rfid as a feature

skyetek

SkyeModule M2

Secure 13.56MHz OEM Reader/Writer

APPLICATIONS:

- Contactless Payment
- ePedigree
- Kiosk / Vending
- Encrypted Authentication

FEATURES:

- SkyeModule Compatibility
- Software Adjustable Host Interfaces: UART (TTL), SPI, USB
- 4 GPIO Capable
- On-board ISO 7816 Slot with I/O Lines and SW Support for Additional Slot
- Simple & Intuitive API

BENEFITS:

- Common Size, Connection Method, and Software Interface with the SkyeModule M9 UHF Reader
- Easy to Embed
- Drive Peripherals (PLC, LED, Sensor)
- Removable Storage of Eencryption Algorithms and Key Storage
- Fast Integration /Time to Market

Product Overview

The SkyeModule™ M2 is a state-of-the-art secure HF RFID reader platform that provides several options for the implementation of cryptographic functions. The M2 is a 13.56MHz OEM module capable of reading and writing to transponders based on ISO 14443 (parts 2, 3, and 4) and ISO 15693 air-interface protocols. Support for security features of MiFare, in addition to standardized encryption algorithms (DES, 3DES, and AES), secure hash functions (SHA and MD5), and an internal Pseudo-Random Number Generator (PRNG) offers industry-leading security functions. An ISO 7816 smart card slot allows for supplementary security protocols and key storage through a replaceable smart card (SAM) while an interface is supplied for the control of an off-board additional ISO 7816 card. The M2 features an on-board antenna optimized to support the data rates of 106, 212, and 424 kbps. A standard 50 Ω antenna output offers the ability to attach an external antenna to enable optimization of read range/ rate. The M2 has three host-interface options USB, UART (TTL) and SPI which are software selectable to facilitate both loosely and tightly coupled integrations. The M2 has 4 programmable GPIO pins for I/O connections to peripherals. Serial data rates are adjustable from 4.8 to 115.2 kbps. Field upgradeable firmware provides forward compatibility for adding future tag protocols, security features, and customized enhancements.

Applications

The SkyeModule M2 has been created specifically for contactless transactions requiring a high level of security with the flexibility to encompass a variety of vertical markets. The M2 offers a simple platform for migration from contact smart card technology to contactless smart card technology.

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About Skyetek:

SkyeTek, Inc., maker of ReaderWare™, is the leading supplier of RFID reader software and reference designs that enable the pervasive adoption of RFID technology. SkyeTek's Tagnostic™ reader technology works with most industry standard tags and smart labels, its low power requirements and a small form factor make it the optimal choice for embedding into new or existing products. SkyeTek's RFID reader technology is available in several formats including reader modules, hardware reference designs, and the ReaderWare™ software suite. SkyeTek markets to OEM customers in targeted vertical markets with several high-volume licensing options available. For more information about SkyeTek, visit **www.skyetek.com** or call **720-565-0441**.

SkyeTek is based in Colorado.
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Transponder Support[1]

Product Name	Memory (bits)	Manufacturer	Air-Interface[1]
Mifare Ultralight	0.5k	Philips	ISO14443A
Mifare	1k, 4k	Philips, Infineon	ISO14443A
DESFire	32k	Philips	ISO14443A
ProX	4k, 8k, 16k	Philips	ISO14443A
SmartMX	36k, 72k	Philips	ISO14443A
SR176	176	ST Microelectronics	ISO14443B
AT88RF020	2K	Atmel	ISO14443B
Tag-It HF-I	2K	Texas Instruments	ISO15693
I-Code SLI(2)	1K	Philips	ISO15693
My-d	2k,10K	Infineon	ISO15693
LRI512	0.5K	ST Microelectronics	ISO15693

[1]See transponder datasheets for complete details

Frequency
13.56 MHz +/- 7 kHz

Physical
Length: 59mm
Width: 36mm
Height: 5mm (9mm with ISO 7816 slot)

Host Communication Interfaces/ Data Rates
RS232 (Serial UART): 4.8-115.2 kbps
SPI: up to 5MHz
USB: 2.0 Full Speed (12 Mb/s)

Supply Voltage
5.0 V

Compliance
FCC Part 15.225 (pending)
EN 300 330 (pending)
RoHS

Transponder Communication Rate
ISO 14443A: 106, 212, 424 kbps
ISO 14443B: 106 kbps
ISO 15693: 26 kbps

Accessories
Host Interface board: RS232 circuitry and connector, USB type B connector, an integrated antenna, and external antenna MMCX connector (95mmx95mm)

Current Consumption
Sleep Mode- 60µA
Idle Mode- 10mA
Scan Mode- 200mA

Antenna Options
Internal or 50 Ω output for external connection

Effective Range
Internal Antenna, 48 mm x 76 mm inlay, 14443 = 7cm
External Antenna, 48 mm x 76 mm inlay, 14443 = 14cm
(Individual results will vary with environment)

Other Offerings from SkyeTek

SkyeTek provides a variety of reader technology at both 13.56 MHz (HF) and 860- 960 MHz (UHF). ReaderDNA HF, a comprehensive reference design, is available for component level integration of the technology including complete design files, BOM, and test fixture. ReaderWare, the embedded software intelligence of the RFID reader, is available to ReaderDNA customers. The SkyeModule M8 is a low power, compact, UHF reader compatible with EPC and ISO transponders. All SkyeModules are controlled via the SkyeTek Protocol, a powerful but simple communication protocol that grants the user access to all features of an RFID transponder. Further, they have been designed with flexible and modular embedded software that allows one to select only the desired features.

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