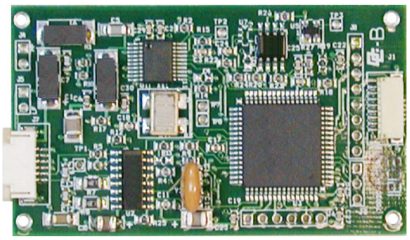
Product Preview

MF Reader System Series 4000
S4100 Multi-Function Reader Module



Description:

Texas Instruments' RFid S4100 Multi-Function Reader (multi frequency and protocol) module (MFR) is a low-cost high performance module offering compatibility across multiple platforms and ease of integration.

This multi-protocol reader allows quick and easy integration into new equipment designs and retro-fit into existing products.

With support for 134.2 KHz and 13.56 MHz contactless technologies, the MFR module is ideal for any contactless application, and makes transitioning from Low-Frequency to High-Frequency products painless and transparent.

Modular firmware architecture provides for system scalability.

Specifications:

Part number	*RF-MGR-MNMN*
Operating Frequency (HF)	13.56 MHz
Operating Frequency (LF)	134.2 kHz
Supported Transponders (HF)	TI Tag-it™ inlays and transponders ISO 15693 compliant inlays and transponders ISO 14443 Type A/B compliant inlays and transponders
Supported Transponders (LF)	TI LF transponders (DST, R/W & R/O)
Supported ISO Standards	ISO 15693 ISO 14443 Type A & B
Supply Voltage	Module: 5 VDC +/- 5% (Regulated)
Current Consumption (Typ-mA)	Receive 60 mA, Transmit 160 mA
Transmitter Power (HF)	200 mW
Transmitter Peak-Current (LF)	1.1 Amps Peak
Antenna Impedance (HF)	50 Ohms @ 13.56 MHz
Antenna Impedance (LF)	440 µH (Approximately)
Antenna Connection	Independent on-board LF & HF Connections
User Interface response	Three TTL outputs:
Communication Interface	Module: USART TTL output
Synchronization	Protocol synchronization via host
Approximate Dimensions:	PWB: 2.75" x 1.5" x 0.4" (69 mm x 38 mm x 1 mm)
Approximate Weight	Module: 1.2 Oz (34 g)

Key Features:

- TTL Serial I/O
- 3 TTL User Feedback Outputs
- Dual Frequency
  - 134.4KHz
  - 13.56 MHz
- Multi-Protocol
  - TI RFid LF Products
  - TI RFid HF Tag-It
  - ISO 15693
  - ISO 14443 A/B
- Custom Firmware Downloadable
- Scalability/Modular Architecture

Applications:

- Access Control
- Vending Machines
- Point of Sale Terminals
- Printers
- Wireless Payments
- Handheld Devices

Figure 1. Typical Application:

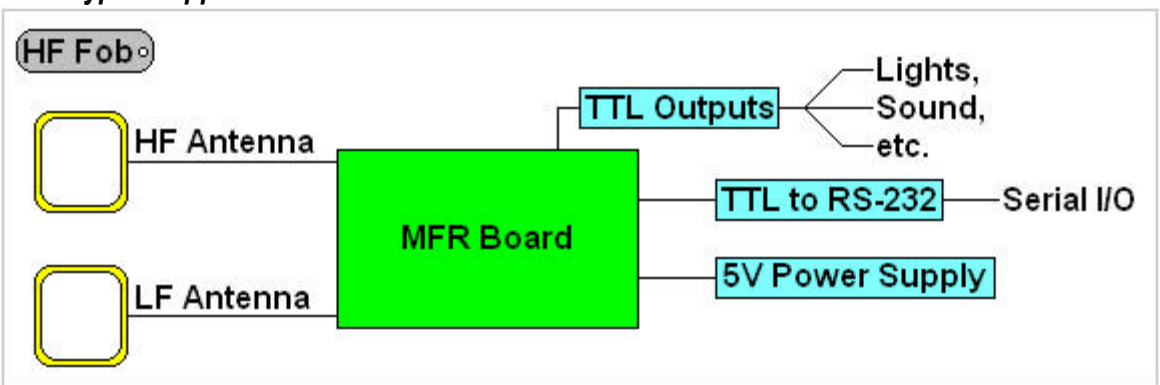
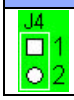


Figure 2. Connector Pin-outs:

Connector J5

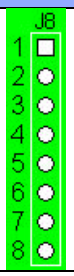
Pin	LF Antenna
1	High
2	Low

Connector J4



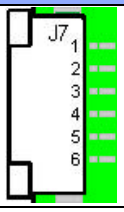
Pin	HF Antenna
1	50 Ω
2	Ground

Connector J8



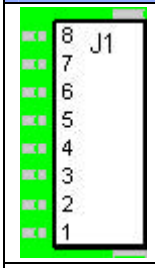
Pin	Function
1	5 V Input (Regulated)
2	Ground
3	TTL Output 3
4	TTL Output 2
5	No Connection
6	TTL Output 1
7	TTL Serial, TX Data
8	TTL Serial, RX Data

Connector J7

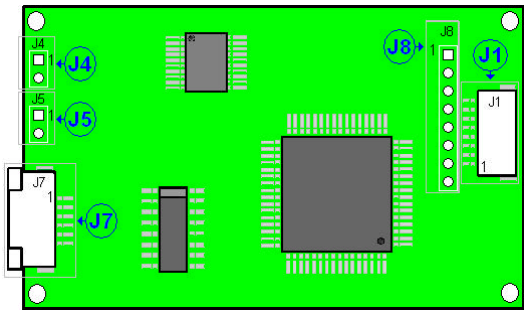


Pin	Function
1	HF Antenna 50 Ω
2	HF Antenna Ground
3	TTL Output 1
4	TTL Output 2
5	LF Antenna Low
6	LF Antenna High
J7 Connector	MOLEX™ 52207-0690

Connector J1



Pin	Function
1	5 V Input (Regulated)
2	Ground
3	TTL Output 3
4	TTL Output 2
5	No Connection
6	TTL Output 1
7	TTL Serial, TX Data
8	TTL Serial, RX Data
Mating Connector	Oupiin™ 4472 Housing



Note:
TTL Outputs 1, 2, and 3 can sink-source 20 mA @ 5 V.

Figure 3. Block Diagram:

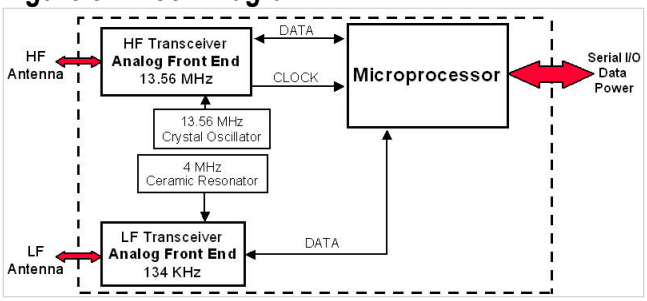
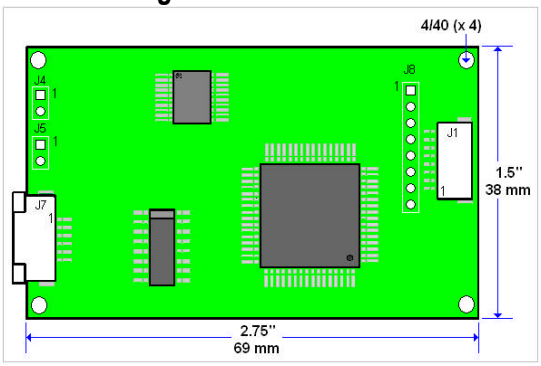


Figure 4. Dimensions and Mounting Holes:



For more information, contact the sales office or distributor nearest you. This contact information, and the most up-to-date specifications for this data sheet can be found on our web site at: **http://www.ti-rfid.com**