Dual-mode Barcode and RFID reader

Overview

This dual technology module combines a high performance laser scan engine with a class-leading RFID engine to provide a single unit capable of reading industry standard bar code symbologies and most leading 13.56MHz RFID tags and smart labels.

Physically and electrically (where possible) compatible with bar code only engines manufactured by Symbol, the OEM186 product can be used as a direct replacement by system integrators and OEMs who wish to enable existing products with the two identification technologies.

Communication with the module is achieved through a powerful serial protocol, which supports configuration, status and data interchange with a host controller through a single connection. For convenience and compatibility, power and digital signals are also connected via the same cable.

Applications

Typical applications for this product include: industrial hand-held terminals for supply chain applications, robotics, point of Sale terminals, vending machines and medical equipment.

OEM 186

Tags supported:

- ISO15693
- Gemplus FOLIO
- Inside PicoTag
- Omron V720
- Philips I.CODE
- Microchip MCRF355, MCRF360
- TI*RFID Tag-it

Bar codes supported:

- UPC/EAN
- Code 39
- Code 93
- Interleaved 2 of 5
- Discrete 2 of 5
- USS-128
- Codabar
- MSI
- UCC/EAN 128
- ISBT-128
- TriOptic Code 39

Features

- **Supports most leading 13.56MHz smart labels**
  Single components reads and writes tags in any environment.
- **Reads most industry-standard bar code symbologies**
  Retains compatibility with existing bar code system.
- **Integrated SE-923 scan engine**
  Adds the reliability of Symbol bar code recognition
- **Single connection to serial interface and power supply**
  Provides an easy way to connect to existing devices
- **Secure firmware download facility via the serial interface**
  Helps to maintain future firmware upgrades
- **Shares barcode physical and electrical specificaitons**
  No tooling or product alterations are required
- **Powerful, fast serial communication protocol**
  Industry-standard protocol for connecting to electrical devices

RFID
by sirit

OEM 186/187
13.56 MHz Dual Technology Scan Engine

Electrical Specifications

Processor:	Motorola MC68HC908GP32
Memory:	32kbytes flash, 512bytes RAM
Protocol:	Serial packet based with error detection
Baud rates:	Selectable between 300 to 19,200 bps
Signal:	TTL level
Interface:	12-way ZIF connector for power and comms
Voltage:	+5V ±0.2V DC, less than 50mV ripple
Active current:	170mA
Antenna type:	50ohm load, Q in range 10 to 25
Output power:	Typically 120mW
Frequency:	13.56MHz
Read range:	0-10cm (4")
*Approvals:	EN 300 330-1 (radio type approval), EN 300 489-3 (EMC) Pre compliance for FCC part 15

Physical Specifications

Module outline(LxWxD):	38.00mm x 26.00mm x 17.00mm (1.496"x1.024"x0.6693")
Mounting:	Single Tapped M2 screw hole with locating pin
Weight:	17g (0.60ounces)
Operating temperature:	with barcode engine -20ºC to +55ºC (-4ºF to 131ºF) without barcode engine -20ºC to +70ºC (-4ºF to 158ºF)
Storage temperature:	with barcode engine -40ºC to +60ºC (-40ºF to 140ºF) without barcode engine -40ºC to +85ºC (-40ºF to 185ºF)
Relative humidity:	80%

Ordering information

Model number:	OEM186	Barcode scan engine fitted
	OEM 187	No barcode scan engine

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