

M24SRxx: new rule replacing I2C DESELECT command and update on device commands.

What is the change?

Datasheet change for:

- A new rule to implement I2C token release which is replacing the I2C DESELECT command in all M24SRxx products and
- Additional information about best usage and restrictions of the device commands to fulfill proper tag operations.

The products remain strictly the same from the electrical and mechanical points of view. However the relevant M24SRxx product related software drivers have been updated to take into account the new rule for I2C token release as well as the best use of specific commands.

The updated datasheets of the M24SRxx products as well as the updated software drivers are available on ST web site:

www.st.com/en/nfc/m24sr-series-dynamic-nfc-tags.html?querycriteria=productId=SS1812

Why?

The M24SRxx implements an arbitration scheme between the RF Reader and I2C host to grant access from either side during communication. Under certain Vcc conditions, this arbitration might unexpectedly be blocked on I2C side. The new rule removes such a constraint and makes the arbitration scheme fully robust no matter the Vcc conditions.

In addition, details are provided for specific device commands in order to improve compliancy to NFC Forum and enhance the overall tag operations.

When?

Since latest M24SRxx datasheets updates release date.

M24SRxx	Datasheet Document	Datasheet Document Version	Datasheet Document Version Release date
M24SR02	DS9985	V9	23 November 2016
M24SR04	DS9725	V13	18 November 2016
M24SR16	DS9726	V8	24 November 2016
M24SR64	DS9316	V18	22 November 2016

Related SW updates are made available in March 2017 (please contact ST in case of need).

How will the change be qualified?

The products remain strictly the same from the electrical and mechanical points of view. No new qualification is required.

The new rule for I2C token release have been validated by applying specific tests, and a specific Test Flow, now part of standard EWS test on 100% sampling, as well as Design critical path analysis.

What is the impact of the change?

- **Form:** Not applicable.

- **Fit:** Not applicable.

- **Function:**

* I2C token release function is not intrinsically changed. Only rules and commands handling it are modified (including Deselect command deprecation on I2C side).

* Affected commands for overall tag operation improvements and specification of restrictions: NDEF Select, UpdateBinary, UpdateFileType, ReadBinary, ExtendedReadBinary.

How can the change be seen?

Datasheet update.

Host software drivers update.

Android Application SW update.

Appendix A: Product Change Information

Product family / Commercial products:	M24SRxx products
Customer(s):	All
Type of change:	Datasheet change
Reason for the change:	<p>Improve robustness of I2C token release by removing potential dependence to the applied Vcc.</p> <p>Provide more details to ensure best use of device commands that lead to improved NFC Forum compliance and enhanced overall tag operations</p>
Description of the change:	<p>New rule to implement I2C token release which is replacing the I2C DESELECT command. This new rule explains how to release the I2C value of the session token.</p> <p>A few commands restrictions for specific NFC based applications.</p>
Forecast date of the change: (Notification to customer)	Week 05 / 2017
Forecast date of <u>Qualification samples</u> availability for customer(s):	N/A
Forecast date for the internal STMicroelectronics change, <u>Qualification Report</u> availability:	N/A
Marking to identify the changed product:	N/A
Description of the qualification program:	N/A
Product Line(s) and/or Part Number(s):	See information in APPENDIX A
Estimated date of first shipment:	N/A

Appendix B: Concerned Commercial Part Numbers:

Commercial Part Numbers
M24SR64-YMN6T/2
M24SR64-YDW6T/2
M24SR64-YMC6T/2
M24SR64-YSB12I/2
M24SR16-YMN6T/2
M24SR16-YDW6T/2
M24SR16-YMC6T/2
M24SR04-YMN6T/2
M24SR04-YDW6T/2
M24SR04-YMC6T/2
M24SR04-GMC5T/2
M24SR02-YMN6T/2
M24SR02-YDW6T/2
M24SR02-YMC6T/2
M24SR02-YSB12I/2

Document Revision History		
Date	Rev.	Description of the Revision
Jan 16, 2017	1.00	First draft creation

Source Documents & Reference Documents		
Source document Title	Rev.:	Date:



Public Products List

Public Products are off the shelf products. They are not dedicated to specific customers, they are available through ST Sales team, or Distributors, and visible on ST.com

PCI Title : M24SRxx: new rule replacing I2C DESELECT command and update on device commands.

PCI Reference : MDG/17/10090

Subject : Public Products List

Dear Customer,

Please find below the Standard Public Products List impacted by the change.

M24SR16-YDW6T/2	M24SR64-YMC6T/2	M24SR04-GMC5T/2
M24SR02-YMC6T/2	M24SR16-YMN6T/2	M24SR02-YMN6T/2
M24SR64-YMN6T/2	M24SR04-YMC6T/2	M24SR02-YDW6T/2
M24SR16-YMC6T/2	M24SR04-YDW6T/2	M24SR04-YMN6T/2
M24SR64-YDW6T/2		



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