

1 BRIEF DESCRIPTION

Radio USB adapter FU9023-915 is designed for wireless connection of computers with installed UDMvision software and medical devices equipped with radio modure FU8002-915 from the family of Urodynamics 3rd generation medical devices manufactured by MEDKONSULT medical technology s.r.o., Pasteurova 67/15, 779 00 OLOMOUC, Czech Republic.

The product is not separately saleable and is intended solely for the manufacturer's own use in the manufacture of medical devices, or authorized service of medical devices. The product is not a self-contained radio device.

The communication protocol is proprietary and is used for intercommunication only for the MMT family of Urodynamics 3rd generation medical devices.

1.1 Technical parameters

Parameter/Requirement	Value / Brief description
FCC Grand ID	2A8XBFU9023-915V1
Frequency range	915.1 MHz
Modulation type	FSK
EIRP performance:	<= 10 dBm
Internal antenna type	915AT43A0026 Johanson Technology
Internal antenna gain:	-1 dBi (peak) / -4 dBi (average) ... XZ-total
Stroke:	200 000 Hz
Baudrate:	100 000 bps
Min / Max packet length:	3.3 ms / 11.7 ms
Bandwidth usage:	<1% per hour in continuous measurement mode (worst-case: 16 measurement channels, 20 Hz sampling rate), <0.1% per hour in typical use (4 measurement channels, 10 Hz sampling rate, 2 measurements of 10 minutes each per hour)
Min / Max idle time between packets:	25 ms / unlimited
Dimensions:	70×25×10 mm
IO interface type	USB 2.0 A
Communication protocol	Proprietary NETPROT32 protocol
Power	5.0 V _{DC} , 200 mA
Drivers	Plug and Play Drivers of OS MS Windows 10 and 11

1.2 Marking

Type	Labels
Basic markings on USB radio adapter	<div style="display: flex; align-items: center; justify-content: space-between;"> <div style="flex: 1;"> Basic markings on USB radio adapter </div> <div style="border: 1px solid black; padding: 5px; text-align: center;"> <div style="display: flex; justify-content: space-around; font-size: small;"> REF FU9023-915 </div> <div style="display: flex; justify-content: space-around; font-size: small;"> SN  </div> <div style="font-size: small;">31500001</div> </div> <div style="border: 1px solid black; padding: 5px; text-align: center; margin-top: 10px;"> MEDKONSULT medical technology s.r.o. (MMT) Model: FU9023-915 FCCID: 2A8XBFU8012-915V1 FW: 2.1.0 915.1 MHz, 10 dBm </div> </div>

1.3 Conditions for operation

The USB radio adapter has only the NETPROT32 protocol implemented and can only be used to communicate MMT medical devices with each other and with the controlling computer. The USB radio adapter cannot be used to communicate with other devices.

1.3.1 FCC Radio Frequency Exposure

All transmitters regulated by FCC must comply with RF exposure requirements. OET Bulletin 65 "Evaluating Compliance with FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields" provides assistance in determining whether proposed or existing transmitting facilities, operations or devices comply with limits for human exposure to RF fields adopted by the Federal Communications Commission (FCC). The bulletin offers guidelines and suggestions for evaluating compliance.

If appropriate, compliance with exposure guidelines for mobile and unlicensed devices can be accomplished by using warning labels and by providing informations concerning minimum separation distances from transmitting structures and proper installation of antennas.

To satisfy FCC RF Exposure requirements for mobile and base station transmission devices, a separation distance of 20 cm or more should be maintained between the antenna of this device and persons during operation. To ensure compliance, operation at closer than this distance is not recommended.

The antenna(s) used for this transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

The following statement must be included as a CAUTION statement in manuals of own products to alert users of FCC RF Exposure compliance:

If the FU9023-915 radio USB adapter is used in a portable application (antenna is less than 20 cm from persons during operation), the integrator is responsible for performing Specific Absorption Rate (SAR) testing in accordance with FCC rules 2.1091.

1.3.2 FCC Compliance Statement

The FU9023-915 has received Federal Communications Commission (FCC) CFR47 Telecommunications, Part 15 Sub-part C "Intentional Radiators" 15.247 and 15.249. The FU9023-915 radio USB adapter can be used with a finished product without obtaining subsequent and separate FCC certification.

The FU9023-915 radio USB adapter has been labeled with its own FCC ID number : 2A8XBFU9023-915V1.

Requirements for product labeling are given in Part 15.19 Labelling Requirements.

The user's manual should include the following 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 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.

1.4 Installation and commissioning

The USB Radio Adapter is installed by plugging it into a USB 2.0 socket on your PC or Notebook.

This product is not a stand-alone product and can be commissioned by an authorized medical device service for urodynamic systems of the manufacturer MEDKONSULT medical technology s.r.o. Please contact your distributor for this purpose.

1.5 Operational

The operational communication of the USB radio adapter is fully controlled by the control software for UDMvision urodynamic systems.

The radio parameters cannot be changed and are hard-coded in the radio USB adapter.