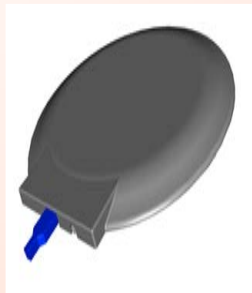


Mu Flat Panel Reader

Serial Interface

The RS232C compatible interface of the PC based reader is via a high speed serial interface running at 38400bps. The data format is 8 bits, parity 1 (even) and one stop bit.

The interface is fully compliant with Microsoft Windows plug and play standards.



USB Interface

The USB interface is fully compliant with V1.1 and operates in full speed mode (1.5Mbps).



Read Performance

Maximum reading range is around 30cm with non collision mu-chip and around 40cm with anti-collision Version

Power Interface

The power requirement is 12Vdc @ 1.25A(max). The supplied 230Vac mains switching power supply is capable of providing 1.25A at 12Vdc. Since the power requirement is in excess of 100mA it is not possible to run the reader via the USB cable and the external power supply MUST be used.

General Description

The Mu Solutions 2.45 GHz flat panel reader (FP2) is rated at 500 Mw EIRP with a 12V DC regulated power supply. It is compatible with both the current (non collision) mu-chip version as well as the next generation (anti-collision) version.

A ceramic single patch circularly polarised antenna is used to support scanning of tags in multiple directions.

The Flat Panel Mu Reader uses advanced surface mount technology to provide a low cost and highly reliable product.

For flexibility of installation, the reader has been designed for desk or wall mounting. The interface to the host system is either via a serial interface or USB. Options are also available for use as a networked reader via an Ethernet controller.

Case Dimensions

The casing is based on a thermoplastic moulding that is fixed to a metal base plate to provide rigidity. It allows for easy fixing to both horizontal and vertical flat surfaces. The dimensions of the reader are 25cm (l)x 26cm (w)x 1.5cm (h). Weight of the unit is approximately 2 kgs.



Processor and general circuit description

The PC based reader has been designed around the Atmel AT89C5131 microcontroller. This device provides an RS232 interface, an integrated USB interface and has 32Kbytes of Flash memory to allow software download via the USB interface.

A 50 MHz Uvicom SX28AC/SS processor is used to modulate the carrier according to the mu-chip air interface protocol and to provide processing for the anti collision mu-chip version.

Carrier signal generation is via the Hitachi HD 157501NP mu-chip reader LSI which allows selectable frequency (via 1MHz) steps in the 2.45 GHz band.

Basic Specification

Parameter		Value
Controller	CPU	16 MHz RISC
	Memory	RAM: 32KB FlashROM: 64 KB
RF	Frequency	2.45 GHz band
	Method	ETSI EN 300 440
Scanner	Method	Non Collision and Anti-collision protocols
	Scanning Distance	Max 400 mm
Communications	Cable Interface	USB 2 (Mini-B) or RS232C
Power Supply		12V DC (1.25A/h)
Dimension (L x W x H)		25 x 26 x 1.5 cm
Weight		Approx. 2.0 kg
Processable transponders		Hitachi Mu-chip
Antenna		NTK Ceramic: Single Patch, Circular Polarisation

Contact Us

For further Information about Mu Flat panel, hand reader or any other Mu Solutions products or services please contact:

Mu Solutions, Hitachi Europe Ltd,
 Whitebrook Park, Lower Cookham Rd,
 Maidenhead, Berkshire, UK, SL6 8YA

Tel-+44 1628 585442

Fax-+44 1628 585656

Email- mu.solution@hitachi-eu.com

Website- www.hitachi-eu.com