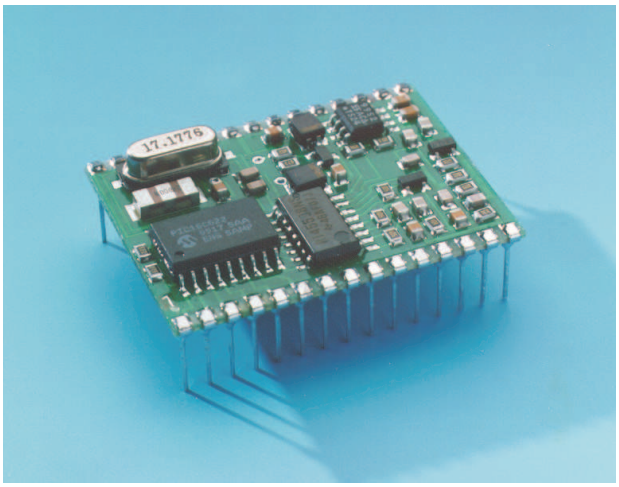
SERIES 2000 MICRO READER

FEATURES

- **Best in Class Performance Through Patented HDX Technology**
- **RS232 Interface (5 Volt Logic Level)**
- **Multi Purpose I/Os**
- **Proven in Harsh Industrial Environments**
- **Easy to Design in and Use**

APPLICATIONS

- **Access Control**
- **Vehicle Identification**
- **Container Tracking**
- **Asset Management**
- **Waste Management**



DESCRIPTION

The Series 2000 Micro Reader is an intelligent module that provides all RF and control functions in order to communicate with 134.2 kHz HDX/FSK transponders and a host application. It is designed as a 30-pin Dual in-line printed circuit board. The Series 2000 Micro Reader is equipped with a serial communication interface (RS232, 5 Volt level) and works in combination with a 47 µH low-Q antenna that eliminates the need to tune the system to resonance. It converts the received RF signals to the transponder's identification number, checks the validity and handles the conversion to the RS232 serial interface protocol.

The RI-STU-MRD1 is well suited for usage in a broad range of applications including, but not limited to, access control, vehicle identification, container tracking, asset management and waste management applications.

ABSOLUTE MAXIMUM RATINGS(1)

over operating free-air temperature range (unless otherwise noted)

	RI-STU-MRD1	UNIT
Operating Temperature	–20 to +50	°C
Storage Temperature	–40 to +85	°C

(1) Stresses beyond those listed under *Absolute Maximum Ratings* may cause permanent damage to the device. These are stress ratings only, and functional operation of the device at these or any other conditions beyond those indicated under *Recommended Operating Conditions* is not implied. Exposure to absolute-maximum-rated conditions for extended periods may affect device reliability.

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OPERATING CHARACTERISTICS

over operating free-air temperature range (unless otherwise noted)

PARAMETER	PART NUMBER	UNIT
	RI-STU-MRD1	
Relative Humidity	<97% non-condensing, IEC 68-2-30 Test Db, 21 cycles	
RF Transmit Frequency	134.2	kHz
Power Supply	5 Vdc, regulated	
Typical Current Consumption	Active mode: 100 Idle mode: 5	mA
Host Communication	Point-to-Point	
Communications Parameters	9600 baud, 8 data bits, no parity, 1 start bit, 1 stop bit	
Communications Protocol	Micro Reader specific communications protocol with Xon / Xoff handshake	
Communications Interface	Serial Communications Interface (SCI), TTL voltage level	
Reader Interference Protection	Wireless and wired synchronization	
Antenna	47 µH, Q 10 – 20	
Typical Read Time	Without synchronization: 100 With synchronization: 120	ms
Transponder Types	134.2 HDX/FSK	kHz
Package	30-pin Dual-in-line for plug- or to solder-in	
Reference Documentation	11-06-21-027 (SCBU027) Reference Guide S2000 Reader System Micro Reader RI-STU-MRD1	
Dimensions	$(38.3 \times 29.3 \times 13.5) \pm 0.5$	mm
Weight	approx. 5	g
Approval	CE, FCC	

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