40mm L x 38mm W x 5mm H

Features & Benefits:

- Fast integration and time-to-market

- Unparalleled investment protection

- Cost-effective and highly scalable

- Miniscule footprint

- 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

- 4 General Purpose I/O Pins

- Simple and intuitive API

Low Cost, Ultra Low Power HF RFID Reader

ThingMagic Gemini marks the next generation of HF reader modules. The Gemini is a low-cost, ultra-low power, MIFARE and NFC reader/writer module. With cutting edge ARM Cortex microcontroller and the latest HF transceiver technology, coupled with the reader's intelligent operating system, this is the most versatile HF RFID module at this price point. Manufactured in accordance with ISO 9001 and ISO 13485 standards, quality is a top priority for all ThingMagic modules.

Supported security features, like mutually authenticated triple DES encryption, offer a low-cost and robust method of authentication for consumables, making the Gemini ideal for medical, ticketing, security or safety applications. At about the size of a matchbook, this module can fit into almost any new or existing OEM design. The Gemini is also well suited for battery powered and other power sensitive applications, due to its low power features, including software stand-by mode and deep sleep mode. In addition, the wide input voltage range and highly efficient switching power design make this module perfect for battery-powered applications right off the shelf.

Gemini module is one of the first to support not only the extremely popular NFC tags, but also NFC peer-to-peer and tag emulation modes as defined by ISO18092. This unique ability allows for active data passing between NFC-enabled smart phones, tablets and other devices.

The Gemini is the same size and form factor as the M1. The optional connector is updated to match the Common Blade Interface and can connect to the same interface board as any of the Common Blade devices. In addition, a micro USB port is available for direct connection to a USB host, as well as an antenna output for an external antenna.

Applications

- Medical Equipment for Healthcare and Pharmaceutical Industries
- Industrial Equipment
- Kiosks and Vending Machines
- Mobile Devices, including Printers, Handhelds, and Sensor Networks

Ordering Information			
Module, USB Version	SM-GM-UB		
Module, MH Version	SM-GM-MH		
Gemini Evaluation Kit	EV-GM-00		
Gemini Developers Kit	DK-GM-00		
Physical			
Dimensions	40mm length, 38mm width, 5mm height		
Weight	6.5 grams		
Frequency	13.56 MHz +/- 7 kHz		
Air Interface	**Manufacturer**	**Product Family**	**Tags**
ISO 14443A	NXP	MIFARE	Mifare Classic 1K/4K, Ultralight/C, Mifare PLUS 2K/4K*, Mifare DESFire**
ISO 14443A	NXP	NFC	NTAG203
ISO 14443A	Kovio	Infineon	NFC Barcode, 2K
* Planned for future support **Select Only			
RF Interface			
Antenna Options	Internal or 50Ω output for external connection		
Internal Antenna Range	up to 5cm*		
External Antenna Range	up to 8cm* *Read range and rate are subject to specific environmental conditions.		
Data/Control Interface			
Peripheral I/O Connection	4 programmable GPIO pins		
Power Consumption			
Sleep Mode:	10µA		
Idle Mode:	10 mA		
Scan Mode:	120 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		
Supply Voltage			
	1.8-5.5V		
Transponder			
Communication Rate	ISO 14443A: 106 kbps ISO 14443B: 106 kbps		
Air Interface Protocols			
	ISO 14443 A/B (parts 2-4) ISO 18092		
Compliance			
	FCC Part 15 Modular Approval AC-17148 IC RSS-210 (Industry Canada) ETSI EN 300-330 (RED 2014/53/EU)		
Temperature			
Operating	-10°C to 70°C		
Storage	-20°C to 85°C		
Specifications subject to change without notice.			

ABOUT JADAK:

JADAK, a business unit of Novanta, is a market leader in machine vision, RFID, barcode, printing, and color and light measurement products and services for original equipment manufacturers. The company designs and manufactures embedded detection and analysis solutions that help customers solve unique inspection, tracking, scanning and documenting. The company is ISO 9001 and ISO 13485 registered.

Novanta is a trusted technology partner to OEMs in the medical and advanced industrial technology markets, with deep proprietary expertise in photonics, vision and precision motion technologies.

ThingMagic is the JADAK line of RFID products.