RC11/25xx(HP)-RC232 FIRMWARE PRODUCT CHANGE NOTIFICATION

Product Change Notification

This document describes firmware product changes. Further details are described in the latest revision of the Data Sheet, User Manual, and Errata Note if applicable.

Firmware Product Change Notification

Radiocrafts defines product changes in firmware (FW) by:

- **C:** Correction of an existing feature
- **N:** Introduction of new features
- **P:** Performance improvement

The firmware revision can be read from the configuration memory of the module using the '0' (zero) command.

FW Revision				Change Notification		Date
HW 1.x	HW 2.x/3.x 1.x(HP)	HW 4.x (RC1140)	HW 2.x(HP)			
1.00					First prototype in Beta	
1.10					Beta optimisation	
1.11					Beta optimisation	
1.12					Beta optimisation	
1.14					First product release	2008-08-16
	1.20					2008-01-29
1.16	1.21				TBD	2008-03-17
1.17	1.22				TBD	2008-03-26
	1.23				NA	
1.18	1.24				TBD	2009-07-04
1.19	1.25				TBD	2009-08-25
1.1A	1.26			**C**	'S' command functionality changed. See '1' for details.	2009-10-08
				C	100kbps fixed (see Errata 1 for details)	
1.1A	1.27			**C**	Sleep pin functionality changed. See '2' for details	2009-12-23
1.1B	1.28			**N**	Max packet length increased to 1024 including header bytes	2010-08-25
				N	New address mode added to support 4 byte addressing	
				N	UART Parity bit option added	
				N	UART Number of stop bit option added	
1.1C	1.29			**C**	RSSI append fixed (see Errata 2 for details)	2010-10-21
				C	Test Mode 3 fixed (see Errata 3 for details)	
	1.31			**P**	Yield improvement for RC1140. No impact on performance or functionality	2012-06-20
			1.32	**P**	Changed control signals for new HW with new RF switch	2014-07-23
				N	Added LED_CONTROL option	
	1.34	1.34	1.34	**P**	Improved robustness in start of crystal oscillator adding 1 ms startup time.	2019-03-01
				C	LED_CONTROL (introduced in 1.32) is set default off for all modules	

Note! *For new orders you may receive older versions subject to stock rotation as old versions already manufactured and on stock will be sold out first. This given that the reason for the new version is non-critical, such as performance upgrade or added functionality. If the change is critical, such as for regulations compliance, an Errata Note will be issued for the old version and stock material will be called back.*

1. 'S' command (RSSI) functionality changed

Description of the Change

The RSSI readout using the S command in configuration mode has been improved to always be instantaneous independent of signal type. However, this has also lead to an increase in the response time.

The RSSI readout has until now been frozen to the last incoming valid packet, and was only instantaneous until a valid packets was received. This has now been change to also be instantaneous after a RC232 packet has been received.

Important Notes

The RSSI readout after this change gives an increased delay when using the S command.
The new RSSI time from end of S command to start of RSSI byte on the UART is now typ. 4 ms. The RSSI append feature is not affected by this change.

Products affected

This product change notification affects the following products and firmware revision:

RC1140-RC232: HW: 1.xx, FW: 1.1A and newer
RC1180-RC232: HW: 2.xx, FW 1.26 and newer
RC1190-RC232: HW: 2.xx, FW 1.26 and newer

Product shipment after 2009-10-15 includes this change.

2. SLEEP pin functionality changed

Description of the Change
In earlier versions the module may hang if the SLEEP pin is enabled (RF_SLEEP_MODE = 0x02) and there is activity on the RXD or CONFIG pin that wakes up the module (pin interrupt).

This has been corrected and the following functionality is now implemented.

When the SLEEP pin is not enabled (RF_SLEEP_MODE = 0x00) the module can be set in Sleep mode by activating CONFIG and sending an 'Z' command. The module is woken up when CONFIG is deactivated (goes high). Note: During Sleep the CONFIG pin does not have any internal pull-up, so the CONFIG pin must be driven high in order to wake the module. Any activity on the RXD pin will make the module wake up, but immediately return to Sleep as long as CONFIG is kept low. Such activity on the RXD pin should be avoided in order to reduce current consumption.

When the SLEEP pin is enabled (RF_SLEEP_MODE = 0x02) the module can be set in Sleep mode by activating RTS/SLEEP. The module is woken up when RTS/SLEEP is deactivated (goes high). Note: During Sleep the RTS/SLEEP pin does not have any internal pull-up, so the RTS/SLEEP pin must be driven high in order to wake the module. Any activity on the RXD or CONFIG pins will not make the module wake up. Activity on module pin 16 and 17 can wake the module and must be avoided (do not connect, as per datasheet).

Important Notes
The RSSI readout after this change gives an increased delay when using the S command.
The new RSSI time from end of S command to start of RSSI byte on the UART is now typ. 4 ms. The RSSI append feature is not affected by this change.

Products affected
This product change notification affects the following products and firmware revision:

RC1140-RC232: HW: 1.xx, FW: 1.1A and newer
RC1180-RC232: HW: 2.xx, FW 1.27 and newer
RC1190-RC232: HW: 2.xx, FW 1.27 and newer

Product shipment after 2009-12-23 includes this change.

Firmware vs hardware revisions

FW Revision				HW Platform															
				RC1140			RC1170		RC1180		RC1190		RC1170HP		RC1180HP		RC1190HP		RC2500	RC2500HP
HW 1.x	HW 2.x/3.x 1.x(HP)	HW 4.x (RC1140)	HW 2.x(HP)	1.x	2.x 3.x	4.x	1.x	2.x 3.x	1.x	2.x 3.x	1.x	2.x 3.x	1.x	2.x	1.x	2.x	1.x	2.x	1.x	1.x
1.00				✓	–	–	✓	–	✓	–	✓	–	–	–	–	–	–	–	–	–
1.10				✓	–	–	✓	–	✓	–	✓	–	–	–	–	–	–	–	–	–
1.11				✓	–	–	✓	–	✓	–	✓	–	–	–	–	–	–	–	–	–
1.12				✓	–	–	✓	–	✓	–	✓	–	–	–	–	–	–	–	–	–
1.14				✓	–	–	✓	–	✓	–	✓	–	–	–	–	–	–	–	–	–
	1.20			✗	✓	–	✗	✓	✗	✓	✗	✓	–	–	–	–	–	–	–	–
1.16	1.21			✓	✓	–	✓	✓	✓	✓	✓	✓	–	–	–	–	–	–	–	–
1.17	1.22			✓	✓	–	✓	✓	✓	✓	✓	✓	–	–	–	–	–	–	–	–
	1.23			✗	✓	–	✗	✓	✗	✓	✗	✓	–	–	✓	–	–	–	–	–
1.18	1.24			✓	✓	–	✓	✓	✓	✓	✓	✓	–	–	✓	–	✓	–	–	–
1.19	1.25			✓	✓	–	✓	✓	✓	✓	✓	✓	–	–	✓	–	✓	–	–	–
1.1A	1.26			✓	✓	–	✓	✓	✓	✓	✓	✓	–	–	✓	–	✓	–	✓	✓
1.1A	1.27			✓	✓	–	✓	✓	✓	✓	✓	✓	–	–	✓	–	✓	–	✓	✓
1.1B	1.28			✓	✓	–	✓	✓	✓	✓	✓	✓	✓	–	✓	–	✓	–	✓	✓
1.1C	1.29			✓	✓	–	✓	✓	✓	✓	✓	✓	✓	–	✓	–	✓	–	✓	✓
	1.31			✗	✓	–	✗	✗	✗	✗	✗	✗	✗	–	✗	–	✗	–	✗	✗
			1.32	✗	✗	–	✗	✗	✗	✗	✗	✗	✗	✓	✗	✓	✗	✓	✗	✗
	1.34	1.34	1.34	✗	✗	✓	✗	✓	✗	✓	✗	✓	✗	✓	✗	✓	✗	✓	✓	✓

–	FW revision never used for this product
✓	FW is compatible with HW
✗	FW revision not applicable for this HW version

Hardware Product Change Notification

Please refer to seperate document.

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