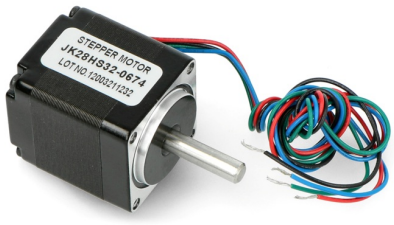


vizmo RJ-1705 Radio Module User Manual

RJ-1705 Radio Module
User Manual

Contents

RJ-1705 Radio Module

MODEL	RJ-1705
BRAND F	VIZMONET
CC ID	VJA-RJ1705
IC	7382A-RJ1705

RJ-1705 is an IEEE 802.11a/n, 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 to achieve long range without compromising on data throughput. With well-engineered RX Design, RJ-1705 offers ultra-low receive sensitivity to achieve long range.

TECHNICAL SPECIFICATION

RADIO MODULE – GENERAL INFO

Chipset	AR9592-AR1B
Memory	EEPROM, SERIAL, 32Kbits
Operating Frequency	4942.5 MHz to 5825 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

Host Interface, Operating Voltage	miniPCI Express, 3.3V DC
RF Antenna connector	x2 MMCX Connectors

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature Range	-40 deg C to +85 deg C

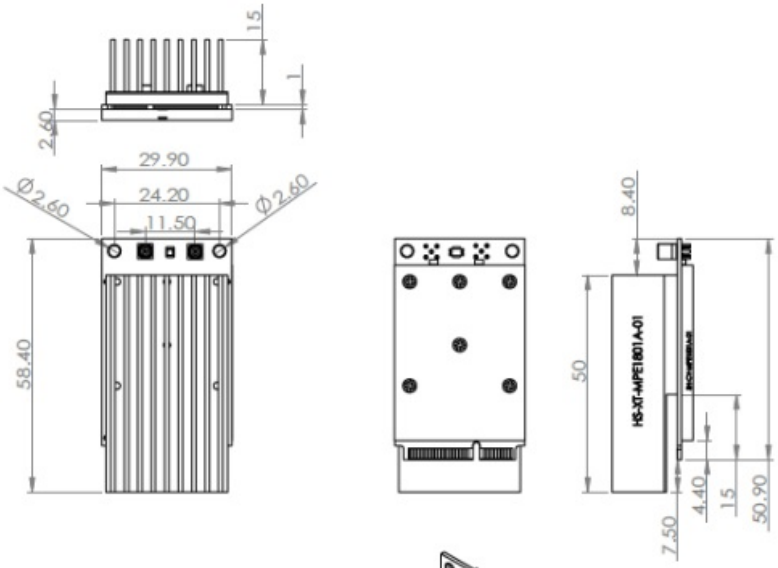
REGULATORY INFORMATION

Compliance	FCC, IC, CE

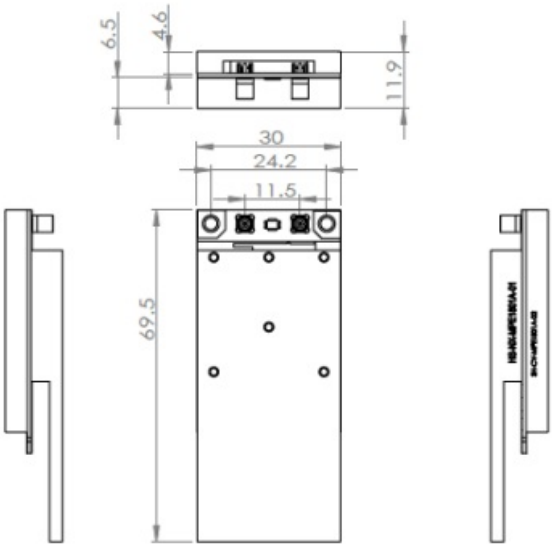
PIN DEFINITION

Pin Number	Pin Name	Pin Description
4,9,15,18,21,26,27,29,34,35,40,43,50	GND	Ground
2,24,39,41,52	POWER	VCC 3.3V
49,51		No Connection
6,28,48	1.6V	No Connection
3,5,37,45,47	RESERVED	No Connection
8,10,12,14,16,17,18	UIM SIGNALS	No Connection
36,38	USB Signals	No Connection
42,44,46	LED GPIO	No Connection
30	SMB_CLK	No Connection
32	SMB_DATA	No Connection
1	WAKE_L	No Connection
22	PERST_L	No Connection
7	CLKREQ_L	No Connection
20	W_DISABLE_L	No Connection
11	REFCLK(-)	Differential Clock, 100 MHz
13	REFCLK(+)	Differential Clock, 100 MHz
23	PERN0	Differential Transmit
25	PERP0	Differential Transmit
31	PETN0	Differential Receive
33	PETP0	Differential Receive

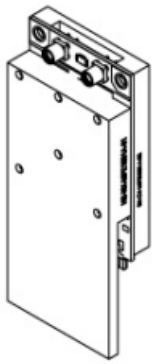
MECHANICAL SPECIFICATIONS



HEATSINK TYPE #1



HEATSINK TYPE #2



Federal Communications Commission Interference Statement (FCC ID: VJA-RJ1705)

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 minimum distance 26 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 26 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 device where the antenna may be installed such that 26 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-RJ1705 and IC: 7382A-RJ1705"

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-RJ1705) 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.

5725MHz to 5850MHz	Trade name RAJANT
	Type : External type(Omni)
	Model name KMA-5800-6-NM
	Max. Gain : 6 dBi

This modular transmitter complies with the FCC rule Part 15.209. The modular transmitter specification is as below.
Frequency band: UNII 802.11 a, n20 (HT 20), n40 (HT40)
Modulation Type: OFDM

Frequency	Country	RED EIRP [dBm]	FCC conduct power [W]
4940MHz to 4990MHz	USA		0.4227
5150MHz to 5250MHz	USA	23.	0.156
5250MHz to 5350MHz	USA	23.	0.111
5470MHz to 5725MHz	USA	30.	0.130
5725MHz to 5850MHz	USA, Canada	32.30	0.428

OEM Installation:
This module is intended for OEM installations only. The OEM integrator is responsible for ensuring that the end-user has no manual instructions to install, remove or modify the module.
When the module is used in OEM system, final host product should be tested to ensure compliance with Part 15 Subpart B and the product must use a physical label stating ""Contains Transmitter Module FCC ID: VJA-RJ1705 and IC: 7382A-RJ1705," or "Contains FCC ID: VJA-RJ1705 and IC: 7382ARJ1705," or shall use e-labelling.

Industry Canada (IC: 7382A-RJ1705)
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.

Rajant Corporation
200 Chesterfield Parkway, Malvern, Pennsylvania 19355-3258, United States Telephone No: 484-595-0233

Extension:220

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 26 cm between the radiator & your body.

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)

IMPORTANT: Regarding indoor-only frequencies
In regions where radio frequencies are regulated by ETSI (CE), the frequency range 5170-5350 MHz is restricted to indoor use only. Check local regulations before using these channels.

CE In many regions where radio frequencies are regulated by ETSI (CE), a license is required to use channels in the frequency range 5735-5835 MHz (on models that offer these channels). Check local regulations before using these channels.

Vizmonet Pte Ltd
www.vizmonet.com

Documents / Resources

	vizmo RJ-1705 Radio Module [pdf] User Manual RJ-1705 Radio Module, RJ-1705, Radio Module, Module

References

- Home - Vizmonet