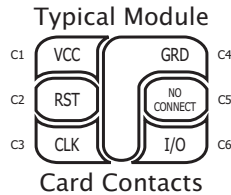


CLXSA002KB5 Smart Card

DESCRIPTION

The CardLogix CLXSA002KB5 Smart Card incorporates a serial EEPROM memory organized 256 x 8 bit. This card is for advanced, low power applications such as secure record storage and gives the systems designer flexibility through the use of many new user-programmable features.



This card features programmable write protection for each byte. Reading of the entire memory array is always possible. The memory can be written and erased byte by byte. Input data and the contents of the addressed byte are compared so that when writing to the card for the first time, only 0's are written. Erasing is only possible byte-wise, even if only one bit is to be erased. Bytes may be written individually. Each byte can be write-/erase-protected individually by setting a protect bit. The protect bit is one time programmable only and can not be erased.

In addition to the above functions, the CLXSA002KB5 has security code logic which controls write/erase access to the memory. For this purpose, the card contains a 4-byte security memory with an Error Counter EC (bit 0 to bit 2) and 3 bytes reference data. These 3 bytes, as a whole, comprise the Programmable Security Code (PSC). After power-on, the entire memory--except for the reference data--can only be read. After three successive unsuccessful comparisons of the verification data, the EC blocks any subsequent attempts and prevents any further writes or erases to the card.

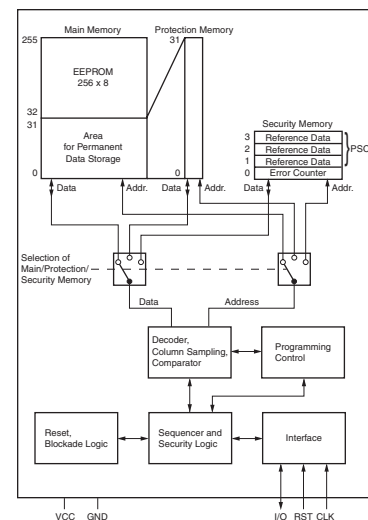
The CLXSA002KB5 is available in the ISO 7816, CR-80, SIM/SAM, and Keychain form factors.

NOTE: Sample Access Code: FFFFFFFF

FEATURES

- 256 x 8-bit user EEPROM organization
- Byte-wise addressing
- Irreversible byte-wise write protection of lowest 32 addresses (byte 0 ... 31)
- 32 x 1-bit protected memory organization
- Two-wire bus protocol (Synchronous)
- End of processing indication
- Answer-to-Reset per ISO standard 7816-3
- Programming time 2.5 ms per byte for both erasing and writing
- Endurance: 10,000 erase/write cycles guaranteed
- Data retention > 10 years
- Electrostatic discharge protection to 4000 V typical
- Contact configuration and serial interface in accordance with ISO standard 7816 (synchronous transmission)
- Data can only be written after entry of the correct 3 byte programmable security code (security memory).

BLOCK DIAGRAM



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