

# **Ups Monitoring Software User Manual**

Emily **For Linux** 

## **Table of Contents**

1 Installation	2
1.1. Note	2
1.2. Install Instructions	2
1.3 Uninstall Instructions	2
2 Function Explanations	3
2.1 Function Introduction	3
2.2 Main Menu	3
2.3 Real Time Information (Monitor UPS Information)	4
2.4 UPS Test	5
2.5 E-Mail Setting to Send Alarm Message (Mail Setting)	5
2.6 SMS Setting to Send Alarm Message (SMS Setting)	8
2.7 UPS Schedule (Plan UPS Schedule)	11
2.8 UPS Event Log (View Event Log)	15
2.9 Configuration of UPS (Configuration Setting)	16
3 Troubleshooting	20

## **1** Installation

#### 1.1. Note

- > Operating OS: Linux kernel Version 2.6.0 version or above.
- > Communication peripheral: Use either a serial port connector or USB connector.
- A SUPERVISIOR ID is required to install EmilyLinux.
   It must install neurses and libusb 1.0 pack.
- Software will be installed in /etc/Emily directory.

#### **1.2. Install Instructions**

- 1.2.1 Switch on the UPS; connect the UPS communication port to the computer via a serial port or USB port.
- 1.2.2 Using terminal and login as SUPERVISIOR to operate installation.
- 1.2.2 In the installation file directory, locate "install" file to execute installation. The file requires change authentication to access. You have to key in command as below:

# chmod 775 install

- 1.2.3 Key in command as below to execute installation program: # / install
- 1.2.4 Upon installation completed, it will display "install complete".
- 1.2.5 Key in command as below to execute monitoring software:

/etc/Emily/Emily start to Start background monitoring.

/etc/Emily/Emily status to Open monitor viewer to monitor measurement and configuration data of UPS.

/etc/Emily/Emily restart to Restart background monitoring.

#### **1.3 Uninstall Instructions**

- 1.3.1. SUPERVISIOR ID is required to uninstall EmilyLinux.
- 1.3.2. Key in command as below to delete file directory: # rm -rf /etc/Emily
- 1.3.3. Enter "/etc/rc.d" file directory and open "rc.local" file. Locate "/etc/Emily/Emily start". Delete the line to remove completely.

## **2** Function Explanations

#### **2.1 Function Introduction**

- Monitoring real time information and status of four machines at the same time.
- UPS Test: Includes Self Test, Test to battery low and Cancel Test.
- Mail Setting Send UPS alarm messages via email
- SMS Setting Send UPS alarm messages via sms.
- Plan UPS Schedule Add, delete and read UPS schedule.
- View Event Log Provide UPS monthly event log.
- Configuration Setting Set configuration and communication of UPS.

#### 2.2 Main Menu

#### 2.2.1 Display explanations

Softwa	I <b>re name</b> UPS Monitor SoftWare	V 1.0
Operation introduction	Select an option below using Up/Down key. Press Enter to start the selected option. 1. Monitor UPS Information	Software version
Software functions	2. UPS Test 3. Mail Setting 4. SMS Setting 5. Plan UPS Schedule 6. View Event Log 7. Configuration Setting 8. Exit	
	*****	*
Function	Description: UPS Real time information and status monitorin	ig.
	=====Server is not start yet ====== Alarm	message

2.2.2 Alarm message- <sup>C</sup> Server is not start yet <sub>J</sub>

The alarm message appears on the screen indicates the LinuxEmily program is not monitoring UPS. Please key in the command below to start monitoring: # Emily start

## 2.3 Real Time Information (UPS Monitoring Information)

2.3.1 Function and Operation Explanation



LinuxEmily is capable of monitoring and display information of four UPS. Use the directional key to switch between machine index. The information and status of UPS is updated immediately according to the selected machine index. Besides UPS real time information, it also displays Link status (communication), Power status (utility), Test status, Battery status and UPS condition.

5		
Status	Normal Display	Alarm Display
Link status	Connect	Disconnect
Power status	Normal	Fail
Test status	No Test	Test in progress
Battery status	Normal	Low
UPS Health	Normal	Fail

Listing status as below:

## 2.4 UPS Test

#### 2.4.1 Function and Operation Explanation

ect an option below	v using Up/Dow	n key.Press Enter	to start te	esting the
ected option.ESC:Ba	ack to menu.			
	Test status	No Test		
	1. S	elf Test		
	2, T	est to battery lo	W	
		_		
	3. C	ancel Test		
States and				

UPS Test includes: Self Test, Test to battery low and Cancel Test. Use the directional key to select the type of test. Then press the Enter key to execute or cancel test command. The screen display current test status and real time monitoring information. "Test in progress" indicates the machine is executing test command. "No Test" indicates that no test command is executed.

#### 2.5 E-Mail Setting to Send Alarm Message (Mail Setting)

#### 2.5.1 Function and Operation Explanation

U	PS Monitor SoftWare 2009/12/16 15:01 We
U	sing Up/Down/Left/Right to select. Enter to change data. Esc: Back to menu.
	MAIL SERVER: <mark>msa. hinet. net</mark>   USER E-MAIL: test@yahoo. com. tw   MAIL TO: test@hotmail. com
	EnableEnable/DisableUtility Fail[ Disable ]Battery Low[ Enable ]ByPass[ Disable ]UPS Failed[ Disable ]Test in Progress[ Disable ]ShutDown Active[ Disable ]Connect UPS[ Disable ]
	To set whether these alarm messages will be sent.
	[Send Test] [Save ] [Cancel] Button

In event of power failure or abnormality, the "E-Mail" function automatically informs user via email. User can select alarm messages to meet the requirement. Ensure the E-Mail account is correct and the alarm message is enabled. Click [Save] to save all settings.



#### 2.5.2 Setting E-mail Box and Sending Test Mail

Use the directional key to select and press the Enter key to input data. To send email alert to multiple recipients, insert a semi colon (;) between each email address. Press Esc to return to menu.

To confirm the settings are correct, click [Send Test] to send a test mail to recipients.

U	PS Monitor SoftWare 2009/12/16 15:02 W	ec
U	sing Up/Down/Left/Right to select.Enter to change data.Esc:Back to menu.	
	MAIL SERVER: msa.hinet.net     USER E-MAIL: test@yahoo.com.tw     MAIL TO: test@hotmail.com	
	Enable event to sendEnable/DisableUtility Fail[ Disable ]Battery Low[ Enable ]ByPass[ Disable ]UPS Failed[ Disable ]Test in Progress[ Disable ]ShutDown Active[ Disable ]Connect UPS[ Disable ]	
	Test Mail has send, check received. [Send Test] Save ] Cancel]	



2.5.3 Setting and Saving Alarm Message Enable or Disable

Use the directional key to select the required event. Press Enter key to enable or disable.

Click [Save] to save all settings.



## 2.6 SMS setting to Send Alarm Message (SMS Setting)

2.6.1 Function and Operation Explanation



The "SMS" function send short message to user via internet during abnormality event. You can select the required alarm messages. Ensure the SMS account is correct and alarm message is enabled. Click [Save] to save all settings.

UPS Monitor SoftWare 2009/12/17 10:30 Thu SMS Setting Api\_id is required for clickatell subscriber only. SMS SERVER api\_id:31879 ID : eumpsablerex Password: \*\*\*\*\*\*\*\*\*\*\*\* Phone Number: 886912345678 Mobile phone number must be international dialing format. -----Enable/Disable Enable event to send Utility Fail Disable ] Battery Low Disable ] www.everdy8d.com.tw www.clickatell.com

2.6.2 Setting SMS Short Message and Sending Test Short Message

Use the directional key to select "SMS SERVER". Press Enter key to show Short Message Service Providers. To use this function you need to subscribe to "every8d" and "clickatell" services. At the moment, the software only supports both "every8d" and "clickatell". For more information on subscriptions and charges, please go to their websites as follow:

For "every8d": Go to <u>http://www.every8d.com/</u>. Please subscribe as "Corporate" account in order to use the SMS function.

For "clickatell": Go to <u>http://www.clickatell.com/</u>. Payment has to be made to obtain an "api\_id" before use.



Use directional key to select item. Then press Enter key to input text. Key in the SMS provider name, account, password, api\_id(for "clickatell" subscriber only) and mobile phone number (international dialing format). If you want to input several mobile phone numbers, please insert a semicolon between the numbers. Press Esc key to go back to menu.

To ensure the settings are correct, click [Send Test] to send a short test message to receivers.

U	PS Monitor SoftWare	MS Setting	2009/12/16 17:24 Wed
	sing Up/Down/Left/Right to select.	. Enter to change dat	a. Esc: Back to menu
     	SMS SERVER:www.everdy8d.com.tw   ID :eumpsablerex   Password:************************************		
	Enable event to send Utility Fail Battery Low ByPass UPS Failed Test in Progress ShutDown Active Connect UPS	Enable/Disable [ Disable ] [ Disable ] [ Enable ] [ Disable ] [ Disable ] [ Disable ] [ Disable ]	
	[Send Test]	Send, check received. we] [Cancel]	

2.6.3 Setting and Saving Alarm Message Enable or Disable

U	PS Monitor SoftWare	SMS Setting	2009/12/16 17:24 Wed
U	sing Up/Down/Left/Right to s	select. Enter to change data.	. Esc:Back to menu
	SMS SERVER: www.everdy8d.co ID :eumpsablerex Password:************** Phone Number:886912345678	om. tw	
	Enable event to send Utility Fail Battery Low	Enable/Disable [ Disable ] [ Disable ]	
	ByPass UPS Failed	[ Enable ] Enable	e the alarm message to be sent
	Test in Progress ShutDown Active	[ Disable ] [ Disable ]	
	Connect UPS	[ Disable ] Disable	e the alarm mess <mark>ag</mark> e to be sent
	[Send Test]	[Save] [Cancel]	

Use the directional key to select the required event. Press Enter key to enable or disable.

Click [Save] to save all settings.

U	PS Monitor SoftWare	SMS Setting	2009/12/16 17:25 Wed
U	sing Up/Down/Left/Right to sel	lect. Enter to change data.	Esc: Back to menu
	SMS SERVER: www.everdy8d.com. ID : eumpsablerex Password: ************** Phone Number: 886912345678	tw	
	Enable event to send Utility Fail Battery Low ByPass UPS Failed Test in Progress ShutDown Active Connect UPS	Enable/Disable [ Disable ] [ Disable ] [ Enable ] [ Disable ] [ Disable ] [ Disable ] [ Disable ]	
	[Send Test]	<pre>Save OK!!==== [Cancel]</pre>	

## 2.7 UPS Schedule (Plan UPS Schedule)

2.7.1 Function and Operation Explanation

UPS Monitor Software Use Right/Left key to select Date Use Up/Down key to select schedul Press Ins key to add a new schedu Date: 2010/ 01 Setting Date.	2010/01/15 18:05 an Schedule Press Enter key to change. e. Press Del key to delete schedule. ile. Esc: Back to menu.
Date Time Event	Repeat Note
01/01 00:00 Self Test Daily 00:00 Test to Battery Low Fri 00:00 Cancel Test 01th 00:00 Shutdown 01/01 00:00 Shutdown and restor	Once Daily Weekly Monthly Te Once Today 08:00 restart of UPS schedule according to date.

List the entire month of UPS schedule according to setting date. Use the Ins key to add schedule and the Del key to delete schedule. The Software will send command to the UPS according to the schedule.

Provide five events and four repeat executions as below:

Schedule	Repeat Execution
Self Test	Once
Test to Battery Low	Daily
Cancel Test	Weekly

Shutdown	Monthly
Shutdown and restore	

## 2.7.2 Refer to UPS Schedule

UPS Monitor Software 2010/01/	15 17:56	i Fri
Plan Schedule		
Use Right/Left key to select Date.Press Enter key to change.		
Use Up/Down key to select schedule.Press Del key to delete schedul		1
Press Ins key to add a new schedule.Esc:Back to menu.		Ĩ
Date: 2010/ 01		
Date Time Event Repeat Note		
<b>II</b>	<u>-</u>	
01/01 00:00 Self Test Once		
Daily 00:00 Test to Battery Low Daily		
01th 1		
01/01 2		
3		
4		
6		
	1	
	- I 🛛 🖉 🛛	

The current month is the schedule default. Use the directional key to select the desired year or month. Upon complete setting, the screen will update the schedule list according to setting date.

#### 2.7.3 Add UPS Schedule



Press Ins key to add UPS schedule. Use directional key to set UPS schedule. Upon complete setting, press Esc key to go back to schedule list.

Date:     2010/01/01     Time: 00:00       Event:     Self Test             Repeat:     Once             Restore:     Time:
Self Test Test to battery low Cancel Test Shut down command Shut down and restart command

Restore and Time setting is required for "Shut down and restart command" only. User can set to switch on UPS today or several days (within the range of 1 to 5 days). If the switch on time is earlier than the shutdown time which is not reasonable, save setting won't be allow.



Restore and Time setting is required for "Shut down and restart command" only.



After adding schedule, click [Save] function to save setting.



#### 2.7.4 Delete UPS Schedule



To delete UPS schedule, Use the directional and Del key to delete.

## 2.8 UPS Event Log (View Event Log)

2.8.1 Function and Operation Explanation

UPS Monitor S	oftware		Fromt Law	2009/12/17	17:34	Thu
Using Right/Left key to select Date.Press Enter key to change Date. Esc:Back to menu.						
Date: <u>2010</u> / 1	Setting	Date.				
	- List-the	entire m	onth UPS event lo	g_according_to	date.	
Date	Time	Machine	Event		1	l İ,
				• • • • • • • • • • • • • • • • • • • •		
2010/01/09	20:40:51	01	Connect			
2010/01/09	20:41:47	01	Connect			
2010/01/09	20:42:50	01	Disconnect			
2010/01/09	20:46:06	01	Connect			
2010/01/09	20:47:00	01	AC Failed			
2010/01/09	20: 47: 27	01	AC Recovery			
2010/01/09	20:48:09	01	Battery Low			
2010/01/09	20:48:59	01	Battery capacity nor	rmal		
2010/01/09	20:49:33	01	In AVR mode			
010/01/09	20: 50: 33					

Provide the entire month UPS event log, user can view all status of UPS quickly via the event log. Lists of recorded event as below:

- To execute and cancel shutdown.
- To execute and complete test command.
- UPS failed and resume work.
- UPS is in AVR mode.
- Battery capacity status.
- Utility failed and resume work.
- Communication is normal.

## 2.8.2 Refer to UPS Event Log

UPS Monitor Software	Event Log	2009/12/17	17:34	Thu
Using Right/Left key to Esc:Back to menu.	select Date. Press Enter key 1	to change Date.		
Date: 2010/ 1				
Date Time	Machine Event			
2010/01/09 20:40:51 2010/01/09 20:41:47	01 Connect 01 Connect			
2010/0   2010/0 1   2010/0 2		Î		
2010/0 3     2010/0 4     2010/0 5				
2010/0 6   2010/0 6   2010/0 <mark></mark>		vi		İ
2010/01/09			<b>⊻</b>	

First it is show current month's event log default. User can view other month's event log using the directional key to select the desired year or month. Upon complete setting, the screen will update the event log list according to setting date.

## 2.9 Configuration of UPS (Configuration Setting)

2.9.1 Function and Operation Explanation

UPS Monitor SoftWare 2010/01/15 14:40
Using Up/Down/Right/Left key to select items. Press Enter to change. ESC:Back to menu.
Setting UPS Configuration and communication.
UPS type : Local-Multiple UPS connect type : RS232 Connect device : /dev/ttyS0
OS shutdown delay time when AC Fail : 0 Min(0 is Disable) OS shutdown delay time when battery low : 0 Min(0 is Disable)
Machine Number : 1 Baud Rate : 2400
Save ] Cancel] Button

Before monitoring UPS, it has to set communication and configuration of UPS. Explain as below.

#### 2.9.2 UPS Type



Use the directional key to select UPS type. You can set monitoring mode which is local or remote monitoring, and machine mode is single or multiple. Selectable items as below:

- Local-Single
- Local-Multiple
- Remote-Single
- Remote-Multiple

#### 2.9.3 UPS connect type



Using directional and Enter key to set mode of communication.

Set UPS connection type is required for Local monitor. Connect type is limited to TCP/IP mode in remote monitor.

Local-Single	Local-Multiple	Remote-Single	Remote-Multiple
Connection Type is RS232 or USB.		Connection Type	is TCP/IP (Only)



2.9.4 Connect device (Connect IP)



UPS Type	Local-Single	Local-Multiple	Remote-Single	Remote-Multiple
Connection	RS232, USB		TCP/IP	
Туре				
Connection	RS232 is required to set a serial		IP Ad	dress
Device	por	t.		



#### 2.9.5 OS shutdown delay time when AC Fail

The function provides to set delay time to shutdown OS when utility failed. When utility failed, software will shut down OS according to delay time and send shutdown message to inform online users. Delay time is between 0 to 99 minutes. 0 minute indicates function disable.

#### 2.9.6 OS shutdown delay time when Battery Low

The function provides to set delay time to shutdown OS when battery low. When battery low, software will shut down OS according to delay time and send shutdown message to inform online users. Delay time is between 0 to 99 minutes. 0 minute indicates function disable.

#### 2.9.7 UPS shutdown delay time

The function provides to set delay time to shutdown ups. When utility failed or executing shutdown schedule, software will shut down UPS according to delay time. When enabling "OS shutdown delay time" function (delay time is more than 0 minute), UPS shutdown time equals OS shutdown delay time plus UPS shutdown delay time. Delay time is between 0 to 99 minutes. 0 minute indicates function

disable when utility failed. But when executing shutdown schedule, delay time is 1 minute default.

## 2.9.8 Machine Number

The function sets the number of machines. In single mode, machine is limited to one. Set the number of machines is only available in multiple mode.

Local-Single	Local-Multiple	Remote-Single	Remote-Multiple
Not allow to set	Allow to set the	Not allow to set	Allow to set the
the number of	number of	the number of	number of
machines.	machines	machines.	machines
(machine is	(range from 1	(machine is	(range from 1
limited one)	to 4 machines)	limited one)	to 4 machines)

## 2.9.9 Baud Rate

The function sets the communication transmission speed of computer. Transmission speed of computer must be the same as machine.

## **3 Troubleshooting**

## 3.1 Symptom: error while loading shared libraries: libtinfo.so.5

When executing software, below message appear on the screen:

error while loading shared libraries: libtinfo.so.5: cannot open shared object file: No such file or directory

Solution:

3.1.1 Install neurses pack.

3.1.2 sudo In -s /lib/libncurses.so.5 /usr/lib/libtinfo.so.5

## 3.2 Symptom: error while loading shared libraries: libtinfo.so.0

When executing software, below message appear on screen:

error while loading shared libraries: libusb-1.0.so.0: cannot open shared object file: No such file or directory

Solution:

3.2.1 Install libusb 1.0 pack.