66mm L x 36mm W x 5mm H

Features & Benefits:

- Fast integration and time-to-market

- Unparalleled investment protection

- Cost-effective and highly scalable

- Miniscule footprint

- Peripheral devices for encryption algorithms and key storage

- Common Blade technology for maximum design and solution flexibility

- Greatest tag compatibility, with TagIQ

- Minimal power consumption and maximum read range

- Software Adjustable Host Interfaces: UART (TTL), SPI, USB, I²C

- 7 General Purpose I/O Pins

- Simple and intuitive API

Multi-Protocol, Secure HF RFID Reader

ThingMagic M2 combines High Frequency (HF) tag and protocol support and outstanding performance in an embedded reader/writer module. With industry-leading privacy protection and anti-counterfeiting/anti-tampering technology, the M2 includes standards-based security that is used in the defense and financial services industries. M2 can read and write to transponders based on the ISO14443 (parts 2, 3, and 4) and ISO15693 air interface and communications standards. It also supports standard encryption algorithms (DES, 3DES, and AES), secure functions (SHA and MD5), and an internal Pseudo-Random Number Generator (PRNG).

ThingMagic M2 is performance-optimized for best-in-class output power (200mW), noise reduction, and power management. M2 uses advanced Universal Reader Architecture and SkyeAPI to abstract frequency, protocol, and tag selection and automate functions from the application. With advanced tag technology, it recognizes unique characteristics of each tag to maximize read/write performance.

Its small size enables this module to fit into almost any new or existing Original Equipment Manufacturer (OEM) design.

Applications

- Product Authentication and Anti-Counterfeiting
- Handheld Reading/Encoding
- Inventory Management, Item Level Tagging
- Consumables
- Patron Management
- Asset Tracking
- Label Printing/Encoding

JADAK
A Novanta Company

Ordering Information	
Module-CF	SM-M2-CF
Module-MH	SM-M2-MH
M2 Evaluation Kit	EV-M2-00
Physical	
Dimensions	CF: 66mm length, 36mm width, 5mm height; MH: 70mm length, 53mm width, 9mm height
Weight	CF: 8.7 grams; MH: 10.5 grams
Frequency	13.56 MHz +/- 7 kHz

Air Interface	Manufacturer	Product Family	Tags
ISO 15693	NXP TagSys ST Micro Infineon Fujitsu Texas Instruments EM Micro	ICODE 370 Series Long Range Vicinity FerVID Tag-It EM Series	SLIX-/S/L, SLI-/S/L 370L-/HL/DL, 370S-DM LRI/1k/2k, LRIS/2k/64k SRF55V/01P/02P/10P/02S/10S MB89R11/9B/8C Standard, Pro, Plus EM4/033/133/233
ISO 14443A	NXP Verayo	MIFARE Vera	Classic/1k/4k, Ultralight/C, DESFire EV1 M1, M4
ISO 14443B	ST Micro	Short Range	SRI/2k/4k/512, SRIX4k, SRT512

Antenna	
Options	Internal or 50Ω MMCX (female) output for external connection
External Range Vicinity	16 cm
External Range Proximity	8 cm
Data/Control Interface	
Peripheral I/O Connection	7 programmable GPIO pins, ISO 7816 smart card slot (optional)
Power Consumption	
Sleep Mode:	4 mA
Idle Mode:	75 mA
Scan Mode:	175 mA
Host Interface, Data Rates	
UART (TTL):	9.6-115.2 kbps
SPI:	Mode 1 up to 4 Mb/s
USB:	2.0 Full Speed 12 Mb/s
I²C:	100/400 kHz
Transponder	
Communication Rate	ISO 14443A: 106 kbps ISO 14443B: 106 kbps ISO 15693: 26 kbps
Air Interface Protocols	
	ISO 14443 A/B (parts 2-4) ISO 15693
Compliance	
FCC Part 15.225 EN 300-330, EN301-489, EN 61000-4-3, RoHS AS/NZS 4268:2003 DGT LP002 HKTA 1035 IDA TS SRD ETSI EN 300-330 (RED 2014/53/EU)	
Temperature	
Operating Temp	-10°C to 70°C
Storage Temp.	-20°C to 85°C

Software & Security
SkyeAPI C/.NET API
Skyeware 4
SkyeOS
SkyeSecurity Encryption DES,3DES, AES, MIFRARE and CryptoRF Support
SkyeSecurity Clone/Tamper Protection
Specifications subject to change without notice.