ST25DV-I2C series
Dynamic NFC/RFID tags
ISO/IEC 15693 NFC Forum Type V

Dynamic ISO/IEC 15693 NFC Forum Type V with I²C interface, fast transfer mode and energy harvesting

ST25DV-I2C is the new member of the ST25 family. It is a future-proof dynamic tag compliant with NFC Forum Tag Type V and ISO/IEC 15693 standards, which offer a wide range of new features and capabilities. The EEPROM memory bank can be accessed either by a low-power I²C interface or by an ISO/IEC 15693 RF interface operating at 13.56 MHz. An additional 256-Byte Fast Transfer Mode buffer allows a rapid data transfer between the RF and I²C part. It also features an energy harvesting and RF status function. In addition, the series offers multiple 64-bit passwords for a flexible data protection mechanism.

**KEY FEATURES**

- Industry standard interfaces:
  - I²C: 1MHz from 1.8 to 5.5V
  - ISO/IEC 15693 NFC Forum Type V
  - 13.56 MHz carrier frequency
  - 4-, 16- and 64-Kbit user EEPROM
  - 256 Bytes Fast Transfer Mode buffer
  - 64-bit unique identifier
  - 64-bit password protection
  - Energy harvesting
  - Configurable Output signal (GPO)
  - RF Field detect
  - Several RF interrupts
  - Low-power mode

- Flexible password protection scheme
- Simple and cost-effective
- New functions and capabilities for device calibration, product activation

**MAIN APPLICATIONS**

- Industrial equipment
- Maintenance, repair and operations (MRO)
- Medical equipment
- Consumer electronics
- Electronic Shelf Label (ESL)
- Asset tracking
- Traceability information management
- Logistics

- Quick firmware upgrade via Fast Transfer Mode
- Enables battery less designs
- Long Range applications
- High-reliability EEPROM
## DEVICE SUMMARY

<table>
<thead>
<tr>
<th>Part number</th>
<th>RF interface</th>
<th>Serial interface</th>
<th>Memory size</th>
<th>Clock frequency (MHz)</th>
<th>Data protection</th>
<th>Supply (V)</th>
<th>Package</th>
<th>Energy Harvesting output</th>
<th>RF status output (GPO)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ST25DV04K</td>
<td>ISO 15693 NFC Forum type V</td>
<td>I²C</td>
<td>4-Kbit</td>
<td>1</td>
<td>64-bit password</td>
<td>1.8 to 5.5</td>
<td>SO8, TSSOP8, WLCSP, FPN8, FPN12, wafer</td>
<td>Yes</td>
<td>Yes</td>
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<tr>
<td>ST25DV16K</td>
<td>ISO 15693 NFC Forum type V</td>
<td>I²C</td>
<td>16-Kbit</td>
<td>1</td>
<td>64-bit password</td>
<td>1.8 to 5.5</td>
<td>SO8, TSSOP8, FPN12</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>ST25DV64K</td>
<td>ISO 15693 NFC Forum type V</td>
<td>I²C</td>
<td>64-Kbit</td>
<td>1</td>
<td>64-bit password</td>
<td>1.8 to 5.5</td>
<td>SO8, TSSOP8, FPN12</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

## ECO-SYSTEM

- Documentation
- Antenna Design Suite
- NFC Android App
- Evaluation board
- e2e community
- Support eco-system
- PC SW tools
- MCU drivers (FW)
- NFC Tap App

## TECHNICAL SUPPORT

The ST25DV-I²C family of dynamic NFC tags offers a simple and cost-effective implementation. ST can provide supporting material for integrating the antenna into your application: application notes, reference designs, antenna computation tools, e-presentations and e-learning. For more information, visit www.st.com/st25dv-i2c