

Handy 440



ITSO V2.1.4 accredited

A Flexible Contactless Card Terminal

The Handy Card Reader is a re-programmable contactless smart card terminal designed for portable use. The reader is designed to run applications that require a high level of security and is the ideal solution for purse and ticket inspections

It is housed in a lightweight ergonomically designed plastic case and runs off a rechargeable LithiumPolymer internal battery. During normal operation the device is capable of reading and verifying at least one thousand cards before recharging. A full recharge cycle is achieved in less than 3 hours using an external mains charger or USB port.

Two integral ISO7816 compatible SAM slots are provided to allow the secure storage of encryption keys.

The display is a full graphical backlit LCD with electronic contrast adjustment allowing different fonts, sizes and icons to be displayed. To increase speed and to aid the operator, the reader has a green, an amber and a red high visibility LED providing feedback on the validity of a card.

The unit is equipped with an integrated real time clock (RTC) which is independently powered by a Lithium coin cell.

The unit can be supplied with either USB or RS232 interconnectivity to allow information that has been captured and stored during normal operation to be uploaded to a host system. In addition the unit can check if the presented card is on a Hotlist and take appropriate action.

The rugged design allows the reader to be used in harsh environments. The unit is protected against dust and water spray and can withstand 1m drops onto solid surfaces. In addition the low weight of the unit coupled with the lanyard allows the unit to be used all day in complete comfort.





Applications

ITSO: the reader is used by ticket inspectors to check the validity of travel products, entitlements, vouchers and stored travel rights. It can also be used to display the travel history of a card and to validate (entry or exit) or clip IPE's (*ISAM required and dependant of business rules).

Education: the reader is used to collect pupil attendance information. It is also used to verify the card-holder's age.

Electronic purse: the reader is used to check the balance of the card purse and to display the transaction history.

GIS can supply either full customisation and build or a development platform for in-house development. Please contact GIS for further details.



Technical Specification

- 32-bit ARM based single chip microcontroller with variable clock speed
- 512Kbytes internal Flash memory (program memory) / 128kbytes internal RAM
- 1MB of non removable Flash memory
- 2GB of removable Flash memory using Transflash technology (optionally up to 32GB)
- Real Time Clock with independent Lithium coin cell
- 128 x 64 DOT matrix graphic LCD (8 lines of 20 characters) with LED backlighting
- Membrane keyboard with 4 (H440) or 12 keys (H450)
- High visibility LED (green, amber and red)
- Operates from single Li+ rechargeable cell
- Ergonomic case design with optional wrist-strap
- Host interface cradle with either USB 2.0 (Full speed) or RS232 (*optional) connectivity
- Bluetooth interface with SPP for wireless expandability (*optional)
- Smartcard interface compatible with ISO14443-A/B, FeliCa® and NFC
- Interface protocol: Mifare® Classic / Ultralight® / T=CL
- AES, 3KDES and 3DES encryption supported
- Reading range up to 3cm
- SAM: 2 x ISO7816 ID000 - 3V or 5V

General Information

- 5V mains adapter/charger cradle (supplied)
- Weight: 140gm
- Dimensions: 150 x 68 x 40(max) mm
- Enclosure is designed to comply with IP53 (IEC529).
- Operating Environment: -20°C to +55°C ambient, 10 to 90% relative humidity (non-condensing)
- Charging environment: -0°C to +40°C ambient, 10 to 90% relative humidity (non-condensing)
- Transit and Storage: -20°C to +60°C ambient, 5 to 95% relative humidity (non-condensing)

Standards and Approvals

- CE: EN61000-6-1:2001, EN61000-6-3:2001, EN60950:2000, EN300 330-1 V1.3.1, EN300 330-2 V1.1.1, EN301 489-3

MIFARE is a trademark of NXP Semiconductors
FeliCa is the contactless IC card technology developed by Sony Corporation
Specifications are subject to change without notice - January 2012



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