

InsightPower Panel for WinCE 5.0

User's Manual

Table of Contents

Chapter1 Introduction	3
Features	3
System Architecture	3
Supported Panel PC	3
Chapter2 Installation	4
Install Program	4
Connect the Communication Line with UPS	4
Chapter3 Functions	6
Main Page :	6
UPS Page :	6
Event Page :	7
Data Page :	7
Chapter4 Configuration	8
COM Setup :	8
Log Setup :	9
Other Setup :	9

Chapter1 Introduction

Features

- **Communicate with multiple UPSes through RS485**
InsightPower Panel can monitor up to 31 Delta NT or T series UPSes through RS485.
- **Cooperate with InsightPower Manager**
Users can also install an InsightPower Manager software in the same RS485 bus, InsightPower Panel has the ability to work with InsightPower Manager simultaneously.
- **Display real-time UPS status, system diagram and parameters**
Displays current UPS status, system diagram and real-time values including voltage, current, frequency,
- **Store event log and historical data in flash**
Stores event log and historical data in flash, users can assign the maximum storage size.

Note: To work with InsightPower Panel, the version of InsightPower Manager should be greater or equal to v8.1.

System Architecture

InsightPower Panel can work alone to monitor all of the UPSes in the same RS485 bus. It can also work with InsightPower Manager to monitor the UPSes simultaneously.

InsightPower Panel sends querying commands to the UPSes actively then listen for the responses when it works alone. If InsightPower Manager is installed in the same bus then InsightPower Panel switches to listen mode to catch the UPS response packets.



Fig 1-1 System Architecture

Supported Panel PC

InsightPower Panel supports AdvanTech Panel PC, model name: TPC-66SN.

Chapter2 Installation

Install Program

Firstly we have to download the ActiveSync from Microsoft web site, after installed ActiveSync we then proceed to install the InsightPower Panel program:

1. Download ActiveSync from Microsoft web site.
2. Run the setup program to install the ActiveSync in your PC.
3. Power on the Panel PC.
4. Connect the USB cable between your PC and the Panel PC. As shown in Fig 2-1.



Fig 2-1

5. Now, ActiveSync should have detected a device has been connected to the PC, please then open ActiveSync window and click on the Explore button. As shown in Fig 2-2.

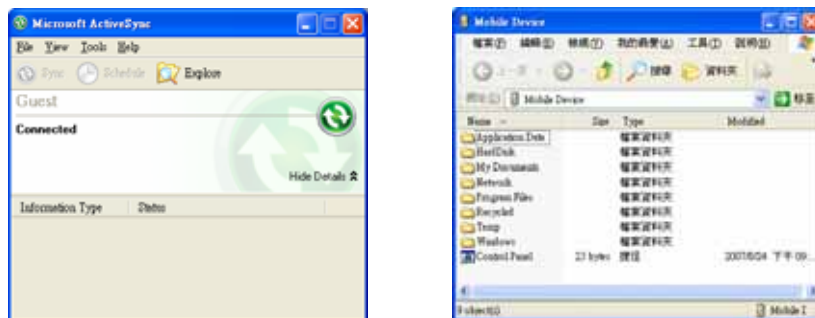


Fig 2-2

6. Enter the HardDisk\Startup directory from the Explore window.
7. Copy InsightPower Panel program to the HardDisk\Startup directory.
8. Restart the panel PC, InsightPower Panel will startup automatically after the panel PC restarts.

Connect the Communication Line with UPS

The pin assignment of Delta UPS RS485 Dsub9 connector:

Pin Number	Description
1	
2	T+ (Data+)
3	T- (Data-)
4	R+
5	R-
6	

InsightPower Panel

7	
8	
9	

After the InsightPower Panel program has been installed and startup, please proceed to connect the RS485 cable between panel PC and UPS.

The following is the RS485 configuration of Advantech TPC-66SN:

The COM4 of TPC-66 has built-in RS485 without termination resistor. Physically, the COM3 and COM4 share the same D-sub9 connector so you only see COM1, COM2 and COM3 on its rear panel.

Pin Number	Description
1	Data-
2	
3	
4	Data+
5	GND
6	
7	
8	
9	

Connects the Data+ pin of UPS to the Data+, pin of TPC-66, the Data- pin of UPS to the Data- pin of TPC-66. As shown in Fig 2-3.

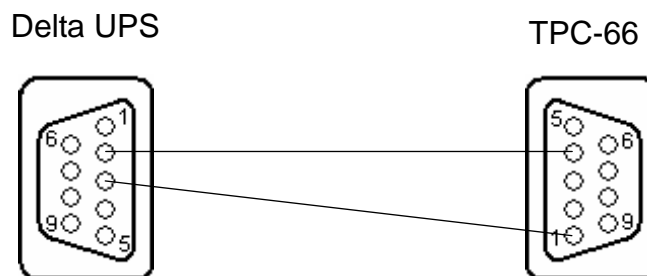


Fig 2-3

Chapter3 Functions

Please refer to the Fig 3-1, there are menu buttons on the left side:

Use the Main, UPS, Event and Data buttons to switch current UPS monitoring pages.

Login button is used to verify the password, Scan button forces InsightPower Panel to rescan all of the UPSes in the RS485 bus. Exit button is used to terminate InsightPower Panel program and back to WinCE desktop.

On the left bottom text box shows the UPS ID number which is currently communicated with InsightPower Panel. On the middle bottom status box displays all of the current UPS alarms alternatively.

Main Page :

List all of the UPS, shows current status, loading and battery voltage.

ID	Model	Load	Batt	Alarm
7	GES-124NT ...	66 66 66%	392V	Input Pow
1	GES-503T2200	76 76 76%	392V	
2	GES-104T2200	75 75 75%	391V	
3	GES-603NT ...	70 70 70%	391V	
4	GES-603NT ...	63 63 63%	392V	
5	GES-603NT ...	76 76 76%	392V	
6	GES-124NT ...	67 67 67%	391V	
8	GES-204NT ...	65 65 65%	392V	
9	GES-404NT ...	71 71 71%	391V	
10	GES-404NT ...	64 64 64%	391V	

08/27/2007 15:42:39

UPS ID2: UPS ID7: On Battery

Fig 3-1

UPS Page :

Including 3 sub-pages: Property, Diagram and Alarm pages.

The figure shows three overlapping screenshots of the UPS Page for a specific UPS unit (ID7, Model: GES-124NT2201100).

- Top Left Screenshot (Property Page):** Displays input and output parameters.

Input		Output	
Freq:	59.9 Hz	Source:	Battery
Volt:	224 222 223 V	Freq:	60.0 Hz
Line:	376 376 378 V	Volt:	222 220 221 V
Amp:	119 111 115 A	Line:	378 377 378 V
Battery		Amp:	
Status:	Normal		
Charger:	Discharging		
Volt:	391		
Amp:	5		
- Top Right Screenshot (Alarm Page):** Lists various alarms with status indicators:
 - Input Power Fail (Yellow circle)
 - Rectifier Fail (Grey circle)
 - Overload (Grey circle)
 - Output Off (Grey circle)
 - Fuse Fail (Grey circle)
- Bottom Screenshot (Diagram Page):** Shows a block diagram of the UPS system. It includes an Input, a Manual Bypass switch, an AC/DC converter, a Reserve battery, a DC/AC converter, and an Output. The battery is shown as being in a 'Reserve' state.

08/27/2007 15:41:41

UPS ID4: UPS ID7: Input Power

08/27/2007 15:43:33

UPS ID9: UPS ID7: Input Power Fail

Fig 3-2

Event Page :

Display the UPS events which is recorded in flash memory. Users can screen the events by UPS ID and event alarm level.

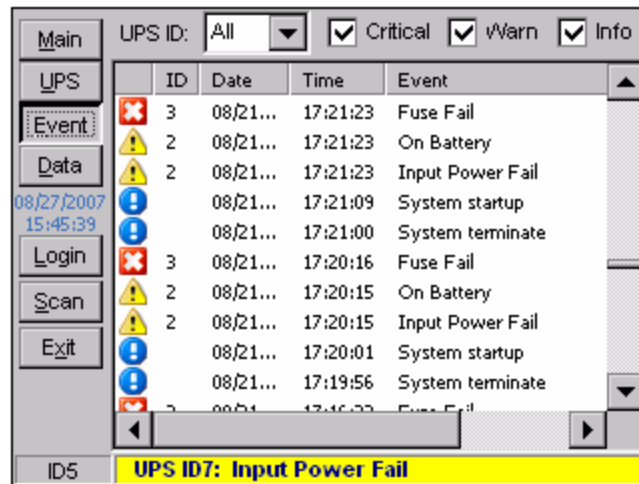


Fig 3-3

Data Page :

Display the historical graphs by retrieving the historical data saved in flash memory. Users can watch the historical graph by selecting UPS ID and parameter category.

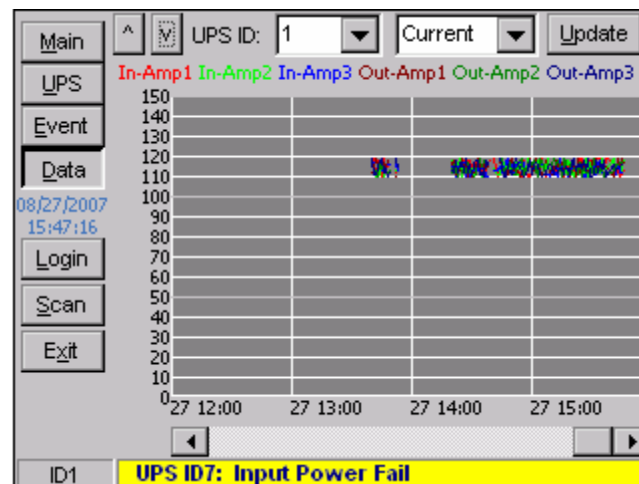


Fig 3-4

Chapter4 Configuration

Press the Login button to verify your password before configuring the system parameters. The default password is 12345678.

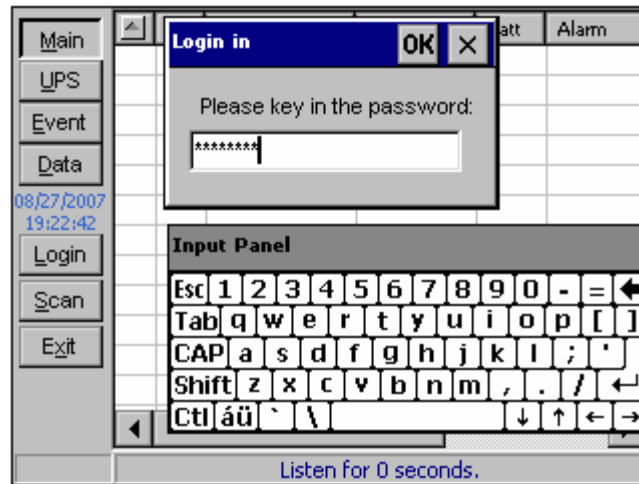


Fig 4-1

After the password is verified correctly, the Exit button will change to Setup button. Press the Setup button to popup the Setup dialog box.

COM Setup :

Select the COM Port to change the communication port of Panel PC. If InsightPower Panel is communicating with Delta NT or T series, the Baud Rate should be 2400. Polling indicates the time delay to send next querying packet. Timeout value is used to determine the communication timeout event.

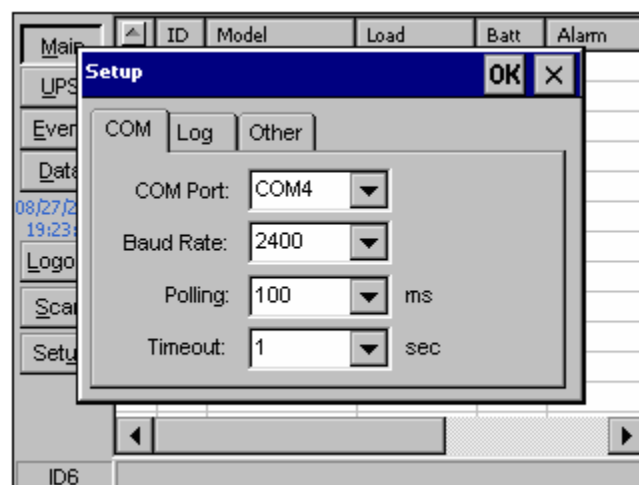


Fig 4-2

Note: InsightPower Panel will be in listen mode when it works with InsightPower Manager. In this situation, InsightPower Panel has to parse double communication frames than Insighttower Manager. If the Polling speed of InsightPower Panel is 100ms then the Polling speed of InsightPower Manager should be configure to longer than 200ms. After considering the performance of CPU, we suggest the Polling speed of IsightPower Manager is longer than 400ms.

Log Setup :

Max Event Log is used to assign the maximum number of event log. Save Data Interval indicates the period of time to save historical data for each UPS and Keep History Data is used to adjust the file size of historical data. Base on our statistics, if each UPS saves historical data every minute then the file size is about 300K bytes for each day.

Clear Event Log button can be used to clear the event log.

Clear Data Log button is used to remove all of the historical data files.

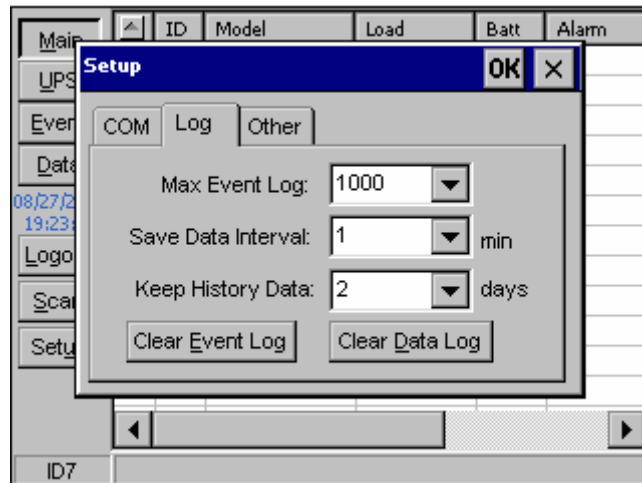


Fig 4-3

Other Setup :

Press Change Password button to change a new password.

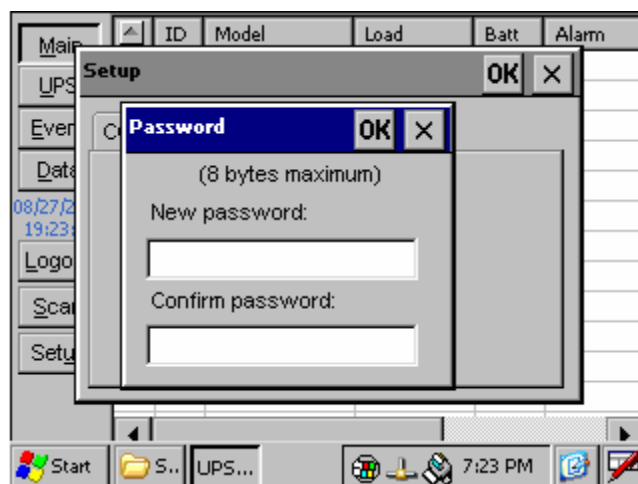


Fig 4-4