

UHF RFID System



**BLUEBOX OEM UHF
1 RF PORT, 500mW RF POWER**

BLUEBOX
RFid System

TECHNICAL CONSTRUCTION FILE

BLUEBOX OEM UHF

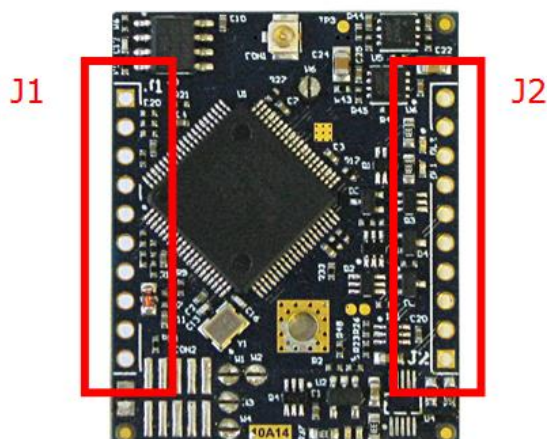
1 RF PORT, 500mW RF POWER

TECHNICAL DOCUMENTATION

The documents listed in the following table form the Technical Construction File of the 1-Port 500mW BLUEBOX OEM UHF module.

	Description	File	Revision
A	TCF index (this document)	A - OEM UHF 1Port 500mW - TCF index.pdf	00 of 05.06.2015
B	List of products / items coding	B - OEM UHF 1Port 500mW - items.pdf	00 of 05.06.2015
C	Module description	C - OEM UHF 1Port 500mW - desc.pdf	00 of 05.06.2015
D	10B14 electronic board description	D - 10B14_desc_00.pdf	00 of 05.06.2015
E	10B14 board schematic, variant 00 (board all populated)	E - 10B14 Schematic_00_R0.pdf	0 of 16.12.2014
F	10B14 pcb documentation	F - 10B14 PCB Print.pdf	16.12.2014
G	10B14 pcb assembly	G - 10B14 PCB Assembly	16.12.2014
H	10B14 component part list, variant 00 (board all populated)	H - 10B14_lpc_00_REV0.2.pdf	0.2 of 05.06.2015
I	10B14 component part list, variant 01 (for item 1061U)	I - 10B14_lpc_01_REV0.2.pdf	0.2 of 05.06.2015
J	10B14 component part list, variant 02 (for item 1071U)	J - 10B14_lpc_02_REV0.2.pdf	0.2 of 05.06.2015
K	10B14 component part list, variant 03 (for item 1061U-S)	K - 10B14_lpc_03_REV0.pdf	0 of 05.06.2015
L	10B14 component part list, variant 04 (for item 1071U-S)	L - 10B14_lpc_04_REV0.pdf	0 of 05.06.2015
M	Module manual	M - B1U003103E - OEM UHF 1CH 500mW 103 eng.pdf	1.03 of 13.04.2015
N	Module datasheet	N - BD1U003000E - OEM UHF 1CH 500mW Rev 0 eng.pdf	0 of 25.11.2014
O	Module shield	O - MME00077.pdf	25.11.2014

Connections



Connections on J1:

Pin	No	Description	
		1061U	1071U
n.c.	1	Not connected	Not connected
n.c.	2	Not connected	Not connected
n.c.	3	Not connected	Not connected
- Vin (Gnd)	4	DC power supply GND	DC power supply GND
n.c.	5	Not connected	Not connected
n.c.	6	Not connected	Not connected
n.c.	7	Not connected	Not connected
n.c.	8	Not connected	Not connected
n.c.	9	Not connected	Not connected
n.c.	10	Not connected	Not connected

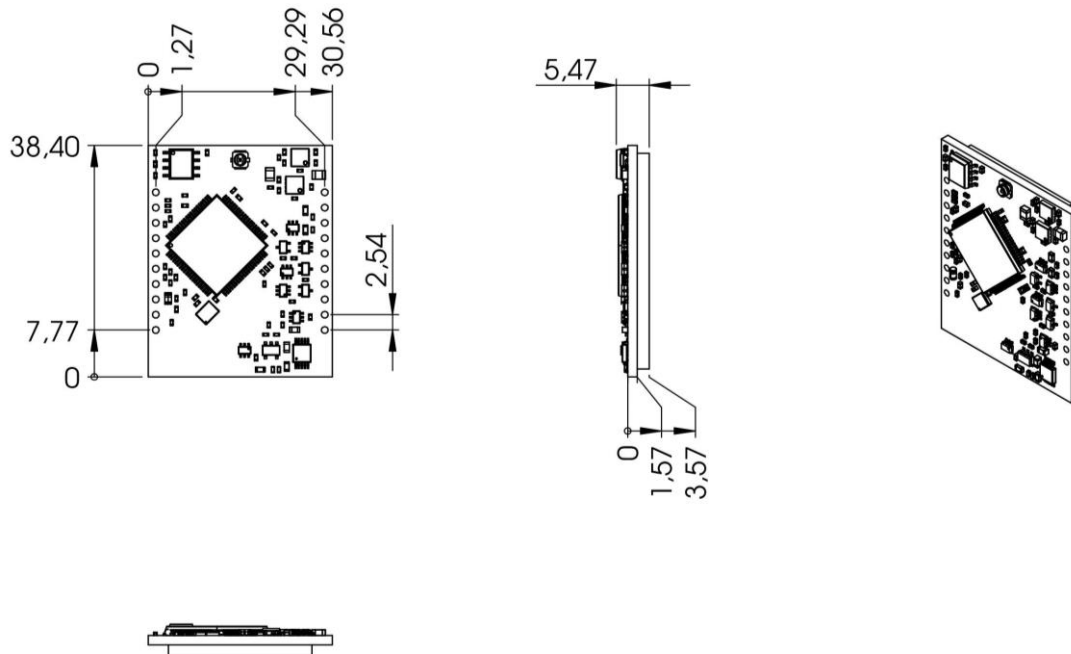
Connections on J2:

Pin	No	Description	
		1061U	1071U
RX	1	TTL serial line (from host)	RS232 serial line (from host)
TX	2	TTL serial line (to host)	RS232 serial line (to host)
TEST	3	Do not connect!!!	Do not connect!!!
I/O 1	4	'Universal' digital Input / Output	'Universal' digital Input / Output
n.c.	5	Not connected	Not connected
I/O 2	6	'Universal' digital Input / Output	'Universal' digital Input / Output
Led 2	7	'Red' external led	'Red' external led
Led 1	8	'Green' external led	'Green' external led
- Vin (Gnd)	9	DC power supply return	DC power supply return
+ Vin	10	DC power supply DC 5 V +/- 5%	DC power supply DC 5 V +/- 5%

Notes:

- Power supply the board with a low noise LDO voltage regulator (for example AS1364 from Austrian Microsystems) to avoid reader performance reduction due to noise interferences.
- IMPORTANT pin 3 must be leaved unconnected (ABSOLUTLY DO NOT CONNECT)
- External LEDs wiring: anodes respectively on pin 7 and pin 8, cathodes on pin 9 (GND); when activated, the LED is +5V powered through a limiting 330 Ω resistor mounted on the module

Mechanical Drawings



Dimensions in mm.

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.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: 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.

FCC Radiation Exposure Statement

The modular can be installed or integrated in mobile or fix devices only. This modular cannot be installed in any portable device, for example, USB dongle like transmitters is forbidden.

This modular complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. This modular must be installed and operated with a minimum distance of 20 cm between the radiator and user body.

If the FCC identification number is not visible when the module is installed inside another device, then the outside of the device into which the module is installed must also display a label referring to the enclosed module. This exterior label can use wording such as the following: "Contains Transmitter Module FCC ID: S6A-M900 Or Contains FCC ID: S6A-M900"

when the module is installed inside another device, the user manual of this device must contain below warning statements;

1. 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.
- (2) This device must accept any interference received, including interference that may cause undesired operation.

2. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

The devices must be installed and used in strict accordance with the manufacturer's instructions as described in the user documentation that comes with the product.

Antenna information

Manufacturer: Shenzhen ARuiShi Technology Co. Ltd.

M/N:C-5M

Antenna gain: 1.5dBi