



# PLUG-CR95HF-B

## Daughter board for the CR95HF 13.56 MHz transceiver IC

Data brief – production data

### Features

- Ready-to-use printed circuit board including
  - CR95HF multi-protocol transceiver IC
  - 47 x 34 mm 13.56 MHz inductive etched antenna and tuning components
  - SPI or UART connector for communication with the host

### Description

The PLUG-CR95HF-B includes a CR95HF contactless transceiver, a 47 x 34 mm 13.56 MHz inductive etched antenna and its associated tuning components.

The user must connect a host to the board through the UART or the SPI connector. It allows

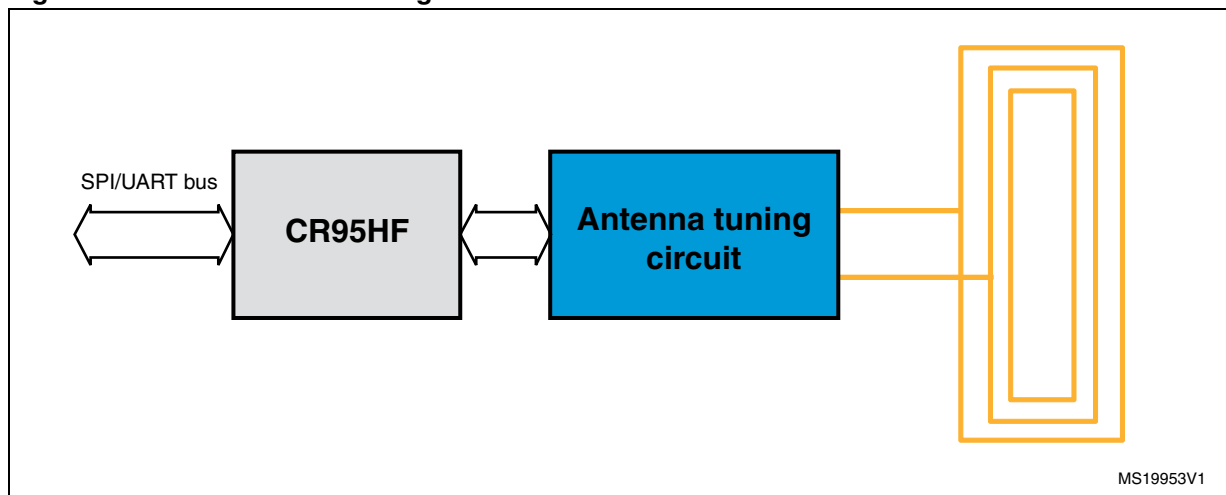


to control the 13.56 MHz CR95HF multi-protocol transceiver IC from the host.

The CR95HF acts as a slave. The host can configure the transceiver and send SPI or UART commands.

The PLUG-CR95HF-B board is powered through the VPS pin.

Figure 1. Functional block diagram

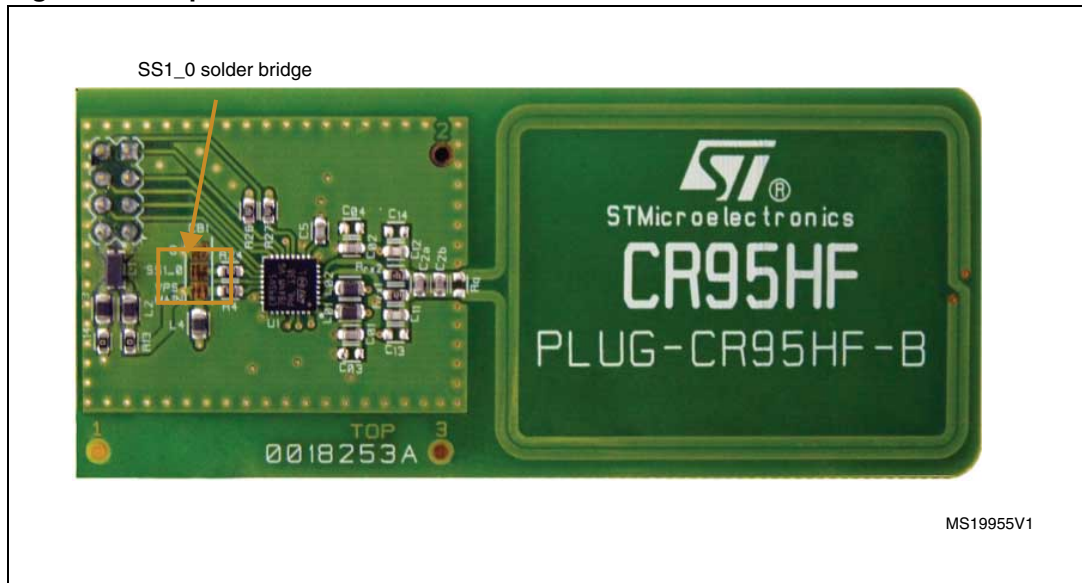


# 1 Hardware configuration

The PLUG-CR95HF-B daughter board can use either the UART or the SPI as external serial interface. SS1\_0 solder bridge allows to configure the CR95HF to use either the UART or the SPI serial interface (see [Figure 2](#), and [Table 1](#)).

Once the solder bridges are configured, the communication mode is automatically enabled by the CR95HF at power-on.

**Figure 2. Top view of the PLUG-CR95HF-B**

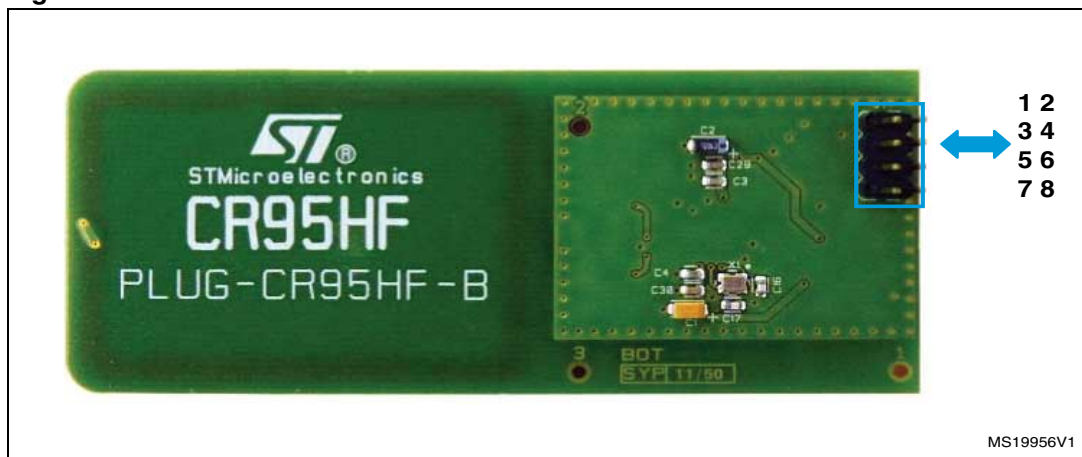


MS19955V1

**Table 1. Solder bridge configuration**

Solder bridge	Communication mode between CR95HF and host	
	UART	SPI
SSI1_0	GND	VPS

**Figure 3. PLUG-CR95HF-B connector**



MS19956V1

**Table 2. Description of connector signals**

Pin number	Signal	Description
1	UART_TX and $\overline{\text{IRQOUT}}$	UART transmit pin/interrupt output for CR95HF
2	UART_RX and $\overline{\text{IRQIN}}$	UART receive pin/interrupt input for CR95HF
3	$\overline{\text{SPI\_SS}}$ (NSS)	SPI slave select
4	SPI_MISO	SPI data, slave output
5	SPI_MOSI	SPI data, slave input
6	SPI_SCK	SPI serial clock
7	VPS and VPS_TX	Main power supply/power supply for RF drivers
8	GND	Ground

Refer to the CR95HF datasheet for a description of the signals.

## 2 Revision history

**Table 3. Document revision history**

Date	Revision	Changes
13-Feb-2012	1	Initial release.
15-Mar-2012	2	Swapped signal and description for pin 1 and 2 in <a href="#">Table 2: Description of connector signals</a> .

**Please Read Carefully:**

Information in this document is provided solely in connection with ST products. STMicroelectronics NV and its subsidiaries ("ST") reserve the right to make changes, corrections, modifications or improvements, to this document, and the products and services described herein at any time, without notice.

All ST products are sold pursuant to ST's terms and conditions of sale.

Purchasers are solely responsible for the choice, selection and use of the ST products and services described herein, and ST assumes no liability whatsoever relating to the choice, selection or use of the ST products and services described herein.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted under this document. If any part of this document refers to any third party products or services it shall not be deemed a license grant by ST for the use of such third party products or services, or any intellectual property contained therein or considered as a warranty covering the use in any manner whatsoever of such third party products or services or any intellectual property contained therein.

**UNLESS OTHERWISE SET FORTH IN ST'S TERMS AND CONDITIONS OF SALE ST DISCLAIMS ANY EXPRESS OR IMPLIED WARRANTY WITH RESPECT TO THE USE AND/OR SALE OF ST PRODUCTS INCLUDING WITHOUT LIMITATION IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE (AND THEIR EQUIVALENTS UNDER THE LAWS OF ANY JURISDICTION), OR INFRINGEMENT OF ANY PATENT, COPYRIGHT OR OTHER INTELLECTUAL PROPERTY RIGHT.**

**UNLESS EXPRESSLY APPROVED IN WRITING BY TWO AUTHORIZED ST REPRESENTATIVES, ST PRODUCTS ARE NOT RECOMMENDED, AUTHORIZED OR WARRANTED FOR USE IN MILITARY, AIR CRAFT, SPACE, LIFE SAVING, OR LIFE SUSTAINING APPLICATIONS, NOR IN PRODUCTS OR SYSTEMS WHERE FAILURE OR MALFUNCTION MAY RESULT IN PERSONAL INJURY, DEATH, OR SEVERE PROPERTY OR ENVIRONMENTAL DAMAGE. ST PRODUCTS WHICH ARE NOT SPECIFIED AS "AUTOMOTIVE GRADE" MAY ONLY BE USED IN AUTOMOTIVE APPLICATIONS AT USER'S OWN RISK.**

Resale of ST products with provisions different from the statements and/or technical features set forth in this document shall immediately void any warranty granted by ST for the ST product or service described herein and shall not create or extend in any manner whatsoever, any liability of ST.

ST and the ST logo are trademarks or registered trademarks of ST in various countries.

Information in this document supersedes and replaces all information previously supplied.

The ST logo is a registered trademark of STMicroelectronics. All other names are the property of their respective owners.

© 2012 STMicroelectronics - All rights reserved

STMicroelectronics group of companies

Australia - Belgium - Brazil - Canada - China - Czech Republic - Finland - France - Germany - Hong Kong - India - Israel - Italy - Japan - Malaysia - Malta - Morocco - Philippines - Singapore - Spain - Sweden - Switzerland - United Kingdom - United States of America

[www.st.com](http://www.st.com)

