



## INfinity 110

Feature-rich, multi-protocol  
High Frequency RFID  
OEM Reader Module

### FEATURES

- Supports 13.56MHz global standard
- 200 mW RF output power
- Multiple tag protocol support
- 3.3v power requirement enables usage in low power and battery operated devices
- Secure firmware download facility via serial interface allowing field upgrades
- FCC and ETSI pre-screened, ROHS compliant

### SUPPORTED TAG PROTOCOLS

- ISO 15693
- ISO 14443 A & B
- ISO 18000-3 Mode 1
- Inside PicoTag™
- NXP EPC
- NXP UID
- NXP I-CODE
- NXP Mifare Ultralite
- TI-RFID™ Tag-it™

### Overview

The INfinity 110 reader module is designed for high frequency embedded RFID applications. Built on the Texas Instruments' TRF796x HF reader chip platform operating at 13.56MHz, this product supports more tag protocols than competitive products and is compatible with numerous global standards.

The IN110 builds upon Sirit's legacy of expertise in high frequency OEM RFID reader design. Its compact footprint allows for easy integration into RFID devices such as handheld readers, mobile or stationary printers, point-of-sale terminals, as well as other devices incorporating embedded RFID functionality. The IN110 lowers the barrier for adding RFID functionality into many types of devices and opens up new possibilities for embedded RFID applications.



The INfinity 110 has been pre-tested to be compliant with FCC part 15 and ETSI EN300-330 specifications and features low power consumption with a 3.3 volt power supply requirement. This helps facilitate integration into various low power or battery operated mobile devices. A development kit for the IN110 module is available and includes a reader board, reference antenna, sample applications and software drivers.

### Applications

Typical applications for the IN110 include security and access control, electronic payments, ticketing, e-passports, document tracking, patron management, product authentication, asset tracking, and non-life critical medical uses such as patient management and pharmaceuticals tracking.

# INfinity 110

## 13.56 MHz RFID Reader Module



### Performance Characteristics

Frequency:	HF Band, 13.56 MHz
Supported Transponders:	ISO 15693, ISO 14443A & B, ISO 18000-3 Mode 1, Inside PicoTag, NXP: EPC, UID, I*CODE, Mifare Ultralite, TI-Tag-it
Communications Protocol:	Serial packet based with proprietary error detection
Communications Parameters:	115,000 (default), 57600, 38400, 19200, 9600
Communications Signal Level:	TTL level (factory set), RS-232 (optional)
Interface Connector:	Single 10-way Molex connector for power and communications
Antenna Type:	External. Impedance: 50 ohms at 13.56 MHz, Q: 10 - 30
Upgradeable Firmware:	Yes

### Physical Characteristics

Dimensions (LxWxD):	35.0 x 35.0 x 4.0 mm (1.38 x 1.38 x 0.16 in.)
Weight:	7 g (0.25 oz.)
Mounting:	4 corner-mounted holes of 3.18 mm (0.25 in.)

### Environment

Operating Temperature:	-20°C to +60°C (-4°F to 140°F)
Storage Temperature:	-40°C to +125°C (-40°F to 257°F)
Relative Humidity:	80%, non-condensing
Power:	
Input Voltage:	3.3 VDC ± 5%, <50 mV ripple
Active Current:	300 mA (antenna dependent)
Standby Current:	60 mA
Idle:	40 mA
RF Output Power:	200 mW max
Regulatory:	Pre-screened for: FCC 47 CFG Ch. 1 Part 15, EN 300 330-1 v1.5.1, EN 300 330-2 v1.3.1, EN 300 489-3



INfinity 110 HF Reader Module

### About Sirit Inc.

Sirit Inc. (TSX: SI) is a leading provider of Radio Frequency Identification (RFID) reader technology to OEMs and solution providers worldwide. Harnessing the power of Sirit's enabling-RFID technology, customers are able to more rapidly bring high quality RFID solutions to the market with reduced initial engineering costs. Sirit's products are built on more than 13 years of RF domain expertise addressing multiple frequencies (LF/HF/UHF), multiple protocols and are compliant with global standards. Sirit's broad portfolio of products and capabilities are easily customized to address new and traditional RFID market applications including Supply Chain & Logistics, Cashless Payment, Access Control, Automatic Vehicle Identification, Inventory Control & Management, Asset Tracking and Product Authentication. For more information, visit [www.sirit.com](http://www.sirit.com).

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The "RFID by Sirit" symbol signifies that Sirit Inc.'s high quality RFID reader technology resides within this product.

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