

## FP-IT51

**Real Time Clock Backup Battery**  
Maintains time during power disconnection. Remove rear casing to access.

**System Reset Switch**  
The hardware reset switch is only required in exceptional circumstances and is accessible through the hole from the outside of the terminal.

**USB Ports**  
Six USB2 full size sockets for devices such as memory stick, barcode scanner, extension modules.

**Memory Card Slot**  
Supports SD and MMC flash card memories

**Biometric Reader Connector**  
For Suprema Fingerprint Reader Module

**Reader Module Connector -**

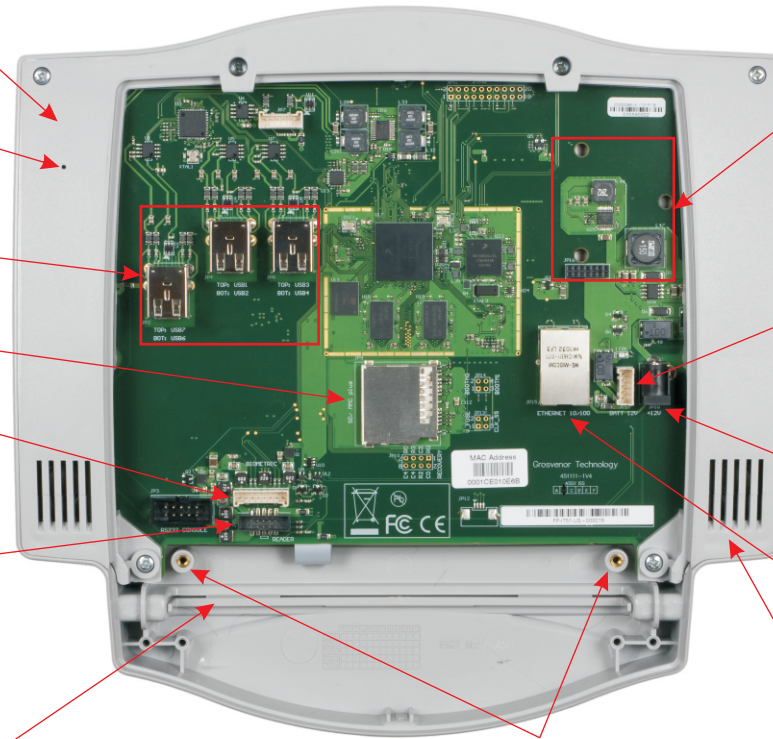
Reader Modules include -

- HID Prox
- Feig Prox
- Generic Prox 5V
- Generic Prox 12V
- Mag Swipe
- Barcode Swipe

**Slot for Swipe Reader**

Unit is supplied with slot filler bar -

- Remove for Swipe readers
- Fit for Proximity readers



Mounting points for Reader Module

Front cover fixing screw



**Power over Ethernet (PoE) Module Position**

Optional module enables terminal to be powered via the Ethernet cable using an IEEE802.3af Ethernet switch or mid-span injector

**Auxiliary Power Connector**  
For connection of Power Option Modules including -

- Battery Backup Module
- Mains Power Supply Module (Subject to regional approvals)

When more than one module is fitted e.g. Mains PSU *and* Battery Backup then connections are cascaded.

**Power IN Connector (2.1mm)**

- 12V DC External PSU (centre positive)
- 11-13V @ 1A max (refer to Power Loading for current calculation)

**Ethernet Connector**

- 10/100baseT
- Full duplex
- Supports PoE (when option module fitted)

**Speakers (one each side)**

- Stereo sound WAV file playback
- 2W per channel
- High efficiency class D amplifier

**Front Window**

- Camera
- Multi colour LED
- Microphone
- Active IR Presence Sensor - detection range approximately 140mm (5.5in)

## General

The IT51 Data Collection Terminal is a modular design which can be customised by adding additional modules to the basic terminal front panel. For a minimum system the following items are necessary in addition to the IT51 Front Panel -

- Back Housing (BP-001)
- Power Supply

Additional modules can be added for further functionality -

- Card Reader Module (Proximity or Swipe)
- Biometric Module
- External USB Port Connector
- Battery Backup Module

Operating Temperature -10 to +50C (14 to 122F)

Humidity 5-90% non condensing  
Weight 943g (2.1lb)

**Power Loading - 550mA @12V Power IN**

## IG1039R01

### IT51 Terminal Front Panel Connection Details



**FP-IT51**

[www.grosvenortechnology.com](http://www.grosvenortechnology.com)

## Power Supply

The IT51 Front Panel can be powered from a 12V DC regulated supply via the 'Power In' socket (2.1mm type).

Further options for powering the device include the following -

- Power over Ethernet with optional PoE Module
- Internal mains power supply 100-230V AC (European approvals)

A Battery Backup Module with rechargeable Lithium-Ion Polymer battery can be fitted within the housing to run the terminal during power fail conditions. For the IT51 only the EM-BB-HC-ITRS high power module may be used. Reader type, display brightness and external load will vary backup duration but typically in excess of one hour can be achieved.

Refer to Option Module Installation Guide for connection details.

A coin cell maintains the Real Time Clock during power off situations. Under normal operating conditions with the terminal powered the battery will not be discharged and give a service life of several years. If however the unit is left un-powered for long periods then the battery should be regularly replaced. Observe polarity when replacing the battery.

### Power Loading Calculation

Each module or device is given a 'Power Loading' figure which relates to how it will impact 12V supply current when active. Modules such as EM-BB-HC-ITRS both supply and consume power. The supply of power and the consumption of power are dealt with independently in the power loading calculation since there may be circumstances for example when Battery Backup is supplying power, when there is a load without the power source. The following example shows the power requirements for an IT51 Terminal with PoE module and Proximity Reader -

CM-POE-IT Module Power Source	+1000mA
FP-IT51 Front Panel Power Loading	-550mA
RM-HID-ITRS Reader Module Power Loading	-15mA
Spare Capacity	= 435mA

## Configuration

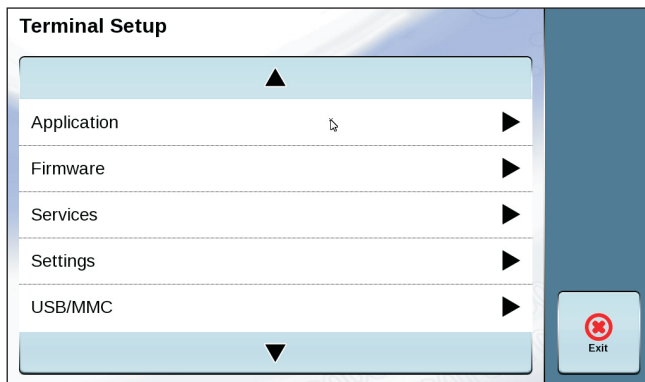
### Entering Terminal Setup Mode

When powered-up the IT51 starts its boot sequence and when ready shows a cog icon at the bottom right of the screen. Touching the icon will prompt for a pass code to enter setup mode, the default code is 1905. If the setup icon is not touched the terminal application will automatically start. Exiting the terminal application will bring up the setup icon in the same way as powering-up the terminal.



### Setup

The setup of the terminal is divided into sections which are displayed in a scroll dialogue. Use the up and down arrows to display more items. An arrow to the right indicates sub-menus for further selections. Press the item in the list to select it.



### Application Setup

The application section allows management of the user application running in the terminal including installation, removal, update etc. Additionally the setup item within the Application section allows parameters within the application to be changed for example enabling menu items, host communications settings, etc. These items are specific to the application and so will vary according to how the user application has been written.

### Firmware Setup

The firmware section allows management of the terminal firmware- this is effectively the operating system that sits beneath the application and includes the Linux kernel, boot loader as well as functions and utilities. The firmware may be updated locally via USB or remotely by specifying a URL. If Automatic update is selected the terminal will periodically check the URL for an update and if a different version is found will perform the update and re-start itself.

Further options within the firmware section include setting the PIN for accessing the setup menu, a reset to factory default for all settings and terminal re-boot.

### Services

This menu allows services to be enabled or disabled such as Telnet, UPnP, NTP, SSH, FTP and VNC. Some of the services have security implications so by default only NTP is enabled. NTP is the recommended method of time synchronisation.

### Settings

Here general settings for the terminal may be made including-

- Date and Time - Set date, time, timezone
- Region and Language
- Network - IP address, DHCP etc.
- Display - Brightness
- Sound - Volume and microphone level
- Reader - Select card reader type, the default is Auto Detect which uses the Plug and Play to detect the reader module installed. The decoder for the card data is also set here which may be specified or automatically detected. A utility is also included to test the reader and shows card data read.
- Biometric - Configure the finger print reader, includes utilities for testing and clearing the biometric module.
- Camera - Displays live view of camera on screen for testing.
- I/O Module - Test outputs and monitor input states

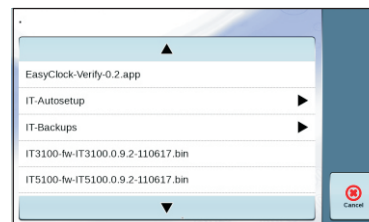
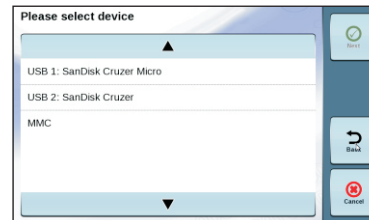
### USB/MMC

This option runs a file explorer which allows viewing and execution of files on inserted memory devices either USB or MMC (including SD flash memory).

On selecting this menu a list of inserted devices is displayed, select the required device and press the next button.

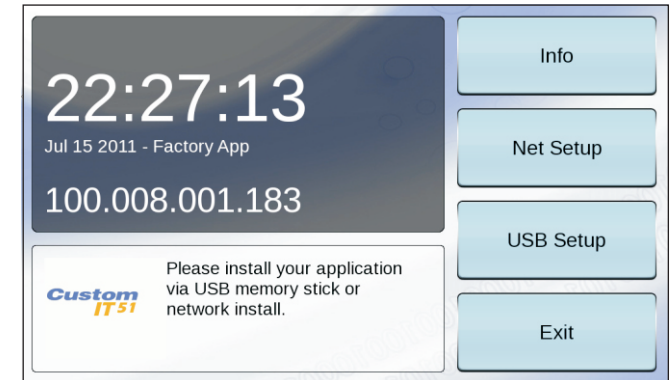
The file list is displayed with directories having an arrow to the right indicating that the item can be explored further by selecting.

If setup files are in the root directory a prompt is given to choose between running the setup file or exploring the device.



### Installing an Application

The terminal is shipped with a factory application installed which allows easy setup. Installation of user applications can be done either via the network or from a USB memory stick. From the main screen select Net Setup or USB setup, note that the USB option only appears when a USB memory stick is inserted.



### Net Setup

To use network setup the network parameters must have been setup and the terminal connected to a network with access to the Internet, if not connected to a network the Net Setup button will not appear. Pressing the Net Setup button will prompt for an ID number to be entered. This number identifies the application and setup to be loaded. Following entry of the ID, a PIN is required to be entered for authorisation. Once the download is complete the terminal will restart with the new application.

### USB Setup

With a memory stick installed the USB Setup button appears. Selecting this option shows the file found and prompts for confirmation. Continuing with the operation will load the file and restart the terminal with the new application.

### From Application Setup

The application may be loaded using either of the above techniques from the Application Setup menu in Terminal Setup. If the factory application is no longer loaded it can be restored using Net Setup by using an ID of 0 and PIN 1905. To ensure the Net Setup is pointed to the default Grosvenor URL it may be necessary to first restore factory defaults in the Terminal Setup Firmware menu.

### Embedded Software License

This product contains some open source software modules, a list of the software versions used can be found on website [www.grosvenortechnology.com](http://www.grosvenortechnology.com). Copies of the General Public License (GPL) can be found at: <http://www.gnu.org/licenses/gpl.html>.