RXQ3 Smart RF Transceiver

1. RXQ3 pinout:
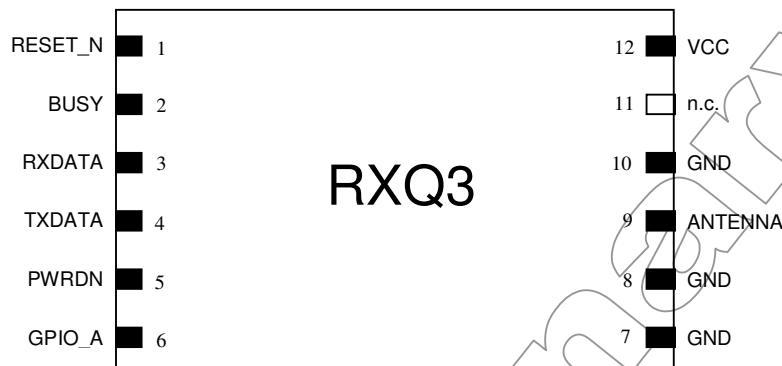
Pin	Pin Name	Pin Type	Description
1	RESET_N	Digital Input	Reset, active low
2	BUSY	Digital Output	High level when the transceiver is transmitting data. Any character DTE sends to DCE is ignored while BUSY is high.
3	RXDATA	Digital Input	Received data
4	TXDATA	Digital Output	Transmitted data
5	PWRDN	Digital Input	High level sets the transceiver in power down mode. Also used for device programming (signal DD).
6	GPIO_A	Digital Input/Output	Generic digital input/output. Also used for device programming (signal DC).
7	GND	Ground	Ground
8	GND	Ground	Ground
9	ANTENNA	RF I/O	Antenna connection
10	GND	Ground	Ground
11	Not connected	-	-
12	VCC	Power	Power supply

Power down mode is in development.

2. AT Commands:

Command	Function	Values	Reset value
Generic Modem Control			
Z	Software reset		
&F	Restore factory defaults		
&T<n>	Enter test mode	1 local digital loopback 2 RSSI	
&V	View configuration		
&W	Store current configuration		
+CLAC	Display available AT commands		
+GMI	Manufacturer identification		
+GMM	Model identification		
+GMR	Revision identification		
+IPR= +IPR?	Serial link data rate	9600 9600 bps 14400 14400 bps 19200 19200 bps 38400 38400 bps 57600 57600 bps	19200
Transceiver Interface Control			
E<n>	Command echo	0 echo off 1 echo on	1
F<n>	Online local echo of trasmitted data	0 local echo on 1 local echo off	1
Q<n>	Result code suppression	0 transmit result codes 1 result codes are suppressed and not transmitted	0
V<n>	Response format	0 numeric text 1 verbose response text	1
Connection Control			
O	Return to online mode		

ATZ and AT&W commands are in development.

After reset, the transceiver starts in data mode.

3. S-Registers:

Command	Function	Values	Reset value
Standard S registers			
S2	Escape character	Range: 0 to 255	43
S3	Carriage return character	Range: 0 to 127	13
S4	Line feed character	Range: 0 to 127	10
S5	Backspace character	Range: 0 to 255	8
S12	Escape code guard time	Range: 0 to 255 msec.	250 msec.
S18	Self-test duration	Range: 0 to 255 sec. Timeout disabled for S18 = 0	60 sec.
Radio Settings			
S100	RF band	1 315 MHz settings 2 433 MHz settings 3 868 MHz settings 4 915 MHz settings	2
S101	RF channel number	Range: 0 to 255	0
S102	RF transmit level	1 +10 dBm 2 +5 dBm 3 0 dBm 4 -10 dBm 5 -20 dBm 6 -30 dBm	1
S103	Radio settings	1 4.8 kbps, GFSK 2 10 kbps, GFSK 3 38.4 kbps, GFSK 4 76.8 kbps, GFSK	1
Address Configuration			
S110	RF source address	Range: 0 to 255	0x00
S111	RF destination address	Range: 0 to 255	0x00
S112	Network identifier	Range: 0 to 255	38
Packet management			
S120	Maximum packet data length	Range: 1 to 240 bytes	80
S121	Wait time before automatic transmission of the RF packet	Range: 1 to 255 msec.	200
S122	Address check	0 disable address check 1 enable address check, no broadcast 2 enable address check, 0x00 broadcast	0
S123	Network check	0 disable network check 1 enable network check	0
S124	Format of the message transferred to DTE	0 only data 1 extended information: length, network, device address, data, rssi	0
Read-only Registers			
S200	Read last measured RSSI	Value in dBm	
S201	Read device temperature	Value in °C	
S202	Read device supply voltage	Value in Volts	
Production Configuration			
S300	S100 factory default setting		2
S301	Mode after reset	0 data mode 1 command mode	0

Support for registers S201, S202 and S301 is in development.

4. Result codes:

Numeric	Verbose	Description
0	OK	command acknowledged
1	reserved	reserved
2	reserved	reserved
3	reserved	reserved
4	ERROR	problems encountered while processing command line
5	reserved	reserved
6	reserved	reserved
7	reserved	reserved
8	reserved	reserved

5. Extended message format:

Message from DCE to DTE, when S124 = 1:

1	1	1	1	N	1
LENGTH	**NETWORK** (optional)	**SOURCE** (optional)	**DESTINATION** (optional)	**DATA PAYLOAD**	**RSSI** (in dBm)

(Field lengths are expressed in bytes)