCS7, MCS8, MCS9, MCS10, MCS11 MCS0, MCS1, MCS2, MCS3, MCS4, MCS5, MCS6, MCS7, MCS8, MCS9, MCS10, MCS11
Channel BW	20 MHz/40 MHz
Operating Voltage	3.3V DC / 5V DC (through miniPCI pins 45,47,49,51 for PA)
Total DC Power Consumption	7 Watts in 2x2 MIMO mode
RF Antenna connector	x2 MMCX Female (Jack), Straight connectors
Mechanical Dimension	(L) 73.8 mm x (W) 68.9 mm x (W) 11.3 mm

MINIPCIE (GOLD FINGER) PIN-OUT

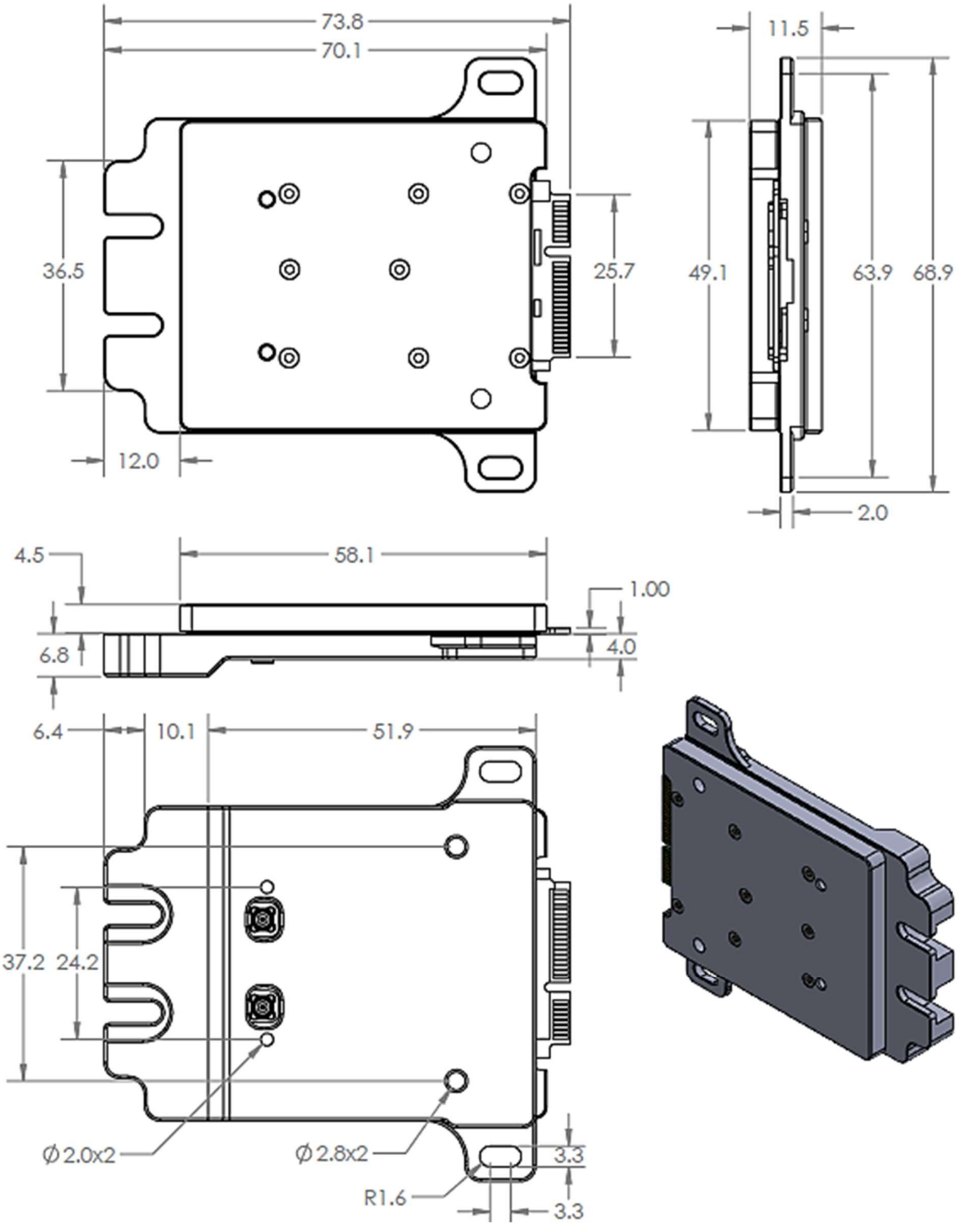
Pin#	Description
1	WAKE_L
2	3.3V
3	RESERVED (NC)
5	RESERVED (NC)
6	1.5V (NC)
7	CLKREQ_L, connected to GND through a pull-down resistor of 0 Ohms.
8	UIM_PWR (NC)
10	UIM_DATA (NC)
11	REFCLK-
12	UIM-CLK (NC)
13	REFCLK+
14	UIM-RESET (NC)
16	UIM_VPP (NC)
17	UIM_C8 (NC)
19	UIM_C4 (NC)
20	W_DISABLE_L (Pulled up to 3.3V)
22	RESET
23	PERN0
24	3.3VAUX (NC)
25	PERP0
28	1.5V (NC)
30	SMB_CLK (NC)
31	PETN0
32	SMB_DATA(NC)
33	PETP0
36	USB_D- (NC)
37	RESERVED (NC)
38	USB_D+ (NC)
39	3.3V
41	3.3V
42	LED_WWAN_L (NC)

44	LED_WLAN_L (NC)
45	5V (FOR PA)
46	LED_WPAN_L (NC)
47	5V (FOR PA)
48	1.5V (NC)
49	5V (FOR PA)
51	5V (FOR PA)
52	3.3V
4,9,15,18,21,26,27,29,34,35,40,43,50	GND

ANTENNA SPECIFICATIONS

2412 MHz to 2472 MHz	Trade name: RAJANT
	Type: External type (Omni)
	Model name: KMA-2400-5-NM
	Max. Gain: 5 dBi

MECHANICAL SPECIFICATIONS



Federal Communication Commission Interference Statement

FCC Compliance Statement

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.

Federal Communications Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class B 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 in 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 or more 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 radio/TV technician for help.

RF exposure statements

1. This Transmitter must not be collocated or operated in conjunction with any other antenna or transmitter.

2. This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated at a minimum distance of 20 centimeters between the radiator and your body or nearby persons.

End Product Labeling

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

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

"Contains FCC ID: VJA-RJ2402 and IC ID: 7382A-RJ2402"

Notice to OEM integrator

Must use the device only in host devices that meet the FCC RF exposure category of mobile, which means the device is installed and used at distances of at least 20cm from persons. The end user manual shall include FCC Part 15 compliance statements related to the transmitter as show in this manual. Host manufacturer is responsible for compliance of the host system with module installed with all other applicable requirements for the system such as Part 15. Host manufacturer is strongly recommended to confirm compliance with FCC requirements for the transmitter when the module is installed in the host. Must have on the host device a label showing Contains FCC ID: VJA-RJ2402.

Canadian Compliance Statement

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

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.

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 20cm between the radiator & your body.

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.

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."

Étiquetage du produit final

Ce module émetteur est autorisé uniquement pour une utilisation avec un appareil permettant d'installer l'antenne de manière à maintenir une distance de 20 cm entre l'antenne et l'utilisateur.

Le produit final doit porter une étiquette visible indiquant :

Contient les identifiants FCC : VJA-RJ2402 et IC : 7382A-RJ2402

Notice to OEM integrator

Must use the device only in host devices that meet the ISED RF exposure category of mobile, which means the device is installed and used at distances of at least 20cm from persons. The end user manual shall include ISED RSS GEN compliance statements related to the transmitter as show in this manual. Host manufacturer is responsible for compliance of the host system with module installed with all other applicable requirements for the system such as ICES 003. Host manufacturer is strongly recommended to confirm compliance with ISED requirements for the transmitter when the module is installed in the host. Must have on the host device a label showing Contains IC: 7382A-RJ2402.

Avis à l'intégrateur OEM

L'appareil doit être utilisé uniquement dans des dispositifs hôtes répondant à la catégorie d'exposition RF « mobile » d'ISED, ce qui signifie que l'appareil est installé et utilisé à une distance d'au moins 20 cm des personnes.

Le manuel de l'utilisateur final doit inclure les déclarations de conformité à la norme RSS-GEN d'ISED relatives à l'émetteur, comme indiqué dans le présent manuel.

Le fabricant de l'hôte est responsable de la conformité du système hôte, avec le module installé, à toutes les autres exigences applicables pour le système, telles que la norme ICES-003.

Il est fortement recommandé au fabricant de l'hôte de confirmer la conformité aux exigences d'ISED pour l'émetteur lorsque le module est installé dans l'hôte.

Le dispositif hôte doit porter une étiquette indiquant Contient IC: 7382A-RJ2402.