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CmCard/microSD

Description

CmCard/microSD represents the heart of the CodeMeter Digital Rights Management system in a Secure Digital (SD) Memory Card form factor. It contains a smart card chip with a secure memory of about 328 kByte available for storing thousands of licenses; the additional flash memory can also be configured as a secure, encrypted disk with CodeMeter API read and write control.

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.

The minimum set of License Options includes: Text (description of an entry), Unit Counter (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 time), 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 with serial number 3-3440000 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.

Technical Specifications

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

- Interface: SD Card, SD 2.0, SD 3.0 (UHS-I)
- 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
- Flash memory: 8 GB MLC flash memory, high performance S8 flash controller
    - Data retention: >10 years at room temperature
    - Endurance: 1.2 TBW (terabyte written) (hyMap) based on JEDEC model
    - Performance: up to 20 MB read, up to 18 MB write
- Power supply: 2.7 - 3.6 V bus-powered, typ. 25 mA
- Operating and storage temperature: -40 °C ... + 85 °C, non-condensing
- MTBF (Mean Time Between Failures): > 3 Million hours
- Case dimensions: 11 mm x 15 mm x 0.7 mm
- Weight: 0.5 g

Certificates

CmCard/microSD is tested and qualified in accordance with the following standards:

CE-Conformity | European Certificates

CmCard/microSD is fully compliant with all applicable European regulations.
- 2014/30/EU EMC:
    - EN55022:2010, IEC/CISPR 22:2008 modified
    - EN55024:2010, IEC/CISPR 24:2010
    - EN 55032:2012, AS/NZS CISPR22:2009 + A1:2010
- All CmCards also comply with EU Directives 2011/65/EU (RoHS), 2015/863/EU (RoHS amendment), 2012/19/EU (WEEE), 1907/2006/EC (REACH), 207/2011/EU (PFOS -REACH Annex XVII)

International Certificates
- FCC 47 CFR, Part 15, Subpart B (2013)
- VCCI Class B ITE
- KCC (South Korea)

Other Certificates
- VDE License No. 129382
- C-UL-US listed I.T.E. Accessory 10 WB, E-File 211202

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

Ordering Information
P/N 1041-03-501: CmCard/microSD 8 GB bulk
Variants with different memory capacities available on demand.

RoHS compliant
WEEE-Reg-No:
DE 90465365
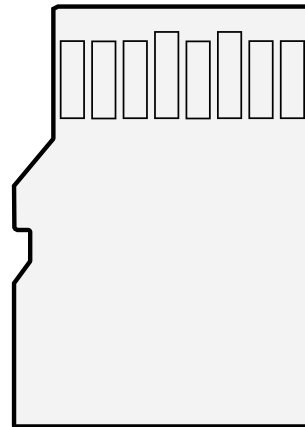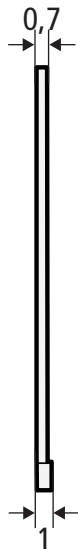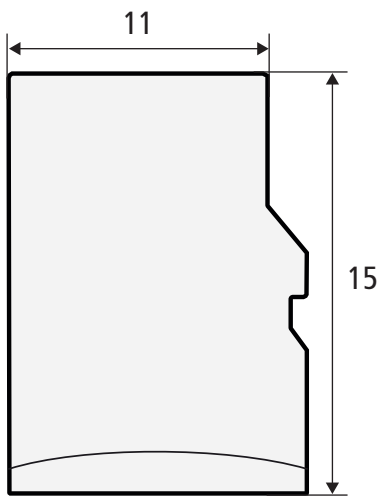
All dimensions in millimeter. Subject to change without notice.

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Technical Drawing

RoHS compliant
WEEE-Reg-No:
DE 90465365

All dimensions in
millimeter. Subject to
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