



Veea Systems Limited

DB926 User Manual

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1. Introduction

This document is the user guide for the DB926 series 4G USB dongle design. The user guide will explain how to setup, use, and configure this device. It is intended to be supplied with the 4G dongle for use with embedded products.

The Dongle is intended for embedded applications in various Veea products and is used always with the same antenna system as shown in section 3. The dongle will be certified as an embedded module and used that way.

2. Installation of SIM CARD

The SIM card is inserted into the back side of the dongle in the socket provided for the SIM card. To insert the card, simply push the micro SIM into the slot provided with the contacts facing the PCB. The SIM should be firmly inserted into the socket so that it does not slip out upon use.

Figure 1 shows the back side of the card.

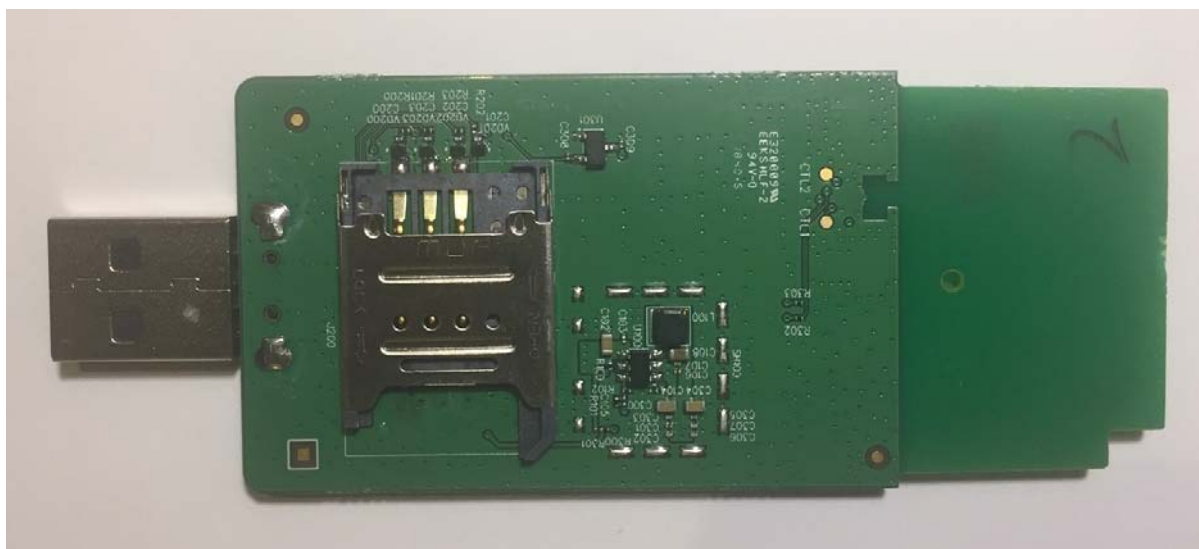


Figure 1 Back side of 4G dongle for SIM card

3. Connection of the Antennas

The antennas are connected to the small UFL connectors shown in Figure 3. These are connected using a primary antenna and a secondary antenna. The primary antenna is part number 2JF0624P and has a 200 mm long cable. The diversity antenna is part number 2JP0624P and has a 137 mm long cable. These are connected to the dongle board using the UFL connectors, which are labelled MAIN for the primary antenna, and DIV for the secondary or diversity antenna. It is important to pay close attention to the different part numbers, as they only vary by one letter. The antennas will be attached to the device which it is being embedded into. A diagram of the layout for certification purposes is shown in Figure 2. The layout shown is for the certification only and in embedded applications, the optimum position of the antennas will be determined prior to installation.

Module Only Certification Test Setup

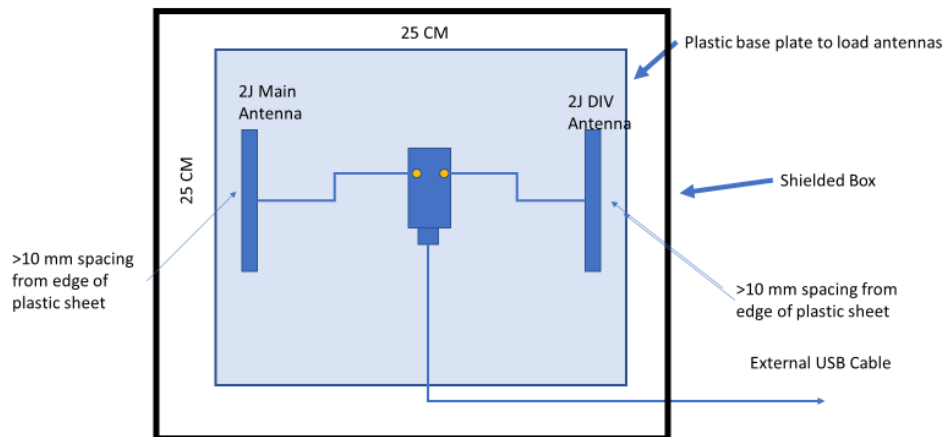


Figure 2 Antenna layout for certification process

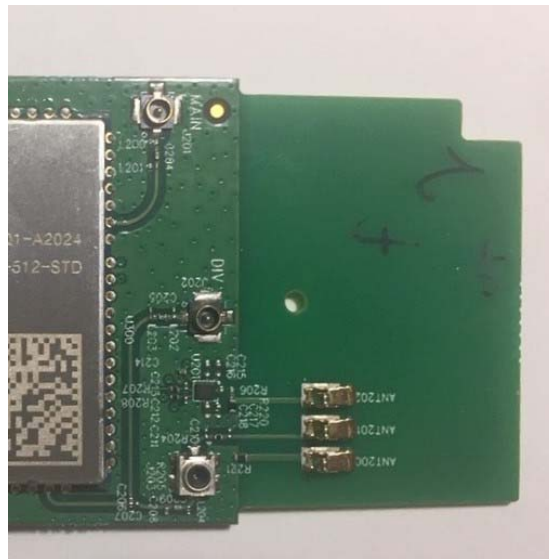


Figure 3 Antenna connectors for Dongle

4. Inserting Dongle into device

Once the device has the SIM card inserted and the antennas connected, it is ready to be inserted into the host system. The USB dongle is inserted into any available USB 2.0 or 3.0 port and will be used as a serial device in that port.

For using this device on a Linux system, please refer to the Quectel device manuals provided as attachments to this document. Figure 4 shows the full device ready to be inserted into the host system. Each version of the dongle has a different module number, but the overall commands and operations should be the same.



Figure 4 Dongle top side diagram

5. Reference Documents

- 5.1. WCDMA<E Linux USB
Driver User Guide
UMTS/HSPA/LTE Module Series
Rev. WCDMA<E_Linux_USB_Driver_User_Guide_V1.8
- 5.2. EC25&EC21
AT Commands Manual
LTE Module Series
Rev. EC25&EC21_AT_Commands_Manual_V1.3

FCC Statement

General Statement

- 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.
- 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 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 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.
- Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

FCC RF Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. To comply with FCC RF Exposure compliance requirements, this grant is applicable to only Mobile Configurations. The antennas used for the transmitter must be installed to provide a separation distance of at least 20cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter. End-users and installers must be provided with antenna installations and consider removing the no-collocation statement.