Rapid Smartcard Solutionz

rapid **RF**™

Product Specification - rapidRF 6000 Reader

The rapidRF 6000 is a versatile contactless smartcard reader that can be branded and integrated for a wide range of global solutions. This small yet highly visible enclosure is suitable for outdoor use, is designed for rapid integration into a system, easily retrofitts to existing devices, meets safety standards and supports various implementations of ISO 14443.

rapidRF 6000		
	6000 Series	**6000s Series**
Interface	LON	LON
Serial	N/A	2xRS232 and /or RS485 Serial I/O ports
Options	I/O control	LCD, printer, card reader, I/O control

The 6000 reader allows for a host of implementation ideas via a simple presentation of a customer's contactless smartcard, from carwashes and payment at fuel pumps, to security access and transportation payment. This rapidRF reader offers a flexible, cost-effective solution to providing the convenience and versatility of contactless smartcard benefits to any environment.

Features
  ➢ Compact, rugged design suited to outdoor use
  ➢ Easily fitted to existing equipment
  ➢ Readily identifiable and easy to use with simple LED display for customer feedback
  ➢ Communicates with all ISO 14443 technologies
  ➢ Read range 40 to 50 mm (depending on locality conditions)
  ➢ Fast read/write process allows customer smartcard details to be updated during a single presentation
  ➢ Meets requirements for electrical and radio devices operated in a hazardous goods zone
  ➢ Incorporates security features
  ➢ Flash-programmable operating software can be updated over a network

Benefits
  ➢ A simple and elegant board design created using advanced engineering and current technology
  ➢ Implementation that creates a superior read performance
  ➢ An embedded processor allowing for complete read/write transaction processing without external intervention
  ➢ Software that can be customised for specific transaction processing for particular customer transaction requirements. An example of this would be for the various smartcard applications.

rapidRF System Solution
The rapidRF 6000 reader forms part of a complete retail RFID solution from Rapid Smartcard Solutionz, with a LonWorks network and site controller interface, customer smartcard encoding and fulfillment options available. This system can be used to replace or coexist with existing contact smartcard and magnetic stripe card reader, pin pad and receipt printer terminals.

The RF Manager, Encoding Station and Fulfillment system (including ODBC database) can be fully customised to regional banking, operating and network requirements. Rapid Smartcard Solutionz is able to provide development of an integrated RFID turnkey solution, which can be implemented quickly with minimum disruption to an installed network.

Technical Data
Open standard IFSF protocol LONWORKS™ network architecture
Emitted power less than 50 dBmV/m
Integrated passive aerial operating frequency 13.56Mhz
Operating distance for transponders 50 to 100mm (depends on aerial size)
Operating temperature (ambient) -20°C to +70°C
Dimensions 116 x 85 x 20mm
Splash resistant to water
UV and chemical resistance rating UL94V-O
Supports EMV recognised ISO 14443 type A and B

Electrical
Power supply 12V
Source current typically 200mA (max. 500mA)

Rapid Smartcard
Solutionz Reader supplied
with connector for
external retrofitting

Components
High-speed embedded processor
RF interface
LED display
On-chip memory - 16 Kbytes RAM and 32 Kbytes ROM
Network communications port
Service pin for remote identification and diagnostics
Unique 48-bit internal serial number stored on every device
Programmable I/O
2xRS232 and/or RS485 Serial I/O ports
Differential mode RS485 or 78kbps free-form topology network to IFSF standard

Transponder – Reader Interface
Data encryption/authentication between reader and transponder - three-pass mutual authentication compliant with ISO/IEC 9798-2:1994(E)
2x serial RS-232C and/or RS-485 configurable as requested
General purpose I/O for other equipment control

Models
The rapidRF reader is customisable within the following areas:
  ➢ Colour and front panel LED display cover
  ➢ Electrical connections/terminations
  ➢ ABS plastic enclosure for external retro-fit attachment or vacuum formed for building into a dispenser to customer specifications
  ➢ OEM unit (PCB) engineered for integration into dispensers or terminals to customer specifications

Ordering Information
Installation requirements depend on existing equipment. A full range of RFID System products are available within the rapidRF product range from Rapid Smartcard Solutionz. Please contact us to discuss your requirements.