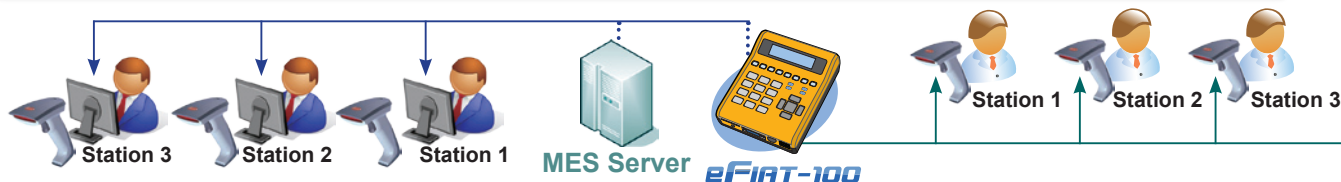


# eFIAT-100

## FLOOR INFORMATION ACQUISITION TERMINAL



Traditionally, shop floor data must be collected with a barcode or RFID device attached to a computer :

- Every workstation needed a computer. The expense of a computer and all the necessary software is hard to justify for such a simple, dedicated task.
- It's difficult to recognize the data source after the data is sent to the backend server.
- Special provision must be made to deal with networking issues, power failure and other inconveniences.

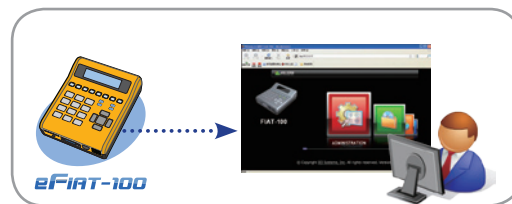
IEI eFIAT-100 is simpler and more robust :

- Compact size to save space
- Simple installation interface for convenience of usage and maintenance
- Multiple expansion interfaces are provided, supporting up to four barcode scanners and RFID readers (2 x USB, 1 x RS-232, 1 x PS/2) and capable of transferring at up to 80 bytes/s. Total hardware savings of around 80%.
- All information collected is automatically forwarded to the backend server with both the terminal IP address and port number making identification of the data source easy.

## 3 Steps to Use and Manage eFIAT-100

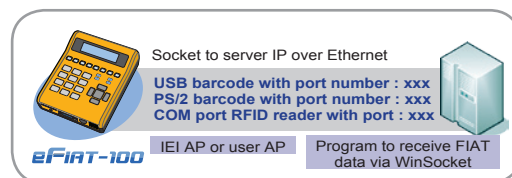
### Step.1 To configure your eFIAT-100

- **Initiation** : The first time the FIAT is turned on, the default device name "eFIAT-100" is displayed. There are three ways to configure the device.
  1. Press <F1> function key and use keypad to input settings
  2. Use the web management page to login and change settings through your web browser
  3. Connect eFIAT-100 to Ethernet and use eFIAT Administrator utility to set up multiple devices
- **SETTING MODE and WORKING MODE** :
  1. Press F1 to enter the settings mode. The following settings are configurable:  
A. Password; B. Ethernet; C. Serial; D. PS2; E. USB; F. Buzzer; G. Time
  2. After configuration, press F3 on the device to run the data acquisition program, or F5 to run a customized application. The collected information will then be forwarded to the backend server.
- Press F2 on the device to show the current IP address of the device. Press F5 to show the current data and time of the device. F6 to F8 are reserved for custom applications.
- The web interface allows changing of the system settings and monitoring of the input data status.



### Step.2 Administration through the web

In the settings mode, the peripheral devices connected to the eFIAT-100 are configured to automatically forward the collected data to the IP address and port number specified in the settings. The included example program and source code provide the basis for creating your own custom applications.



### Step.3 To manage eFIAT-100 via web page or administration tool

- The eFIAT-100 is a web-enabled device with a built-in web server, FTP server and related Internet services.
- Built-in management web pages and web server make it easy to manage and monitor the eFIAT-100 remotely over a network.
- With these management web pages, users can :
  1. In setting mode : configure the device settings
  2. In working mode : monitor the input data

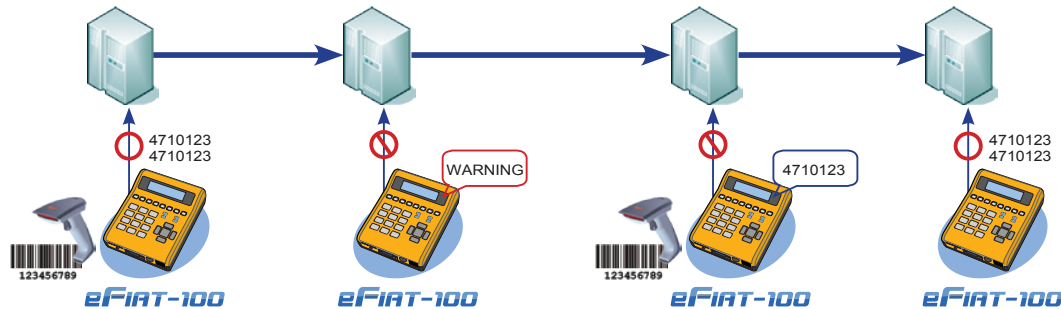


In addition, eFIAT Administrator PC site utility enables IT administrators to monitor, synchronize configuration and upgrade firmware for multiple eFIAT-100s via the Internet

# System Stability Enhancement Design

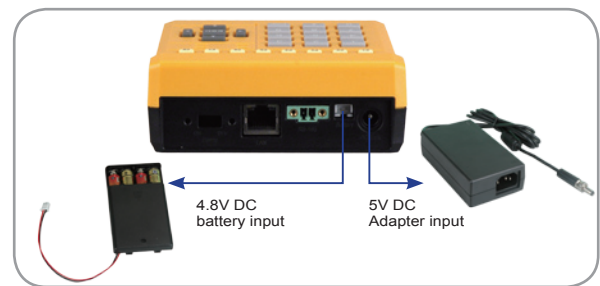
## Ensure normal operation against network failure

1. Network failures are automatically detected and a warning message is shown.
2. Collected data is stored in local memory until the network comes back online. Up to 10,000 records can be stored on the device.
3. After network recovery, all the recorded data is uploaded to the server.



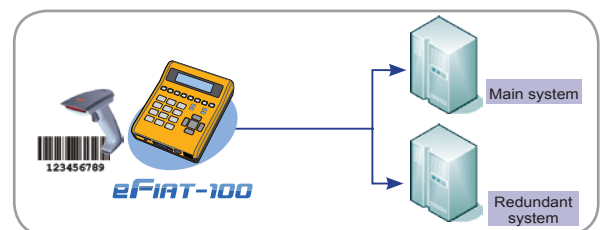
## Battery backup

- The eFIAT-100 supports backup power that is activated in the following sequence :
  1. By default power is drawn from the DC power input
  2. Input switches to the 4.8V battery pack when main DC power fails.
  3. Once power is restored, the system switches to drawing power from the DC power input.
- These features ensure against temporary loss of main power.



## Redundant backend server support

- A redundant server setup allows data to be stored in two places to provide a backup in case of server failure.
- The eFIAT-100 can be configured to send all collected data to two backend servers simultaneously.



## Barcoded system settings

- The barcode reader switches to keyboard input mode after pressing F1 and entering the settings menu. The settings information can be programmed into a barcode for easy setup of all system settings.

## Multi-layer authentication

- A password is required to switch modes and change the system settings. The password is required whenever F1, F3 or F5 are pressed.
- Three levels of user authentication are offered, user level depends on the entered password.

## Information rich data packets

- Each data packet sent from the device to the server includes the name of the device, the username of the current user, the I/O port, the data and the time the data was recorded.

### Device Name / User Name / I/O Port / Date/Time

- The server decodes the data packet to extract the information.



# eFIAT-100 *Compact form factor floor information acquisition terminal with ARM processor + Linux platform, rich peripheral expansion interfaces and turnkey software integrated*



## Features

- Compact form factor design
- 16 character x 2 lines backlight LCM & 4 Status LED display
- 17 numeric/direction/Enter & 8 programmable function keys
- 2 x USB + 1 x PS/2 peripheral integration
- 10/100Mbps ethernet connectivity
- 1 x MiniSD expandable storage capacity
- Optional redundant battery pack for power failure backup

10/100M Ethernet 4.8V DC battery input



Power switch RS-485 5V DC Adapter input

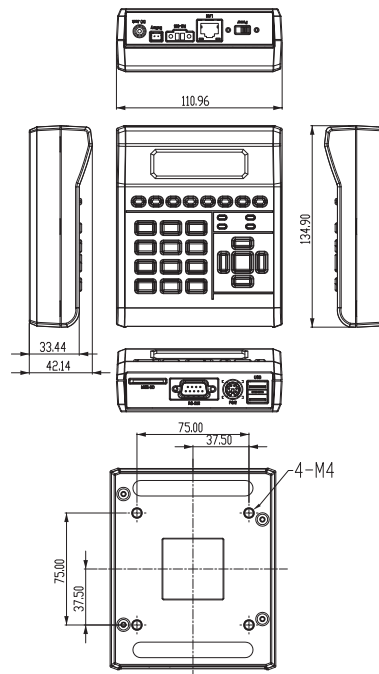


Mini SD slot RS-232 PS/2 2 x USB 2.0



2 x 16 Text Mode LCM  
F1 ~ F8 function keys  
Status LEDs  
Direction keys  
Numeric & Enter keys

## Dimensions (mm)



## Specifications

CPU / MCU	Nuvoton (Winbond) ARM9 W90910@200MHZ RISC-based CPU
System memory	64MB SDRAM
NAND Flash	128MB for Embedded OS and data programming
Operation System	Linux Kernel 2.6.18
Display	16 Characters x 2 Lines backlight LCM
Status LED	Power/Connection/Battery status/Data transfer LED Indicators
Communication	1 x 10/100Mbps Ethernet
Keypad	17 numeric/direction/enter & 8 programmable keys
Peripheral Expansion	1 x PS2 2 x High Speed USB2.0 1 x RS-232 1 x miniSD 1 x RS-485
Power	1 x 5V DC input 1 x 2-pin connector for 4.8V Battery Input 1 x Power Switch
Power Consumption	5W
Operation Temperature	0~50°C
Construction Mechanical	PC + ABS
Dimensions (WxHxD)	111.0 mm x 134.9 mm x 42.1 mm
Weight	280g

## Packing List

- 1 x eFIAT-100
- 1 x Power adapter
- 1 x Utility CD includes application tools, SDK and technical documents

## Ordering Information

Part No.	Description
eFIAT-100-R10	Linux Integration Product,shop Floor Data Collector, Winbond ARM 9,90P910, 2MB ROM, 256MB NAND FLASH, 64MB SDRAM, RoHS
46026-000100-RS	eFIAT-100 Optional 4x 1.2V Battery Pack