

# RS868v3 module configuration

## Configuration procedure

To enter the **configuration mode** insert a jumper onto the pins marked **CONFIG** (see: **Pinout**). After every issued command (besides device reset) the device will reply with a status packet: **OK\r\n** on success, **ERR\r\n** on error. After finalizing the settings please remove the jumper to resume normal operation.

## Restoring factory defaults

### Using a jumper

To restore factory default settings insert a jumper onto the pins marked **RESET** (see: **Pinout**) while the module is powered on. After removing the jumper module will restore factory defaults and reset itself

### Using a command

See: **Command examples**

## Configuration packet format

**CFG<command><value>\r\n**

Where:

- <command>** – length: **1 byte**. See **Commands** table
- <value>** – length: **1 or 2 bytes**
- \r\n** – standard Windows line ending (CRLF).

## Commands

	Meaning	<value>	Default	Format	Description
<b>A</b>	Print current settings	any		*	
<b>B</b>	Buffer size	1-128	16	HEX	
<b>C</b>	RF channel	0-64	0	HEX	Available channel count depends on selected RF speed, see: <b>UART/RF speed mapping</b> . If value exceeds the range for current speed setting, value modulo available channels is used.
<b>F</b>	Factory reset	AC		ASCII	Restores and saves factory default settings (Default)
<b>M</b>	Operation mode	0 1 2	2	ASCII	<b>0</b> – Point to Point <b>1</b> – Point to Multipoint <b>2</b> – Half Duplex

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	Meaning	<value>	Default	Format	Description
<b>P</b>	Transmitter power (13dBm version)	0-31	31	HEX	Level 0 means <b>-18dBm</b> , 1 dBm granularity (max 13 dBm)
<b>P</b>	Transmitter power (20dBm version)	0-22	15	HEX	Level 0 means <b>-2dBm</b> , 1 dBm granularity (max 20 dBm)
<b>R</b>	Module restart	any		*	Restart the module
<b>S</b>	RF speed	0-7	4	ASCII	See: <b>UART/RF speed mapping</b>
<b>U</b>	UART speed	0-9	3	ASCII	See: <b>UART/RF speed mapping</b>
<b>V</b>	UART word length	8 9	8	ASCII	<b>8</b> – 8 bits <b>9</b> – 9 bits
<b>X</b>	UART parity bit	N O E	N	ASCII	<b>N</b> – No parity bit <b>O</b> – Odd Parity <b>E</b> – Even Parity
<b>Y</b>	UART stop bits	0 1 2	0	ASCII	<b>0</b> – 1 bit <b>1</b> – 1,5 bits <b>2</b> – 2 bits
<b>T</b>	Init RSSI measurement	any		*	See: <b>RSSI measurement</b>
<b>Z</b>	Read measured RSSI	any		*	See: <b>RSSI measurement</b>
<b>W</b>	Save settings	any		*	Save settings into non-volatile memory

## Caution!

UART port settings (commands **U**, **V**, **X**, **Y**) are applied on device start-up. To apply changes save settings and reset the module (commands **W**, **R**)

**Default UART configuration:** 9600 8N1.

## UART/RF speed mapping

Value	Meaning	Unit		RF Channels
		UART	RF	
<b>0</b>	1200	baud	bps	64
<b>1</b>	2400	baud	bps	64
<b>2</b>	4800	baud	bps	64
<b>3</b>	9600	baud	bps	64
<b>4</b>	19200	baud	bps	32
<b>5</b>	38400	baud	bps	14
<b>6</b>	57600	baud	bps	14
<b>7</b>	115200	baud	bps	6
<b>8</b>	230400	baud	-	-

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Value	Meaning	Unit		RF Channels
		UART	RF	
9	460800	baud	-	-

## RSSI measurement

There have to be exactly 2 modules with identical RF configuration on the same channel in order for RSSI measurement to be successful. One module has to be in receive mode.

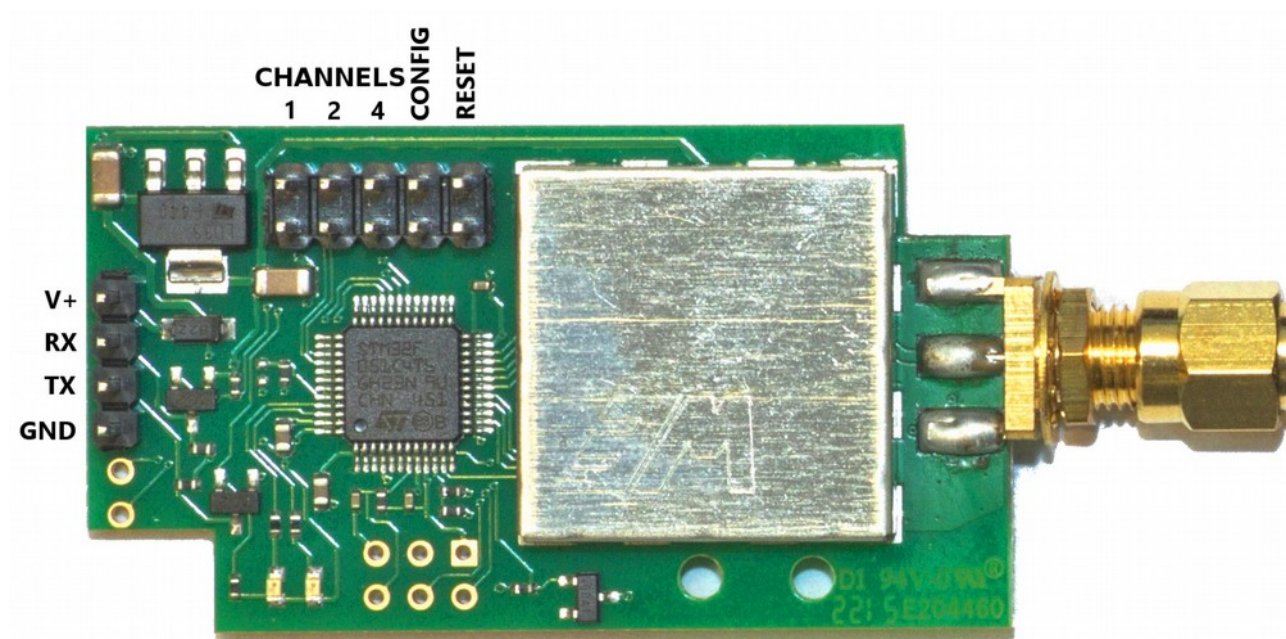
After issuing the **T** command the module attempts to measure RSSI and the following packet is returned:

**RSSI: -<X>\r\n**

Where <X> can be between **0** and **120** (ASCII) if measurement was successful or **UNK** if the measurement failed..

Manual readout of the RSSI value is available by issuing the **Z** command. Returned data format is as stated above.

## Pinout



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## Command examples

Change buffer size to 32 bytes:

- CFGFB20\r\n** – Set 32 (0x20) byte buffer size
- CFGW0\r\n** – Save settings into memory
- CFGR0\r\n** – Restart module

Set minimal transmitter power:

- CFGP0\r\n** – Set transmitter power to 0 (lowest)
- CFGW0\r\n** – Save settings into memory
- CFGR0\r\n** – Restart module

Restoring factory defaults:

- CFGFAC\r\n** – Restore factory defaults
- CFGR0\r\n** – Restart module

## Contact information

<http://www.migraftech.eu>

e-mail: [support@migraftech.eu](mailto:support@migraftech.eu)

Migraf Technologies Sp. z o. o.  
ul. Czerwony Dwór 8/1  
80-383 Gdańsk, Poland