

Cardax FT Intelligent Door Terminal

Designed to meet the requirements of high security access control, the Cardax FT Intelligent Door Terminal extends beyond card plus PIN functions to incorporate digital intercom and an advanced user interface.



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Card Plus PIN

The Cardax FT Intelligent Door Terminal (IDT) is a card plus Personal Identification Number (PIN) reader. It is ideal where higher security is required. The illuminated keypad enables a cardholder to enter their PIN in conjunction with presenting their card, giving the same type of security used with Automatic Teller Machines (ATMs).

Arm and Disarm Intruder Alarms

Authorised cardholders can use the Cardax FT IDT to arm and disarm intruder alarms for the zone it resides in. When cardholders arm and disarm alarms, the reader provides prompts and feedback via its Liquid Crystal Display (LCD).

Dot-Matrix Display

The Cardax FT IDT includes a back-lit dot-matrix LCD. This enables prompts, time and date, feedback and cardholder messages to be displayed at the reader. The dot-matrix display has 4 lines with a maximum of 20 characters per line.

Digital Intercom

The Cardax FT IDT reader features an integrated digital intercom.

The digital intercom enables a person to approach the reader and contact an operator. For example, if the person is a visitor, or if a cardholder has lost or forgotten their card they can contact the operator. When the person presses the F3 function key on the reader a “call operator” event is generated and logged by the system. A notification will be displayed on the operator’s Cardax FT Command Centre workstation.

The operator can then activate the intercom and speak to the person. The intercom works in half-duplex mode (one person can speak at a time). The operator has complete control over the activation/deactivation of the intercom. This allows the operator to deactivate the intercom should they no longer wish to speak with the person.

Intercom communications are transmitted via the Cardax FT IDT’s RS485 communications link. The audio is digitised and encrypted at the reader before being sent to the Cardax FT Controller 5000GL.

The digital intercom can be used as an alarm-monitoring tool. For example, if an alarm is triggered by an intruder, an operator can activate the intercom to listen to what is happening in the area.

Cardholder-Friendly Interface

In addition to the dot matrix LCD and the digital intercom, the Cardax FT IDT also includes:

- A red ‘wave’ LED inviting cardholders to pass their card across the face of the reader
- A speaker within the reader to complement visual feedback by generating sounds denoting access granted or denied.

Communication and Connectivity

The Cardax FT IDT connects via the Cardax FT Controller 5000GL, a field controller in the Cardax FT system. Up to 16 Cardax FT Controller 5000GL devices, including Cardax FT IDTs, can be connected to the Cardax FT Controller 5000GL.

Field devices connect to the Cardax FT Controller 5000GL via RS485 over Cat 5 data cable at 187.5 Kb/s. There are two RS485 connections on the Cardax FT Controller 5000GL. The maximum length of cable from each port to the last attached device is 500m. The distance can be increased in either direction by using the Cardax FT Strike Controller as a communications repeater.

The Cardax FT Strike Controller can also provide extra line protection for the power and communications to Cardax FT IDTs located outside secured areas, for example, on external doors. This protects the rest of the system from being compromised by any attack on these devices.

Reliable Card Identification

Access control records are often used to review access activity. In these circumstances it is essential that when a reader is used, data is accurately transmitted from the card to the reader. The Cardax FT IDT system uses a full 16 bit CCITT-CRC error detection protocol ensuring that the reader correctly identifies the card being presented by the cardholder.

Data and Tamper Protection

Security of the reader is enhanced by encryption and monitoring of the communications data between the Cardax FT IDT and the Cardax FT Controller 5000GL. An alarm will be raised at the Cardax FT Command Centre workstation if the reader stops communicating with the Controller, for example, if the communications cable to the reader is disconnected or cut.

High Performance Housing with Colour Choice

The Cardax FT IDT housing is injection

moulded in a high strength, high impact resistant engineering plastic alloy proven over many years in the Cardax product range. The Cardax FT IDT is dust and water resistant to IP54.

To suit a wide range of installation environments the reader housing is available in Cardax Cool Grey and Cardax Charcoal.

RFID Technology

Three versions of the Cardax FT IDT are available utilising different RFID technologies.

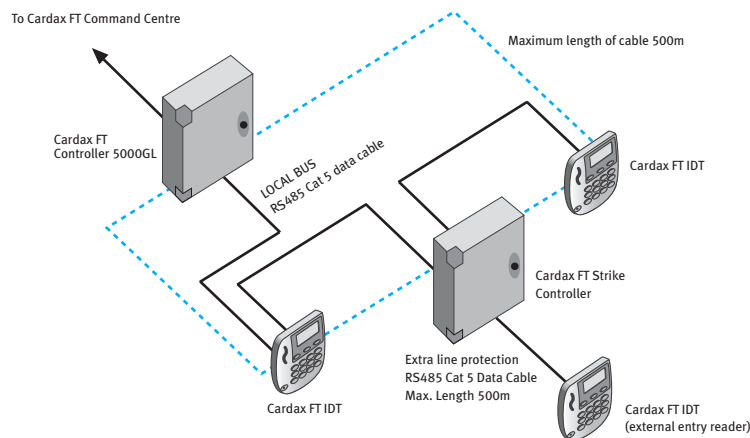
Cardax FT IDT (125 Series)

Cardax supports the widely available 125kHz technology, allowing multiple supported card formats to be active concurrently in the system. This complete flexibility means it is possible to integrate the use of Cardax proprietary cards alongside existing third party cards.

The Cardax proprietary format is supported using Amplitude Shift Keying (ASK) modulation. Phase Shift Keying

Connectivity Diagram

Cardax FT Intelligent Door Terminals connecting to a Cardax FT Controller 5000GL



Cardax FT Intelligent Door Terminals connecting to a Cardax FT Controller 5000GL, with one reader on an external door connected to a Cardax FT Strike Controller for extra line protection.

(PSK) and Frequency Shift Keying (FSK) are used for reading other selected third party formats.

Please contact Cardax Technical Support for more details on integrating third party formats.

Cardax FT IDT (Mifare® Series)

Cardax has selected Philips Semiconductors contactless Mifare® Standard technology to provide the platform for its Smart Card range. Communication between the reader and card uses RF technology at 13.56MHz.

The benefits of Mifare® Standard Smart Card technology include the ability to have multiple applications residing and operating independently on a single card. This means that the card used for Cardax access control can be a cornerstone for Smart Card applications. Cardax IV data is supported within Mifare sectors. CSN card reading is supported as an alternative to sector reading.

Cardax FT IDT (TIRIS Series)

The RFID technology used with the Cardax FT IDT (TIRIS Series) is based on Texas Instruments TIRIS system using FM wireless technology. The transmission technique between the

IDT (TIRIS Series) and the transponder is Frequency Shift Keying (FSK) at 134.2 KHz.

Ancillary Products

A variety of ancillary products are available, including transponders, Cardax Encoder software and hardware for encoding Cardax proprietary cards, and Cardax Protective Reader Covers for increased protection for the readers.

For more information about ancillary products, please visit www.cardax.com or refer to the respective Cardax datasheets:

- Cardax Encoder III
- Cardax Protective Reader Covers.

Key features of the Cardax FT Intelligent Door Terminal

- A key pad for PIN entry and control functions such as the arming and disarming of intruder alarms
- An integrated intercom so cardholders can communicate with operators
- A dot matrix LCD displays messages and prompts
- The ability to accept future software upgrades over the network.

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TECHNICAL SPECIFICATIONS

Cardax FT Intelligent Door Terminal

Power Supply	Voltage	13.6 V DC ± 15%
	Current	300 mA
Number of Ports	RS485	1
Communications	To Cardax FT Controller 5000GL or Cardax FT Strike Controller	RS485 at 187.5 Kbits per second
Cable Specifications	Communications	Two wire Cat 5 (or better) Data Cable
	Power	Dependent upon distance from power supply
Max. Cable Length	To Cardax FT Controller 5000GL or Cardax FT Strike Controller	500 m
Mounting	Surface (requires 25 mm dia X 40 mm deep cable recess behind reader)	
	Suggested Installation Height	1100 mm above floor
Dimensions	Height	112 mm
	Width	113 mm
	Depth	28 mm
Reading Distance	IDT (125 Series) – Card transponder	100* mm
	– Key ring transponder	50* mm
	IDT (Mifare® Series) – Smart Card transponder	35 mm
	IDT (TIRIS Series) – Card transponder	100 mm
	– Key ring transponder	90 mm

*Dependant on installation and technology (FSK/ASK/PSK)

Proximity Method of Transmission	IDT (125 Series)	125 kHz ASK, FSK or PSK
	IDT (Mifare® Series)	13.56 MHz
	IDT (TIRIS® Series)	Frequency Shift Keying transmission between 124.2kHz and 134.2kHz

Temperature Range	-10° to +55° C
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Environmental Protection Rating	Reader	IP54
	Reader with Cardax FT IDT Cover	IP66

Compliance Standards



ACN 002132943



All equipment complies with CE and C-Tick approvals. The Cardax FT IDT (125 Series) also complies with UL and FCC approvals. Please contact Gallagher Security Management Systems for the latest list of approvals.



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