iRZ ATM2-232

iRZ **ATM2-232** is a dual-band (900/1800 MHz) GSM/GPRS modem developed for the transmission of data over cellular networks. The modem supports GPRS class 10 and the TCP/IP protocol stack.

iRZ **ATM2-232** automatically connects to the GPRS network and establishes a connection with the server and then maintains a permanent connection to it or runs by schedule. The user gets transparent inter-working between back-end software and an external device connected to the modem. iRZ **ATM2-232** is intended to operate in conjunction with a specialized iRZ Collector server.

The modem is equipped with a RS485/422 serial port (DB9) for a data cable and three additional GPIO pins used to drive external devices. The operation of the GPIO pins is controlled using SMS messages.

iRZ **ATM2-232** comes with a functionality that makes it possible to keep connected using another mobile network operator by switching to the second SIM card. The modem's functionality supports switching to a reserve server both in the event of a loss of connection with the main server and after getting a signal from the external pins of the modem or via SMS commands.

The modem is equipped with an adjustable watch-dog timer and is capable of working with a wide range of input voltages and temperatures.

iRZ **ATM2-232** is designed for use with data collection systems, process control systems, telemetry and telemechanic systems, as well as with utility metering systems.

Hardware Specification:

- GSM/GPRS module: BGS2
- communication interfaces: RS485/RS422 (terminal connector)
- terminal connector: RS485/RS422 + 2 x GPIO + 1 x GPO + Out 3.3V
- MiniUSB connector (setting and log record)
- dual SIM support
- GSM antenna connector: SMA
- power connector: Micro-Fit 4

Frequency bands:

- 900/1800 MHz
- 850/900/1800/1900 MHz (option)

Physical parameters:

- Plastic housing
- Dimensions (without connectors): less than 66 x 83 x 25 mm
- Dimensions (with connectors): less than 75 x 83 x 25 mm
- Weight: less than 100 g
- Operating temperature range: -40°C ... +65°C
- Storage temperature range: -50°C ... +85°C

Operating humidity: 80% or less (at +25°C)

GSM module transmitter output power:

- 850/900: 2 W
- 1800/1900: 1 W

Electrical characteristics:

- Supply voltage range: DC 7V ... 40V
- Supply current (active GPRS mode) less than:
  - at 12 V supply voltage - 250mA
  - at 24 V supply voltage - 125mA
- Supply current (standby mode) less than:
  - at 12 V supply voltage - 60mA
  - at 24 V supply voltage - 30mA
- GPIO 1 and 2 (“IN” mode):
  - programmable resistance pull-up to supply voltage – 10kΩ
  - programmable resistance pull-up to ground – 47kΩ
  - max. voltage of level “0” (low level) – 0.8V
  - min. voltage of level “1” (high level) – 2V
- GPIO 1 and 2 (“OUT” mode):
  - type of output: open collector to ground
  - output resistance – 120Ω
  - max. output current - 10mA
- GPO 3 (“IN” mode):
  - type of output: open collector on supply voltage
  - output resistance - 2Ω or less
  - max. output current – 500mA
- Out 3.3V
- max. output current – 30mA