

# CmStick/MI

## Description

Longtime availability of data and robustness in rugged environments are some of the most important requirements in industrial applications. Standard MLC flash memory cannot fulfill these requirements anymore, so we extended our CmStick/M product family with the pSLC (pseudo SLC) functionality. We've optimized our firmware algorithms for high read access and long data retention applications at high temperatures. This USB device comes in a small, noble and robust metal case. It contains a smart card chip with a secure memory of about 328 kbyte, which is available for storing thousands of licenses; the additional flash memory, coming in different capacities, can be used as a removable drive or a private, encrypted drive or a CD-ROM partition or a secure, encrypted disk with CodeMeter API read and write control. Combinations of the different disks are also possible.

The basic idea of the revolutionary CodeMeter concept is that licenses can be stored for many products at the same time, with full multi-vendor capabilities.

License Options include: Text (description of an entry), Unit Counter (i.e. number of runs or actually run time of a license), Activation Time (time the license is valid from), Expiration Time (time the license is valid until), Usage Period (starts at first use), Maintenance Period (according to release date), Feature Map (up to 32 modules or versions), License Quantity (concurrent use / floating network licenses), Protected Data / Extended Protected Data (128x256 bytes read-only data), Hidden Data (128x256 bytes only readable with password; usable as secret/private key), Secret Data (128x256 bytes non-readable, only usable as secret/private key), User Data (256 bytes, unsecured), Customer Owned License Information (256 bytes).

Encryption algorithms used in firmware 4.22 or higher: 128 and 256-bit AES, SHA-256, 1024, 2048 and 4096-bit RSA, 224-bit ECC.

The integrated smart card chip fulfills the evaluation level EAL 5+ (Common Criteria certified) and contains a random number generator. The CodeMeter communication is using mass storage device (MSD).

## Technical Specifications

The CodeMeter technology is covered by US 7.145.297 and other patents.

- Interface: USB 3.1 type A, Mass Storage Device (MSD)
- Flash memory configuration:
  - removable drive
  - private, encrypted drive
  - CD-ROM partition
  - secure, encrypted disk
- CodeMeter License memory:
  - Data retention: 10 years at room temperature
  - Data endurance:
    - Unit Counter: up to 500 million decrements
    - Other license parameter: up to 10 million updates to each license

- pSLC-Flash memory:
  - Data retention: > 1 year at 2.5 TBW @85°C (TeraByte written)
  - Data retention: > 3 years at 250 GBW @85°C (GigaByte written)
  - Endurance: 20,000 P/E Cycles (Flash Cell Level)
  - Performance: up to 90 MByte/s write, up to 190 Mbyte/s read
- Power supply: 5 V bus-powered, < 130/180 mA @USB 2.0/USB3.1
- Temperature operating & storage:
  - -40 °C...+ 85°C: USB 2.0, non-condensing
  - -40 °C...+ 70 °C: USB 3.1, non-condensing
- MTBF (Mean Time Between Failures): > 3 Million hours
- Case/Dimensions: Noble metal case, 8 mm x 16 mm x 61.5 mm (without cap 56 mm)
- Cap/Dimensions: 7 mm x 16 mm x 18 mm
- Weight: CmStick 24 g (without cap 19 g)
- Warranty: 36 months

## Certificates

The CmStick/MI is tested and qualified with the following standards:

### CE-Conformity | European Certificates

CmStick/MI is fully compliant with all applicable European regulations.

- 2014/30/EU EMC: Report Bureau Veritas File CE180718D10, 2018-08-15
  - EN55022:2010/AC:2016, IEC/CISPR 32:2015, class B
  - EN55024:2010+A1:2015, IEC/CISPR 24:2010+AMD1:2015
  - EN55032:2015, AS/NZS IEC/CISPR 32:2015
- All CmStick/MI units are fully compliant with EU Directives 2011/65/EU (RoHS), 2015/863/EU (RoHS amendment), SJ/T 11363-2014 (China RoHS2), 2012/19/EU (WEEE), 1907/2006/EC (REACH), 207/2011/EU (PFOS -REACH Annex XVII), 1272/2013/EU (PAH-REACH Annex XVII), and 1272/2013/EU (DINP-REACH Annex XVII).

### International Certificates

- 47 CFR FCC, Part 15, Subpart B (2017), class B: Report Bureau Veritas File FD180718D10
- VCCI Class B ITE: Acceptance No. 2018048608, 2018-09-19
- KCC (South Korea): R-R-XWK-CmStick, 2018-08-08
- BSMI (Taiwan): D43250 RoHS,
- ACMA (RCM): RCM20180091804-C, 2018-09-19

### Other Certificates

- VDE License No. 129382
- C-UL-US listed I.T.E. Accessory 10 WB, E-File 211202, 2018-07-30

The encryption device is only for use with UL Listed PCs (low power system). Meets UL 60950-1 and CSA C22.2 No. 60950-1 Safety of Information Technology Equipment specifications.

### Ordering Information

P/N 1011-03-637: CmStick/MI 8 GB pSLC-Flash bulk  
 P/N 1011-03-638: CmStick/MI 16 GB pSLC-Flash bulk  
 Other memory variants or laser engraving are available on request.

RoHS compliant  
 WEEE-Reg-No:  
 DE 90465365

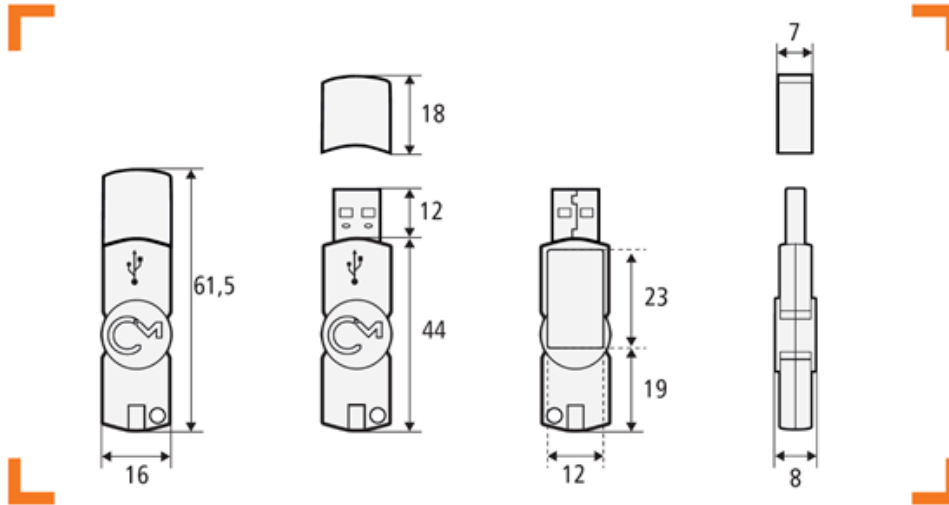


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# Technical Drawing

Article-No:

1 0 1 1 - 0 3 - 6 3 x



All dimensions in millimeter. Subject to change without notice.

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