

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 I²C.

Identification by SPI or I²C

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

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