ST25R3916 ST25R3917 ST25R3920 Errata sheet

ST25R3916, ST25R3917 and ST25R3920 devices limitations

Silicon identification

This errata sheet applies to the ST25R3916, ST25R3917 and ST25R3920 NFC products. These parts can be identified by reading the product revision code through SPI or I^2C.

Identification by SPI or I^2C

The part can be identified by reading the product revision code in the IC identity register at address `3Fh`. The limitations described in this document apply for product revision 3.1, which corresponds to an IC identity register readout of `2Ah`.

1 Summary of device limitations

Table 1 gives quick references to all documented limitations.

Legend for *Table 1*: A = workaround available; N = no workaround available.

Table 1. Summary of silicon limitations

Function	Links to limitation	Workaround		
		ST25R3916 revision 3.1	ST25R3917 revision 3.1	ST25R3920 revision 3.1
System	*Section 2.1.1: Direct command `Change AM modulation state` does not change resistive modulation state (Applicable when bit res_am=1)*	N	N	N
Interrupt and associated reporting	*Section 2.1.2: Missing I_rxe interrupt*	A	A	A
	Section 2.1.3: PPON2 Timer	A	A	A

2 Description of device limitations

The following sections describe device limitations and provide workarounds if available. They are grouped by device functions.

2.1 System

2.1.1 Direct command *Change AM modulation state* does not change resistive modulation state (Applicable when bit res_am=1)

Description

The device allows amplitude modulation (AM) by using the concepts of regulation and resistive based modulation. The direct command *Change AM Modulation state* changes the AM modulation state from unmodulated to modulated, and vice versa. This command is not needed during normal operation but can be used e.g. to measure the AM modulation index. The command does only affect the regulator state and not the resistive modulation state.

Workaround

None

2.1.2 Missing I_rxe interrupt

Description

Rarely on corrupted frames I_rxs gets signaled but I_rxe is not signaled.

Workaround

Treat all reception error interrupts as I_rxe and implement a timeout on I_rxe.

2.1.3 PPON2 Timer

Description

In AP2P mode in case I_txe is not read out before the I_gpe, PPON2 timer is not started and therefore I_ppon2 is not signaled.

Workaround

Use an MCU timer to cover ppon2 timeout.

3 Revision history

Table 2. Document revision history

Date	Revision	Changes
29-Nov-2019	1	Initial release
03-Jul-2020	2	Added ST25R3920 root part number
01-Oct-2020	3	Added: – *Section 2.1.2: Missing I_rxe interrupt* – *Section 2.1.3: PPON2 Timer* Updated: – *Table 1: Summary of silicon limitations*