

The power behind competitiveness

# Delta InsightPower SNMP IPv6 for UPS

**User Manual** 



www.deltaww.com

# **Save This Manual**

This manual contains important instructions and warnings that you should follow during the installation, operation, storage and maintenance of this product. Failure to heed these instructions and warnings will void the warranty.

Copyright©2011 by Delta Electronics Inc. All Rights Reserved. All rights of this User Manual ("Manual"), including but not limited to the contents, information, and figures are solely owned and reserved by Delta Electronics Inc. ("Delta"). The Manual can only be applied to the operation or the use of this product. Any disposition, duplication, dissemination, reproduction, modification, translation, extraction, or usage of this Manual in whole or in part is prohibited without the prior written permission of Delta. Given that Delta will continuously improve and develop the product, changes may be made to the information in this Manual at any time without obligation to notify any person of such revision or changes. Delta will make all possible efforts to secure the accuracy and the integrity of this Manual. Delta disclaims any kinds or forms of warranty, guarantee, or undertaking, either expressly or implicitly, including but not limited to the completeness, faultlessness, accuracy, non-infringement, merchantability or fitness for a particular purpose of the Manual.

# **Table of Contents**

Chapter 1 : Im	npo	rtant Safety Instructions	1
1-	1	Warnings	1
1-3	2	Standard Compliance	1
Chapter 2 : In	tro	duction	2
2-	1	Product Description	2
2-3	2	Features	2
2-2	3	Package Contents	3
2-	4	Interface	4
Chapter 3 : In	sta	llation	б
Chapter 4 : Sy	/ste	em Configurations	10
4-	1	Configuring via InsightPower UPS Web -	10
4-3	2	Configuring with EzSetting	12
4-3	3	Configuring via Telnet	14
4-	4	Configuring through COM Port	15
4-	5	Configuring via Text Mode	17
Chapter 5 : In	sig	htPower UPS Web	23
5-	1	Monitor	24
5-1	1-1	Information	24
		UPS Properties	24
		Battery Parameters	25
		In/ Out Parameters	25
		Identification	26
		Status Indication	26
		Power Module	26
5-1	1-2	History	27
		Event Log	27
		Data Log	28
		Configure	29

5-1-3	Environment	29
	Information	29
	Configuration	30
5-2	Device	31
5-2-1	Management	31
	Configure	31
	Control	33
	Weekly Schedule	35
	Specific Schedule	35
	Event Level	36
5-3	System	37
5-3-1	Administration	37
	User Manager	37
	TCP/ IP	38
	Web	39
	Console	40
	FTP	41
	Time Server	42
	Syslog	43
	Batch Configuration	43
	Upgrade	45
5-3-2	Notification	45
	SNMP Access	45
	SNMPv3 USM	46
	SNMP Trap	47
	Mail Server	48
	Wake On LAN	49
Chapter 6 : SNM	P Device Firmware Upgrade	50
Chapter 7 : Trou	bleshooting	53
Appendix A : Sp	ecifications	59
Appendix B : Wa	rranty	60

# **Chapter 1 : Important Safety Instructions**

# 1-1 Warnings

- The InsightPower SNMP IPv6 for UPS, hereafter referred to as SNMP IPv6, is designed to work with a UPS and needs to be installed inside the UPS's SNMP slot or inside an external SNMP box. Before installation, ensure that all power sources and critical loads connected to the UPS are disconnected.
- Do not place or use this unit in the presence of flammable substances.
- Do not attempt to disassemble the unit.
- Do not attempt to perform any internal modifications on the unit.
- Do not attempt to fix/ replace internal components. When repair is needed, refer all servicing to the nearest Delta service center or authorized distributor.
- Do not allow any objects or liquids of any kind to penetrate the unit.
- Always follow this User Manual to install and operate this unit.
- Do not play the included CD on a conventional CD player. This could generate loud noise at a level that could result in permanent hearing loss.

# **1-2** Standard Compliance

- EN 55022: 2006 + A1: 2007, Class B
   EN 61000-3-3: 1995+A1: 2001+A2: 2005
- EN 55024: 1998 + A1: 2001 + A2: 2003
   IEC 61000-4-2: 1995+A1: 1998+A2: 2000
   IEC 61000-4-3: 2006
   IEC 61000-4-4: 2004
   IEC 61000-4-5: 2005
   IEC 61000-4-6: 2007
  - IEC 61000-4-8: 1993+A1: 2000
  - IEC 61000-4-11: 2004

# **Chapter 2 : Introduction**

# 2-1 Product Description

The InsightPower SNMP IPv6 for UPS is a device that provides an interface between an UPS and a network. It communicates with the UPS, acquires its information and remotely manages the UPS via a network system. The SNMP IPv6 supports public protocols including SNMP and HTTP. You can effortlessly configure this SNMP IPv6 using a network system and easily obtain your UPS's status and manage your UPS via the SNMP IPv6.

# 2-2 Features

#### • Network UPS management

Allows remote management of the UPS from any workstation through Internet or Intranet.

#### • Remote UPS monitoring via SNMP & HTTP

Allows remote monitoring of the UPS using SNMP NMS, Delta MIB (Management Information Base) or a Web Browser.

# • UPS and system function configuration from any client (password protected)

Sets the UPS and system parameters through a Web Browser.

#### • Event logs & metering data keeping

Provides a history data of the UPS's power events, power quality, status and battery conditions.

#### Other features and supported protocols include:

- User notification via SNMP Traps and e-mail
- Network Time Protocol
- Telnet configuration
- BOOTP/ DHCP

- HTTPS, SSH, SFTP and SNMPv3 security protocols
- RADIUS (Remote Authentication Dial In User Service) login and local authentication
- Remote event log management through syslog
- IPv4 and IPv6

# 2-3 Package Contents

Please carefully verify the SNMP IPv6 and the included accessories. Contact your dealer if any item is missing or damaged. Should you return the items for any reason, ensure that they are carefully repacked using the original packing materials came with the unit.



No.	ltem	Quantity
0	InsightPower SNMP IPv6 for UPS	1 PC
2	RJ45 to DB9 cable	1 PC
8	Software & User's Manual CD	1 PC
4	Cover	3 PCS

# 2-4 Interface

The interface includes NETWORK port, COM port, NET LED, UPS LED, RESET button and dip switch shown below. For their functions and indications, please refer to the table below.



#### No. ltem Description

NET LED (Green) indicates network communication status. UPS 4 LED Indicators LED (Yellow) indicates UPS communication status.

NET LED (Green)	UPS LED (Yellow)	Description		
OFF		Hardware or network errors		
	Blinks every second	UPS disconnection		
Without EnviroProbe				
ON	Blinks every 50 ms Normal operation			
With EnviroProbe				
Blinks every 50 ms	Blinks every 50 ms	Normal operation		
ON	Blinks every 50 ms	EnviroProbe disconnection		

6

DIP

Sets up operation mode.

Switch
--------

Dip 1	Dip 2	Operation Mode	Description
OFF	OFF	Normal Mode	The SNMP IPv6 works with the UPS. It provides the UPS's status information and parameters through a network system.
OFF	ON	Pass Through Mode	The SNMP IPv6 stops polling the UPS but transfers the communication data between the console port and the UPS.
ON	OFF	Sensor Mode (with EnviroProbe)	The SNMP IPv6 works with the UPS and an optional EnviroProbe. It provides the UPS's information and the environmental parameters (temperature, humidity, etc).
ON	ON	Configuration Mode	In this mode, the user can login through the console port and configure the SNMP IPv6's settings. Please refer to <b>4-4 Configur-</b> <i>ing through COM Port</i> .

NOTE 🗲 Ŵ

For EnviroProbe information, please refer to the Installation Guide included in the package of the EnviroProbe.

# **Chapter 3 : Installation**

# NOTE Before installation, please disconnect all power sources and critical loads connected to the UPS. Otherwise, the SNMP IPv6 might have shorting issues to cause UPS shutdown or damage.

Please install the SNMP IPv6 inside your UPS's SNMP slot. If your UPS does not have any SNMP slot, please install it in an optional external SNMP box.

- Please follow the procedures below to install the SNMP IPv6 into your UPS's SNMP slot.
  - **Step 1** Remove the cover and the two screws shown from the UPS's SNMP slot (*see Figure 3-a*).





Please note that, due to different design, the location of screws for each UPS's SNMP slot might be different.

**Step 2** Find the two grooves inside the SNMP slot (see Figure 3-b).



**Step 3** Insert the SNMP IPv6 into the grooves (see Figure 3-c).



**Step 4** There are three covers provided in the SNMP IPv6's package. Please follow the location of screw holes on the SNMP slot to select the suitable cover, and use the two screws that you just removed to fix the cover on the SNMP slot (*see Figure 3-d*).



- Please follow the procedures below to install the SNMP IPv6 into an external SNMP box.
  - **Step 1** Remove the two screws shown from the external SNMP box (*see Figure 3-e*).



**Step 2** Find the two grooves inside the external SNMP box (see Figure 3-f).



**Step 3** Insert the SNMP IPv6 into the grooves (see Figure 3-g).



**Step 4** There are three covers provided in the SNMP IPv6's package. Please follow the location of screw holes on the external SNMP box to select the suitable cover, and use the two screws that you just removed to fix the cover on the external SNMP box (*see Figure 3-h*).



E	<u>`</u>			
The ba	Ackside view of	f the external SNMP box is shown as follows.		
	<ol> <li>Power Jack</li> </ol>	RS232 Port 10-pin Connector		
No.	ltem	Description		
0	Power Jack	Connects your UPS's output. The input powe should be 12Vdc.		
2	RS232 Port	Use the RS232 cable provided by your UPS to connect your UPS's RS232 port.		
3	10-pin Connector	Connects your UPS's PC board. Please ask quali fied service personnel to execute such connec tion. Do not perform the connection yourself.		
Please refer to the table below for the external SNMP box's specifications.				
External SNMP Box Specifications				
Pov	ver Jack	Input Power 12Vdc		
RS232 Port		D-Sub 9-Pin Male		
10-	pin Connecto	r Male		
Size	e (W×D×H)	92.4 x 208 x 42 mm		
Wei	ight	540 g		

# **Chapter 4 : System Configurations**

There are different ways you can configure your InsightPower SNMP IPv6. If a network connection is available at your location, the following methods can be used.

- Web-based **InsightPower UPS Web** (please refer to **Chapter 5: InsightPower UPS Web**). This offers complete system management and monitoring.
- Provided program **EzSetting** (Please refer to **4-2** Configuring with EzSetting)
- Telnet mode (please refer to 4-3 Configuring via Telnet)

The above-mentioned methods require network connection. If it is not available at your location, you can use direct COM port connection to set up your InsightPower SNMP IPv6. Please see **4-4 Configuring through COM Port**.

- 1. To ensure system security, it is highly recommended that you change your account and password after the first login.
- If you have other SNMP IPv6 units connected in your network, we highly suggest that you change the SNMP IPv6's default Host Name to avoid Host Name conflicts. Also, it is recommended that you disable BOOTP/ DHCP and manually assign a valid static IP address for the SNMP IPv6.

# 4-1 Configuring via InsightPower UPS Web

To set up the SNMP IPv6 via the **InsightPower UPS Web**, please see the following instructions:

Step 1 Use a CAT5 cable to connect the SNMP IPv6's network port and the network. Launch your Web Browser and enter default Host Name Insight-Power or the SNMP IPv6's default IP 192.168.1.100 in the address box. If you are unable to connect, please see Chapter 7: Troubleshooting Q6.

If you have previously changed the SNMP IPv6's Host Name or IP address, make sure to provide the correct information accordingly.

- Step 2 Log in as Administrator (default account/ password: admin/ password, case sensitive). Click System → Administration → User Manager. Manage your login accounts and passwords under the "Local Authentication" subhead. The access permission for the account types are listed as follows:
  - 1) Administrator: Permitted to modify all settings.
  - 2) Device Manager: Permitted to modify device-related settings.
  - 3) Read Only User: Only permitted to observe monitoring data.

You can manually specify whether users are allowed to log in from external connections (from other LANs). Selecting **Only in This LAN** will block login attempts from external connections. Selecting **Allow Any** will allow these attempts.

- Step 3 Click System → Administration → TCP/ IP to set Host Name, IP address, Subnet Mask and Gateway IP for the SNMP IPv6.
- **Step 4** Click **Time Server** to manually set time and date for the system, or enable automatic time synchronization between the SNMP IPv6 and the time servers.



To configure all InsightPower SNMP IPv6's settings including system information, input/ output management, system administration, event notifications and event history, please refer to **Chapter 5: InsightPower UPS Web** – **5-1 Monitor, 5-2 Device, 5-3 System**.

# 4-2 Configuring with EzSetting

One of the easiest ways to configure the SNMP IPv6 is utilizing **EzSetting** (Compatible with Windows systems), a program you can find in the provided CD. You can use it to set up your InsightPower SNMP IPv6 and perform firmware upgrades on your SNMP devices.

- Step 1 Set up a workstation (Windows 2000/ 2003/ 2008/ XP/ Vista/ Win7 or later version).
- **Step 2** Use a CAT5 cable to connect the SNMP IPv6's network port and the network.
- **Step 3** Make sure both of the DIP switches of the SNMP IPv6 are set to the **OFF** position (normal mode) to enable network transmission, and make sure the workstation and the SNMP IPv6 are on the same LAN.
- **Step 4** Insert the provided CD in the CD-ROM drive. From the root directory, launch **EzSetting**.
- Step 5 Click Discover to search all SNMP devices on the LAN. A list of devices will be shown.

Press "Discover" button to search all of the SNWP devices in the LAN.     Discover     Then select one of device in the "Device List" which you would like to configure or upprade it. But     before to do that please provide the account name and password by pressing the "Modify" button.     "Configuration" is used to setup the IP address, netmask, enable or disable     "Onfiguration     "Upgrade" button is used to load the device firmware file then transmit it to     "upgrade" button is used to load the device firmware file then transmit it to     "Device List     "Peddress     Host Name Account Password Version Model/Product     _add     _add	InsightPower E2Setting v2.0.6			
Device List IP Address Host Name Account Password Version Model/Product Add	Press "Discover" button to search all of the SNI Then select one of device in the "Device List" w before to do that please provide the account n     "configuration" is used to setup the IP address networking services     "Upgrade" button is used to load the device firs the single selected device. (Ignore the checkbo	MP devices in the LAN.	Discover         LAN           rupgrade it. But * Modify* button.         172.16.186.104           subnet:         Subnet:           jonfiguration         172.16.186.0           IPv4 Mask / IPv6 Prefix leng         255.255.254.0	▼  th:
172.016.186.035       POU1       PPU1113       OI       Add an new item of SNMP device to the Device List manually.         172.016.186.053       POU2       PPU1113       OI       Display item of SNMP device to the Device List manually.         172.016.186.053       POU2       PPU1113       OI       Display item of SNMP device to the Device List manually.         172.016.186.132       INSIGHTPOW       PPU2PPPP       1.166       GES-102R1120       OI         172.016.186.132       INSIGHTPOW       PP2PPP       1.16h       GES-102R1120       OI         Select All       Deselect All       Period of the devices which are listed in the Device List then press the       Extension	Device List         IP Address         Host Name         Account           172.016.186.161         EMS1         172.016.186.175         POUL           172.016.186.132         POUL         172.016.186.135         POUL           172.016.186.132         INSIGHTPOW         172.016.186.132         INSIGHTPOW           172.016.186.132         INSIGHTPOW         172.016.186.132         INSIGHTPOW           172.016.186.132         INSIGHTPOW         Image: Select All         Image: Select All           Please mark the checkbon of the devices which         Image: Select All         Image: Select All         Image: Select All	Password Version Modely ???????? 01.11.02 EMS2( ???????? 01.11.00 POU ??????? 01.11.09 POU ??????? 01.11.0e GES203 ???????? 1.16h GES-102	I/Product     Add       200000     00       Add an new item of SNIVP dex       U113     00       b the Device List manually.       SNH20098     00       22R1120     00       Set the account and password for the selected device.       Remove       Remove the selected device from the Device List.	rice



Step 6 Select a device from the Device List, click Modify, and key in Administrator account and password. Default account/ password: admin/ password (case sensitive).

IP & Account				
SNMP Device Address				
IP Address:	172 . 16 . 176 . 150			
	Administrator Acco	ount		
Account:	admin	Default: admin		
Password:	****	Default: password		
ОК				

**Step 7** Click **Configuration** and set up essential parameters.

Configuration	
System Identification	System Configuration
*Host Name(NetBIOS): IP2	*IP Address: 172 . 16 . 186 . 234
System Contactor:	*Subnet Mask: 255 , 255 , 254 , 0
System Location:	Gateway IP: 172 . 16 . 186 . 254
Date/Time	DNS IP: 172 . 16 . 176 . 188
⊙ *SNTP ○ Manual	BOOTP/DHCP Client: O Enable • *Disable
Time Zone: GMT+08 Beijing, Taipei	HTTP Server:      Enable      Disable
*1st Time Server Name or IP: 172.16.186.116	Telnet Server: ③ Enable   〇 Disable
2nd Time Server Name or IP:	HTTP Server Port: 80
Set Current Time: Date 07/26/2006 (MM/DD/YYYY)	Telnet Server Port: 23
Time 12:00:00 (hh:mm:ss)	User Limitation
	Administrator: 💿 In The LAN O Allow Any
Reset to Default OK Cancel	Device Manager: ③ In The LAN O Allow Any
It is recommended to provide a static "IP Address" and disable the "BOOTP/DHCP Client" option.	Read Only User:  In The LAN O Allow Any
If it is the first time to configure your InsightPower device, pl given a "Time Server" for the device throught "SNTP" protoc	lease assign an unique name in the "Host Name" field and ol if possible.

# 

To configure all InsightPower SNMP IPv6's settings including system information, input/ output management, system administration, event notifications and event history, please refer to **Chapter 5: InsightPower UPS Web**.

# 4-3 Configuring via Telnet

- **Step 1** Use a CAT5 cable to connect the SNMP IPv6's network port and the network.
- **Step 2** Set up a workstation (Microsoft Windows, Max OSX or Linux). Connect the workstation to the same LAN which the SNMP IPv6 is connected to.
- **Step 3** Make sure both of the DIP switches of the SNMP IPv6 are set to the **OFF** position (normal mode).
- Step 4For Windows workstations, launch DOS prompt mode (Start  $\rightarrow$  Run<br/> $\rightarrow$  key in cmd and press Enter). For Linux, launch shell.
- **Step 5** Enter the following command: **telnet InsightPower** to initiate telnet connection with the SNMP IPv6.
- Step 6 When connection is established, enter account and password (default: admin/ password, case sensitive). The Main Menu will appear on the screen. Please refer to 4-5 Configuring via Text Mode for more information.

# 

- 1. The SNMP IPv6 will terminate idle connections after 60 seconds.
- To configure all InsightPower SNMP IPv6's settings including system information, input/ output management, system administration, event notifications and event history, please refer to *Chapter 5: InsightPower UPS Web*.

# **4-4 Configuring through COM Port**

If network connection is not available at your location, you can still manage the SNMP IPv6 by using the COM port connection. Please follow the instructions below.

If you are running on a non-Windows system, refer to your system's User Manual for Telnet clients.

- Step 1 Set up a workstation (Microsoft Windows 2000, 2003, 2008, XP, Vista or 7).
- **Step 2** Use the provided RJ45 to D89 cable to connect the SNMP IPv6's COM port and the workstations' COM port.
- **Step 3** Make sure both of the DIP switches of the SNMP IPv6 are set to the **OFF** position (normal mode).
- Step 4 For workstations running Windows 2000, 2003, 2008 or XP, go to Start → Programs → Accessories → Communications and select HyperTerminal.



NOTE 📝

Microsoft has removed HyperTerminal from Windows Vista and later versions. For workstations running these systems, you can still download a free Telnet/ SSH client 'PuTTY' from http://www.putty.org.

Step 5 Enter a name and choose an icon for the connection. Click OK to continue. From the dropdown list Connect using, select the COM port that is connected to the SNMP IPv6.

Connect To
8
Enter details for the phone number that you want to dial:
Country/region: Taiwan (886)
Enter the area code without the long-distance prefix.
Area code: 06
Phone number:
Connect using: COM3
Configure Configure Detect Carrier Loss Use country/region code and area code Redial on busy
OK Cancel

**Step 6** Click **Configure** and set up COM port parameters as follows:

COM3 Properties	? ×
Port Settings	1
Bits per second: 2400	<b></b>
Data bits: 8	-
Parity: None	-
Stop bits: 1	-
Flow control: None	•
	Restore Defaults
ОК	Cancel <u>Apply</u>

Step 7 Click OK to continue and set both of the DIP switches of the SNMP IPv6 to the ON position (configuration mode). HyperTerminal will automatically connect to the SNMP IPv6. If it does not connect, click the telephone icon call from the icon list. When connection is established, log in with account/ password. (Default: admin/ password, case sensitive). Once you are logged in, the Main Menu appears on the screen. Please refer to 4-5 Configuring via Text Mode for more information.

# 4-5 Configuring via Text Mode

You can configure the SNMP IPv6 via text mode by using Telnet/ SSH clients such as HyperTerminal and PuTTy. In this section, you can find descriptions and default values for each item in the table.

### Main Menu



### User Manager

+   User Manag +	ger   ====================================	
RADIUS	Disable	
[2].Server:		
[3].Secret: [4].Port:	1812	
Logal Auth		
Administrate	or	
[5].Account:	admin	
[6].Password: [7].Limitation:	Only in This	LAN
Device Manag	Jer	
[8].Account:	device	
[a].Limitation:	Only in This	LAN
Read Only Us	ser	
[b].Account:	user	
[d].Limitation:	Allow Any	
[0].Back To Prev	vious Menu	
Please Enter You	ir Choice =>	

No.	ltem	Description	Default
[1]	RADIUS Auth	Specify whether RADIUS login is al- lowed	Disable
[2]	Server	The RADIUS server name	
[3]	Secret	The RADIUS secret	
[4]	Port	The RADIUS port number	1812
[5]	Administrator Account	The default account/ password for the	admin
[6]	Administrator Password	Administrator (case sensitive)	password
[7]	Administrator Limitation	Restrict Administrator login area	Only in This LAN
[8]	Device Manager Account	The default account/ password (case sensitive) for the Device Manager who	device
[9]	Device Manager Password	is only permitted to change device- related settings	password
[a]	Device Manager Limitation	Restrict login area of the Device Man- ager	Only in This LAN
[b]	Read Only User Account	The default account/ password (case	user
[c]	Read Only User Password	only observe settings	password
[d]	Read Only User Limitation	Restrict login area of the Read Only User	Allow Any

## TCP/IP Setting

+   TCP/IP Setting +	==+   ==+
<ol> <li>[1].IPv4 Address:</li> <li>[2].IPv4 Subnet Mask:</li> <li>[3].IPv4 Gateway IP:</li> <li>[4].IPv4 DNS or WINS IP</li> </ol>	192.168.001.100 255.255.255.000 192.168.001.254 :192.168.001.001
<pre>[5].DHCPv4 Client: [6].IPv6 Address: [7].IPv6 Prefix Length: [8].IPv6 Gateway IP: [9].IPv6 DNS IP: [a].DHCPv6:</pre>	Enable fe80::230:abff:fe25:900 64 :: :: Enable
<pre>[b].Host Name(NetBIOS): [c].System Contact: [d].System Location:</pre>	INSIGHTPOWER
<pre>[e].Auto-Negotiation: [f].Speed: [g].Duplex: [h].Status Stable: [0].Back To Previous Mention [].Back To Previous Mention</pre>	Enable 100M Full 3 nu
Please Enter Your Choice	

No.	ltem	Description	Default
[1]	IPv4 Address	The IPv4 address	192.168.001.100
[2]	IPv4 Subnet Mask	The IPv4 subnet mask setting	255.255.255.000
[3]	IPv4 Gateway IP	The IPv4 network gateway	192.168.001.254
[4]	IPv4 DNS or WINS IP	IPv4 Domain Name Server or WINS IP	192.168.001.001
[5]	DHCPv4 Client	Enable/ Disable DHCPv4 protocol	Enable
[6]	IPv6 Address	The IPv6 address	
[7]	IPv6 Prefix Length	The IPv6 prefix length	
[8]	IPv6 Gateway IP	The IPv6 network default gateway	
[9]	IPv6 DNS IP	IPv6 Domain Name Server IP address	
[a]	DHCPv6	Enable/ Disable DHCPv6 protocol	Enable

No.	ltem	Description	Default
[b]	Host Name (NetBIOS)	The Host Name for the SNMP IPv6	INSIGHTPOWER
[c]	System Contactor	The System Contactor informa- tion	
[d]	System Location	The System Location information	
[e]	Auto-Negotia- tion	Enable/ Disable automatic trans- fer rate (10/ 100M bps) negotia- tion	Enable
[f]	Speed	If the Auto-Negotiation is dis- abled, you can specify the trans- fer rate	100M
[g]	Duplex	If the Auto-Negotiation is dis- abled, you can specify the duplex mode	Full
[h]	Status Stable	Status change confirmation check time	3

### Network Parameter

+   Network Parameter +	+   + 
[2] HTTPS Server.	Enable
[2] Tolpot Corror:	Enable
[J] SCH/SEED Sorwork	Enable
[4].SSH/SFIF Server:	Disable
[5].FIF SELVEL.	Disable
[7] HTTP Server Port:	80
[8].HTTPS Server Port:	443
[9].Telnet Server Port:	23
[a].SSH Server Port:	22
[b].FTP Server Port:	21
[c].Syslog Server1:	
[d].Syslog Server2:	
<pre>[e].Syslog Server3:</pre>	
<pre>[f].Syslog Server4:</pre>	
[g].SNMP Get,Set Port: 1	61
[0].Back To Previous Menu	
Please Enter Your Choice	=>

No.	ltem	Description	Default
[1]	HTTP Server	Enable/ Disable HTTP protocol	Enable
[2]	HTTPS Server	Enable/ Disable HTTPS protocol	Enable
[3]	Telnet Server	Enable/ Disable Telnet protocol	Enable
[4]	SSH/ SFTP Server	Enable/ Disable SSH/ SFTP protocol	Enable
[5]	FTP Server	Enable/ Disable FTP protocol	Disable
[6]	Syslog	Enable/ Disable remote syslog	Disable
[7]	HTTP Server Port	HTTP networking port	80
[8]	HTTPS Server Port	HTTPS networking port	443
[9]	Telnet Server Port	Telnet networking port	23
[a]	SSH Server Port	SSH networking port	22
[b]	FTP Server Port	FTP networking port	21
[c]	Syslog Server1	The remote syslog Host Name	
[d]	Syslog Server2	The remote syslog Host Name	
[e]	Syslog Server3	The remote syslog Host Name	
[f]	Syslog Server4	The remote syslog Host Name	
[g]	SNMP Get, Set Port	The SNMP networking port	161

### Time Server

You can manually adjust time and date for the SNMP IPv6 or set up automatic time server synchronization. The SNMP IPv6, Windows XP and later versions work with SNTP (Simple Network Time Protocol). If you need to start up a time server service on your workstation, please refer to *Chapter 7: Troubleshooting* **Q1**.

+   Time Server +	
<ol> <li>[1].Time Selection:</li> <li>[2].Time Zone:</li> <li>[3].1st Time Server:</li> <li>[4].2nd Time Server:</li> <li>[5].Manual Date:</li> <li>[6].Manual Time:</li> <li>[0].Back To Previous</li> </ol>	SNTP +0 hr POOL.NTP.ORG 01/01/2000 (MM/DD/YYYY) 00:00:00 (hh:mm:ss) Menu
Please Enter Your Cho	pice =>

No.	ltem	Description	Default
[1]	Time Selection	SNTP or manual	SNTP
[2]	Time Zone	Select the time zone	+0 hr
[3]	1 <sup>st</sup> Time Server	The first time server for SNTP	POOL.NTP.ORG
[4]	2 <sup>nd</sup> Time Server	The second time server for SNTP	
[5]	Manual Date	Set the date manually	01/01/2000
[6]	Manual Time	Set the time manually	00:00:00

### Soft Restart

Reset the SNMP IPv6. This will not affect the operation of the UPS.

### Default Reset

Reset to manufacture default.

### Exit Without Saving

Exit and ignore changes.

### Save and Exit

Preserve your changes and exit.

# Chapter 5 : InsightPower UPS Web

To configure the SNMP IPv6 via the InsightPower UPS Web, please follow the steps below:

- **Step 1** Make sure that your InsightPower SNMP IPv6 is connected to the LAN. Use a CAT5 cable to connect the SNMP IPv6's network port and the network.
- Step 2 Launch your Web Browser. Enter the SNMP IPv6's Host Name http:/InsightPower/ or IP address http://192.168.1.100/ in the address bar. For encrypted connection, enter https://InsightPower/ or https://192. 168.1.100/.
- **Step 3** When connection is established, the **InsightPower UPS Login** page appears. Enter your account and password. (Default: admin/ password).

C 1 http://192.168.1.1	20/	
	InsightPower UPS Login	
	User Name :	
	Password:	
	Site IP: 172.16.186.82	
	Copyright W, All rights reserved.	

- 1. If you have previously changed the SNMP IPv6's Host Name or IP address, make sure to provide the correct information accordingly.
- If the login page is accessible, but you are unable to log in with correct account and password, additional network configuration is needed. The cause could be the IP subnet of the computer you are logging in to is different from the SNMP IPv6's. To solve this issue, please refer to Chapter 7: Troubleshooting Q3.
- The SNMP IPv6 will automatically log off idle connections after 30 minutes.

The **InsightPower UPS Web** includes the information of **Monitor**, **Device** and **System**. Please refer to the following sections *5-1~5-3* for more information.

# 5-1 Monitor

Under the Monitor category, there are Information, History and Environment these three items.

# 5-1-1 Information

This includes the information of UPS Properties, Battery Parameters, In/ Out Parameters, Identification, Status Indication, and Power Module. Please note that since different UPSs provide different information, the UPS that you have may not display the same web page.

### UPS Properties

Go to **Monitor**  $\rightarrow$  **Information**  $\rightarrow$  **UPS Properties** to see a status overview of the UPS's major parameters. The values will be updated automatically.



### Battery Parameters

Go to **Monitor**  $\rightarrow$  **Information**  $\rightarrow$  **Battery Parameters** to view the information of Battery Status, Battery Measurement, Battery Cabinet and Replacement Date.

ADELTA	-		InsightPov	ver UPS Web	Logout English 🗸
POWER & COOLING SOLUTION:	The power	behind competitiveness		System Time : Thu	02/10/2011 AM 10:01:0
Monitor	Device	System			
Information	History	Environment			
UPS Properties	0 1	Aonitor » Information » Battery P	arameters		
Battery Parameter	s 🔿	Battery Parameters		Replacement Date	
In/Out Parameters	0	Battery Status		Last Battery Replacement Date:	
invour arameters	-	Battery Status: Normal		12/30/2009(MM/DD/YYYY)	
Identification	0	On Battery Time: 0	Seconds	Next Battery Replacement Date: 12/31/2012/www.po/xxxxy	
Status Indication	0	Battery Measureme	ent		
		Battery Capacity: 100	55		
Power Module	0	Voltage: 240.0 Temperature: 50	v Tc		
		Battery Cabinet	Contract_25		
		Cabinet 1 Temperature: 25	-c		
		Cabinet 2 Temperature: 22	°C		
		Cabinet 3 Temperature: 23	°C		
		Cabinet 4 Temperature: 22	-c		

### In/ Out Parameters

Go to **Monitor**  $\rightarrow$  **Information**  $\rightarrow$  **In/ Out Parameters** to view the information of Input Measurement, Bypass Measurement and Output Measurement.

ADELTA				InsightP	ower UPS Web			🔁 Но	me 🗖	Logout E	nglish
OWER & COOLING SOLUTIONS	The power l	behind competitiveness					s	ystem	Time : T	'hu 02/10/2011	AM 10:01
Monitor	Device	System									
Information	History	Environment									
UPS Properties	0	Ionitor » Information » I	n/Out Para	meters							
Battery Parameters	0	In/Out Parameter	ers		Output Measure	urem	ent				
In/Out Parameters	0	Input Mea	surement		Output Source:	Norm	al				
Identification	0	P. Frequency: 60 Voltage: 22	P-2 .0 60.0 0.0 220.0	P-3 60.0 Hz 220.0 V	Voltage:	P-1 220.0	P-2 220.0	P-3 220.0	V		
Status Indication	0				Power:	220	225	223	Watt		
Power Module	0	Bypass Me Frequency: 60 P- Voltage: 22	asuremen .0 Hz 1 P-2 0.0 220.0	P-3 220.0 V	Loading:	5	5	5	*		

### Identification

Go to **Monitor**  $\rightarrow$  **Information**  $\rightarrow$  **Identification** to view the information of Identification and UPS Rating.

ADELT		InsightPov	ter UPS Web	ogout English
OWER & COOLING SOLUTION	5 The powe	er behind competitiveness	System Time : Thu	02/10/2011 AM 10:01
Monitor	Device	System		
Information	Histor	ry Environment		
UPS Properties	0	Monitor » Information » Identification		
Battery Parameters	0	Identification	UPS Rating	
In/Out Parameters	0	Model: GES803NH20098 Type: 3 phase	VA: 80 kVA Power: 64 kW	
Identification	0	Web Firmware: 01.11.0e Serial Number: 1234567890	Output Voltage: 220 v Output Voltage: 220 v Bypass Voltage: 220 v	
Status Indication	0		Frequency: 60.0 Hz Battery Voltage: 240 v	
Power Module	0		Low Transfer Voltage: 230 v	

### Status Indication

Go to **Monitor**  $\rightarrow$  **Information**  $\rightarrow$  **Status Indication** to view the UPS's event list. When an event occurs, its according beacon lights green.

A DELTA			InsightPower UPS Web	🔂 Home 🗖 Logout	English 💊
POWER & COOLING SOLUTION	s The powe	er behind competitiveness		System Time : Thu 02/10/201	AM 10:01:
Monitor	Device	System			
UPS Properties	0	Monitor » Information » Status Inc	fication		
Battery Parameters	0	Status Indication			
In/Out Parameters	0	Conomic Mode	OUPS Disconnect	Output Over Voltage	
Identification	0	Buzzer Enabled	Buzzer Alarm Input Out Of Range Battery Low	Output Onder Voltage Overload	
Status Indication	0		Battery Depleted Battery Need Replace	Other Warning Fan Abnormal	
Power Module	0		Battery Ground Fault     Go Test In Progress     Test Fail     Go Uput Off     On Manual Bypass     On Reserve     UPS System Off     GUPS System Off	Fuse Abnormal     Inverter Abnormal     Charger Abnormal     Bypass Out Of Range     Emergency Power Off     Power Module Abnormal	

### Power Module

Go to **Monitor**  $\rightarrow$  **Information**  $\rightarrow$  **Power Module** to view the information of Power Module Bypass and Power Module ID1/ 2/ 3/ 4. Please note that this page only appears when your UPS has designated power modules.

ADELTA			InsightPowe	r UPS Web	🔂 Home 🗖 Logout	English
POWER & COOLING SOLUTION	The powe	er behind competitiveness			System Time : Thu 02/10/2	2011 AM 10:01:
Monitor	Device	System				
Information	Histor	ry Environment				
UPS Properties	0	Monitor » Information » Power	Module			
Battery Parameters	0	Power Module Bypas	\$			
In/Out Parameters	0	<ul> <li>Bypass Voltage/Frequence</li> <li>Bypass Phase Sequence</li> </ul>	y Abnormal Abnormal			
Identification	0	<ul> <li>Bypass STS Overload</li> <li>Bypass STS Over Temper</li> </ul>	ature			
Status Indication	0	Bypass STS Fail				
Power Module	0	Power Module				
		ID1	ID2	103	ID4	
		PFC Temp.: 30 C Inverter Temp.: 30 C Inverter-R Volt: 220.0 v Inverter-S Volt: 220.0 v	PFC Temp.: 30 C Inverter Temp.: 30 C Inverter-R Volt 220.0 v Inverter-S Volt 220.0 v	PFC Temp.: 30 C Inverter Temp.: 30 C Inverter-R Volt: 220.0 v Inverter-S Volt: 220.0 v	PFC Temp.: 30 °C Inverter Temp.: 30 °C Inverter-R Volt: 220.0 v Inverter-S Volt: 220.0 v	
		Inverter-T Volt: 220.0 V	Inverter-T Volt 220.0 V	Inverter-T Volt: 220.0 V	Inverter-T Volt 220.0 V	

## 5-1-2 History

### Event Log

Go to **Monitor**  $\rightarrow$  **History**  $\rightarrow$  **Event Log**  $\rightarrow$  Page 1/2/3/4 to see events that occur. The existing ones are overwritten when the maximum number of entries (1,000) is reached. You can also download the entire event log archive (event\_log.xls) recorded during an assigned period of time on your computer.

<b>⊦ → C</b> ☆ h	ttp://192.168.	1.100/			
ADELT	2	/		Insigl	tPower UPS Web
POWER & COOLING SOLUTI	ons The powe	r behind competitiv	reness		System Time : Thu 02/10/2011 AM 10:01:37
Monitor	Device	System			
Information	History	y Environ	ment		
Event Log	0	Monitor » History	» Event Log »	Page1	
Data Log	0	Event Log	9		
		<ul> <li>Page </li> <li>From 02/*</li> </ul>	123 10/2011 (MN	4 >> Dov	wnload All Download Event Log from UPS
		Date	Time	Level	Event Log
		02/10/2011 02/10/2011	10:00:54 09:59:02	System System	"admin" login to the WEB from 172.16.186.183 Logout from the WEB
		02/10/2011 02/10/2011 02/10/2011	09:58:05 09:56:14 09:55:56	System System	"admin" login to the TELNET from 172.16.186.114 "admin" login to the WEB from 172.16.186.183
		02/10/2011 02/10/2011	09:55:05 09:54:28	System System	"admin" login to the WEB from 172.16.186.183 "admin" login to the WEB from 172.16.186.114
		02/10/2011 02/10/2011	09:52:08 09:40:20	Warning System	Environment sensor connect Logout from the WEB
		02/10/2011 02/10/2011	09:40:11 09:29:49 09:29:44	System	"admin" login to the WEB from 1/2.16.186.183 Logout from the WEB "admin" login to the WEB from 1/2.16.186.183
		02/10/2011 02/10/2011	09:21:42 09:17:55	Warning System	Environment sensor disconnect "admin" login to the WEB from 172.16.186.249
		02/10/2011 02/10/2011	09:16:58	System System	"admin" login to the TELNET from 172.16.186.114 "admin" login to the WEB from 172.16.186.118
		02/10/2011 02/10/2011 02/10/2011	08:42:03 08:39:44	System System	"admin" login to the WEB from 172.16.186.114 "admin" login to the WEB from 172.16.186.114

- Date: The date when the event occurred.
- **Time:** The time when the event occurred.
- Level: The Event Level of the event occurred.
- **Event Log:** The description of the event that occurred.
- Download Event Log from UPS

The SNMP IPv6 sends a request to the UPS, collects the event logs saved in the UPS, and replies to the user through network. Please note that this option only appears when the UPS supports this function, and the event logs saved in the UPS may be different from the event logs saved in the SNMP IPv6.

#### Data Log

Go to **Monitor**  $\rightarrow$  **History**  $\rightarrow$  **Data Log** to see all saved device data. You can also download the data archive (data\_log.xls) recorded during an assigned period of time on your computer.

→ C ☆ ht	tp://192.168	.1.100/									
ADELT	1	/		InsightPov	ver UPS We	b		🟦 Но	me 📮	Logout	English 🗸
POWER & COOLING SOLUTIO	NS The powe	er behind competitiveness					5	System	Time : Th	u 02/10/201	1 AM 10:01:
Monitor	Device	System									
Information	Histor	ry Environment									
Event Log	0	Monitor » History » Data	Log » 02/10/	2011 ~ 02/10/201	11						
Data Log	0	Data Log									
Configure	0										
	_	From 02/10/2011	(MM/DD/YYYY)	to 02/10/2011	(MM/DD/YYYY) API	Doi	wnload				
		Date Time	In Fren	In Volt	In ; In ; Out	Out	Out :	Out	Out By	Fren By V	
				Lo Hi	Amp Pwr Freq	Volt	Amp	Pwr	Load O		
		02/10/2011 09:59:28	60.0Hz 2	20.0V 220.0V	60.0Hz	220.0V	1.0A 2	220W	5% 60	0Hz 220	0V
		02/10/2011 09:49:28	60.0Hz 2	20.0V 220.0V	60.0Hz	220.0V	1.0A 1	22000	5% 60	0Hz 220	01
		02/10/2011 09:29:28	60.0Hz 2	20.0V 220.0V	60.0Hz	220.0V	1.0A 3	220W	5% 60	0Hz 220	ov
		02/10/2011 09:19:27	60.0Hz 2	20.0V 220.0V	60.0Hz	220.0V	1.0A	220W	5% 60	0Hz 220	ov
		02/10/2011 09:09:27	60.0Hz 2	20.0V 220.0V	60.0Hz	220.0V	1.0A 2	220W	5% 60	0Hz 220	0V
		02/10/2011 08:59:27	60.0Hz 2	20.0V 220.0V	60.0Hz	220.0V	1.0A 3	220W	5% 60	0Hz 220	0V 🛄
		02/10/2011 08:49:27	60.0Hz 2	20.0V 220.0V	60.0Hz	220.0V	1.0A 2	220W	5% 60	0Hz 220	٧0
		02/10/2011 08:39:27	60.0Hz 2	20.0V 220.0V	60.0Hz	220.0V	1.0A 3	220W	5% 60	0Hz 220	0V
		02/10/2011 08:29:27	60.0Hz 2	20.0V 220.0V	60.0Hz	220.0V	1.0A 2	220W	5% 60	0Hz 220	0V
		02/10/2011 08:19:27	60.0Hz 2	20.0V 220.0V	60.0Hz	220.0V	1.0A	220W	5% 60	0Hz 220	OV
		02/10/2011 08:09:27	60.0Hz 2	20.00 220.00	60.0Hz	220.0V	1.0A 3	220W	5% 60	UHZ 220	0V
		02/10/2011 07:59:27	60.0HZ 2	20.07 220.07	60.0HZ	220.00	1.0A 1	22010	5% 60	0Hz 220	01/
		02/10/2011 07:39:27	60.0Hz 2	20.0V 220.0V	60.0Hz	220.00	1.04 3	220W	5% 60	0Hz 220	0V
		02/10/2011 07:29:27	60.0Hz 2	20.0V 220.0V	60.0Hz	220.0V	1.04 3	220W	5% 60	0H7 220	ov
		00/00/00 44 07:40:07	60.0Hz 2	20.0V 220.0V	60.0Hz	220.0V	1.0A	220W	5% 60	0Hz 220	ov
		02/10/2011 07 19 27			00.011					and the second	
		02/10/2011 07:09:27	60.0Hz 2	20.0V 220.0V	60.0Hz	220.0V	1.0A 2	220W	5% 60	0Hz 220	0V
		02/10/2011 07:09:27 02/10/2011 06:59:27	60.0Hz 2: 60.0Hz 2:	20.0V 220.0V 20.0V 220.0V	60.0Hz 60.0Hz	220.0V 220.0V	1.0A 2	220W 220W	5% 60 5% 60	0Hz 220 0Hz 220	0V 0V
		02/10/2011 07:19:27 02/10/2011 07:09:27 02/10/2011 06:59:27 02/10/2011 06:49:27	60.0Hz 23 60.0Hz 23 60.0Hz 23	20.0V 220.0V 20.0V 220.0V 20.0V 220.0V	60.0Hz 60.0Hz 60.0Hz	220.0V 220.0V 220.0V	1.0A 1.0A 1.0A	220W 220W 220W	5% 60 5% 60 5% 60	0Hz 220 0Hz 220 0Hz 220	0V 0V 0V

- **Date:** The date when the data entry is recorded.
- Time: The time when the data entry is recorded.

### Configure

Go to **Monitor**  $\rightarrow$  **History**  $\rightarrow$  **Configure** to clear the history data logs and event logs. You can also assign the Save Data Interval.

← → C ☆ ht	tp://192.168	3.1.100/				
ADELT	1	Ins	ightPower U	PS Web	🔂 Home 🗖 Lo	gout English 💌
POWER & COOLING SOLUTIO	NS The pow	er behind competitiveness	-		System Time : Thu 0	2/10/2011 AM 10:01:49
Monitor	Device	System				
Information	Histo	ry Environment				
Event Log	0	Monitor » History » Configure				
Data Log	0	History Data		Event Log		
Configure	0	Clear History Data		Cit	ear Event Log	
		Save Data Interval: 10 minute	(s)			
		( THEY				
				유민생님은 것이	가는 감독 관계 관계	

- Clear History Data: Empty history data logs.
- Clear Event Log: Empty event logs.
- **Save Data Interval:** The time interval after which an event/ data entry is recorded.

### **5-1-3 Environment**

#### Information

Go to **Monitor**  $\rightarrow$  **Environment**  $\rightarrow$  **Information** to see the information of Sensor, Input Contacts and Contact Setting.



### Configuration

Go to **Monitor**  $\rightarrow$  **Environment**  $\rightarrow$  **Configuration** to configure the Warning Threshold, Alarm Threshold, Title and Type. Please note that you can use the two dip switches to set different operation modes. Please see the table below for detail information.

ADELTA	1	II	nsightPower UPS Web		💼 Home 🛄 Logout 🛛 English 💌
POWER & COOLING SOLUTION	s The pow	er behind competitiveness			System Time : Thu 02/10/2011 AM 10:02:0
Monitor	Device	System			
Information	Histo	pry Environment			
Information	0	Monitor » Environment » Configuration			
Configuration	0	Configuration			
		Sensor	Warning Threshold		Alarm Threshold
		Temperature	35 °C		40 °C
		Humidity	80 %		90 %
		Power Configuration			
		Input	Title	1	Туре
		Contact 1	Smoke		Normal Open 💌
		Contact2	Fire		Normal Open 🖌
		Contact3	Leak		Normal Open 💌
		Contact4	Door		Normal Open 🔽

Dip 1	Dip 2	Opeation Mode	Description
OFF	OFF	Normal Mode	The SNMP IPv6 works with the UPS. It provides the UPS's status information and parameters through a network system.
OFF	ON	Pass Through Mode	The SNMP IPv6 stops polling the UPS but transfers the communication data between the console port and the UPS.
ON	OFF	Sensor Mode (with EnviroProbe)	The SNMP IPv6 works with the UPS and an option- al EnviroProbe. It provides the UPS's information and the environmental parameters (temperature, humidity, etc).
ON	ON	Configuration Mode	In this mode, the user can login through the con- sole port and configure the SNMP IPv6's settings. Please refer to <b>4-4 Configuring through COM</b> <b>Port.</b>

# 5-2 Device

### 5-2-1 Management

Since different UPSs have different functions, your UPS may not support the same configurations or control items stated below.

### Configure

Go to **Device**  $\rightarrow$  **Management**  $\rightarrow$  **Configure** to configure the UPS. The configuration values are saved in the UPS or in the SNMP IPv6 and these values change UPS operation. The configuration items include the following. Please note that different UPSs may support different configuration options.

ADELTA	1		nsightPower UPS Web
POWER & COOLING SOLUTION	s The pow	ver behind competitiveness	System Time : Thu 02/10/2011 AM 10:02:
Monitor	Device	System	
Management			
Configure	0	Device » Management » Configure	
Control	0	Configure	
Weekly Schedule	0	Select UPS Configuration: Auto-Restart	Auto Restart
Specific Schedule	0	UPS Buzzer Voltage Sensitivity	Reboot After Power Restore: V Enable
Event Level	0	UPS Shutdown Action Smart Shutdown	Boot Delay After Power Restore: 30 Sec
		Battery Replacement Date Bypass Transfer Frequency Bypass Transfer Voltage	Submit
		Periodic Auto Test	Description: Send the command to the UPS to configure the auto restart function.

#### Auto Restart

After you click **Submit** to confirm your auto restart setup, the SNMP IPv6 will send the command to the UPS to enable auto restart.

#### UPS Buzzer

After you click **Submit** to confirm your buzzer setup, the SNMP IPv6 will send the command to the UPS to enable buzzer.

#### Voltage Sensitivity

After you set up your voltage sensitivity (there are Normal, Reduced, and Low selections) and click **Submit**, the SNMP IPv6 will send the command to the UPS to enable the UPS's voltage sensitivity function.

#### • Transfer Voltage

After you click **Submit** to confirm your transfer voltage setup, the SNMP IPv6 will send the command to the UPS to enable the relevant functions.

#### Low Battery

This configuration saves the setup values in the SNMP IPv6 and compares with the values received from the UPS. If the received battery level is lower than the assigned one, the SNMP IPv6 will trigger a low-battery alarm.

#### UPS Shutdown Action

This configuration saves your setup values in the SNMP IPv6 and compares with the values received from the UPS. If an event like power failure or low battery occurs, the SNMP IPv6 will send the assigned shutdown delay command to the UPS.

#### Smart Shutdown

The Smart Shutdown configuration is used to safely shutdown all of the connected computers and the UPS. First of all, you should estimate the longest OS Shutdown Delay time for your operating systems that have been installed shutdown software and connected to the SNMP IPv6. The SNMP IPv6 will delay the assigned OS Shutdown Delay time and wait for all operating systems' shutdown. After that, the SNMP IPv6 will send the assigned UPS shutdown-delay command to the UPS and turn off the UPS.

#### • Battery Replacement Date

After you set up battery replacement dates, the SNMP IPv6 will send the command to the UPS and save the information in the UPS.

#### • External Battery Pack

After you click **Submit** to confirm your external battery pack setup, the SNMP IPv6 will send the command to the UPS and save the external battery pack quantity in the UPS.

#### • Bypass Transfer Frequency

After you set a tolerance of bypass transfer frequency and confirm your setup, the SNMP IPv6 will send the command to the UPS. If the UPS transfers to bypass mode and the bypass frequency is out of the tolerance, output will be turned off and critical loads will be protected.

#### Bypass Transfer Voltage

After you set a tolerance of bypass transfer voltage and confirm your setup, the SNMP IPv6 will send the command to the UPS. If the UPS transfers to bypass mode and the bypass voltage is out of the tolerance, output will be turned off and critical loads will be protected.

#### • Periodic Auto Test

This configuration is used to set up battery test time. After you confirm your setup, the SNMP IPv6 will send the command to the UPS and save the setup in the UPS. When the test time is due, the UPS will automatically perform the battery test.

#### Output Dry Contacts

After you click **Submit** to confirm your setup of output dry contacts, the SNMP IPv6 will send the command to the UPS, save the values in the UPS, and report the current UPS's status.

#### Control

Go to **Device**  $\rightarrow$  **Management**  $\rightarrow$  **Control** to configure relevant control commands. After you click **Submit**, the SNMP IPv6 will send the according commands to the UPS to enable relevant functions. The control items include the following.

ADELT	1	In	sightPower UPS Web
POWER & COOLING SOLUTIO	s The pow	er behind competitiveness	System Time : Thu 02/10/2011 AM 10:02:1
Monitor	Device	System	
Management			
Configure	0	Device » Management » Control	
Control	0	► Control	
Weekly Schedule	0	Select UPS Control: Battery Test	Battery Test
Specific Schedule	0	Shutdown & Restart UPS Only Smart Shutdown Power Fail/Restore Simulation	Battery Test Type: 10-seconds Test
Event Level	0		Submit
			Description: Send the command to the UPS to perform the battery test.

#### Battery Test

After you select the battery test type and click **Submit**, the SNMP IPv6 will send the command to the UPS to enable the battery test accordingly.

#### • Shutdown & Restart UPS Only

After you confirm your setup, the SNMP IPv6 will send the command to the UPS to shut down or/ and restart the UPS.

If you want to shutdown the UPS, please check the UPS Shutdown Delay box and key in delay time.

If you want to restart the UPS, please check the UPS Restart Delay box and key in delay time.

If you want to shutdown and restart the UPS, please check both of the boxes and key in according delay time.

#### Smart Shutdown

The Smart Shutdown configuration is used to safely shutdown all of the connected computers and the UPS. First of all, you should estimate the longest OS Shutdown Delay time for your operating systems that have been installed shutdown software and connected to the SNMP IPv6. The SNMP IPv6 will delay the assigned OS Shutdown Delay time and wait for all operating systems' shutdown. After that, the SNMP IPv6 will send the assigned UPS shutdown-delay command to the UPS and turn off the UPS.

#### Outlet Control

Press the Switch Bank button to control the UPS output relay (on or off).

#### • Power Fail/ Restore Simulation

Click **Power Fail Test** or **Power Restore Test** button to let the SNMP IPv6 simulate UPS power failure or power restore event. This function allows you to test all of the connected software and verify whether they work properly or not. Please note that the simulation won't influence UPS operation, the UPS remains in its original operation mode and won't transfer to battery mode.

### Weekly Schedule

Go to **Device**  $\rightarrow$  **Management**  $\rightarrow$  **Weekly Schedule** to arrange a weekly schedule for the UPS. You can select **No Action, Shutdown, Restart, 10-Second Test**, and set up what day and what time you want the action to be executed.

		0.1.100/		Insiah	tPowe		S Wel			🔂 Hom	e 🖸 Logout	English
POWER & COOLING SOLUTION	The por	ver behind cor	npetitiveness	margin	u ow					System	Time : Fri 02/11/2	011 PM 03:28
Monitor	Device	Syst	em i									
Management												
Configure	0	Device » M	anagement » Weekly S	chedule								
Control	0	► We	ekly Schedule									
Weekly Schedule	0		Action	SUN	MON	TUE	WED	THR	FRI	SAT	Time	
Specific Schedule	0	1	No Action								00:00	
EventLevel	-	2	No Action Shutdown Restart								00:00	
Lion Lord	<u> </u>	3	10-Seconds Test								00:00	
		4	No Action								00:00	
		5	No Action								00:00	
		6	No Action								00:00	
					C	Submit	)					
		_										_

### Specific Schedule

Go to **Device**  $\rightarrow$  **Management**  $\rightarrow$  **Specific Schedule** to arrange a specific schedule for the UPS. You can set up a specific date (MM/ DD/ YYYY) and time (hh:mm) for a specific action (Stop Action, Shutdown, Restart, 10-Second Test).

→ C ☆ http	o://192.16	8.1.100/			Þ	
ADELTA		/	In	sightPower UPS Web	🔂 Home 🛄 Logout 🗉	nglish 💌
POWER & COOLING SOLUTION	The por	ver behind compe	titiveness		System Time : Fri 02/11/2011	PM 03:43:26
Monitor	Device	System				
Management						
Configure	0	Device » Mana	gement » Specific Schedul	e		
Control	0	► Specifi	ic Schedule			
Weekly Schedule	0		Date(MM/DD/YYYY)	Time(hh:mm)	Action	
Specific Schedule	0	1	01/01/2000	00:00	Stop Action	
Event Level	0	2	01/01/2000	00:00	Shutdown Restart	
		3	01/01/2000	00:00	10-Seconds Test	
		4	01/01/2000	00:00	Stop Action	
		5	01/01/2000	00:00	Stop Action	
		6	01/01/2000	00:00	Stop Action	
		7	01/01/2000	00:00	Stop Action	
		8	01/01/2000	00:00	Stop Action	

#### Event Level

Go to **Device**  $\rightarrow$  **Management**  $\rightarrow$  **Event Level** to set up a level for an event. If you want to receive an event notification, please refer to *5-3-2 Notification* - *SNMP Trap* and *5-3-2 Notification* - *Mail Server*.

• → C 🛠 http://192.16	8.1.100/	
ADELTA	InsightPower UPS Web	🔂 Home 🛄 Logout 🛛 English 💌
POWER & COOLING SOLUTIONS THE DOW	er behind competitiveness	System Time : Thu 02/10/2011 AM 10:02:33
Monitor Device	System	
Management		
Configure 🔘	Device » Management » Event Level	
Control	Event Level	
Weekly Schedule 🔘	Event: Over temperature	
Specific Schedule	Lever wanning V Opdate	
Event Level 🔹 🕥	Event Description	Level
	Recover from over temperature     Power real     Power real	alarm warning warning alarm alarm alarm alarm alarm alarm alarm alarm warning warning warning alarm alarm alarm alarm alarm alarm alarm alarm alarm

# 5-3 System

Under the System category, there are Administration and Notification these two items.

## 5-3-1 Administration

### User Manager

The SNMP IPv6 supports RADIUS. Check the **Use RADIUS** box, key in required information including Server, Secret and Port (default: 1812) and click **Submit** to enable RADIUS. You can define service types for Administrator, Device Manager and Read Only User. If RADIUS is disabled, you can still manage the Account Name, Password and Login Limitation for Local Authentication.

	The pow	ver behind competitiveness	InsightPower UPS Web	Home Logout English System Time : Thu 02/10/2011 AM 10:02:
Monitor	Device	System		
Administration	N	otification		
User Manager	0	System » Administration » User M	anager	
ТСРЛР	0	User Manager		
Web	0			
Console	0	Server (51 chars max.)	Secret (32 chars max.)	Port
FTP	0			1812
Time Server	0		RFC2865 Service Type:	
Syslog	0	Administrator	Device Manager	Read Only User
Batch Configuration	0	Framed User	Framed User	Framed User
Upgrade	0	Callback Login	Callback Login	Callback Login
		Administrative	Administrative	Administrative
		NAS Prompt	NAS Prompt	NAS Prompt
		Authenticate Only	Authenticate Only	Authenticate Only
		Call Check	Call Check	Call Check
		Callback Administrative	Callback Administrative	Callback Administrative
			Local Authentication	
		Privilege	Account Name Passv (16 chars max.) (16 chars	word Login Limitation
		Administrator admin	•••••	Only in This LAN     Allow Any
		Device Manager device	••••••	Only in This LAN     Allow Any
		Read Only User user	•••••	O Only in This LAN

### TCP/IP

This allows Administrator to configure local network parameters for the SNMP IPv6.

CANELIA	1000	InsightPowe	er UPS Web
POWER & COOLING SOLUTION	The pow	er behind competitiveness	System Time : Thu 02/10/2011 AM 10:02:4
Monitor	Device	System	
Administration	No	otification	
User Manager	0	System » Administration » TCP/IP	
TCP/IP	0	▶ ТСР/IР	► System
Web	0	TCP/IP Settings for IPv4	System
Console	0	DHCP Client:      Enable      Disable     IP Address: 172.16.186.82	Host Name: UPS1
FTP	0	Subnet Mask: 255.255.254.0	System Location:
Time Server	0	Gateway IP: 172.16.186.254	
Syslog	0	DNS IP: 172.16.1.86	Link
Batch Configuration	0	Search Domain: deltaww.com	Speed:   100M   10M
Upgrade	0	TCP/IP Settings for IPv6	Duplex: 💿 Full 🔘 Half
		DHCP Client:   Enable Disable  IP Address: [re20:230:abff.fe25]  Prefix Length:  64  Galeway VRIP:	Submit
		DNS V6IP	

- TCP/ IP Settings for IPv4
  - 1) **DHCP Client:** Enable/ Disable DHCP. If enabled, DHCP server automatically assigns an IP address to the SNMP IPv6.
  - 2) IP Address: The IP address in dotted format (e.g. 192.168.1.100).
  - 3) **Subnet Mask:** The Subnet Mask for your network (e.g. 255.255.255.0).
  - 4) **Gateway IP:** The IP address for network gateway in dotted format (e.g. 192.168.1.254).
  - 5) **DNS IP:** The IP address Domain Name Server in dotted format (e.g. 192.168.1.1).
  - 6) **Search Domain:** If the Host Name you provided cannot be found, the system appends the search domain to your Host Name.
- TCP/ IP Settings for IPv6
  - 1) **DHCP Client:** Enable/ Disable DHCP. If enabled, DHCP server automatically assigns an IP address to the SNMP IPv6.

- 2) IP Address: The IPv6 address.
- 3) **Prefix Length:** The prefix length for the IPv6 address.
- 4) Gateway V6IP: The IP address for the IPv6 network gateway.
- 5) **DNS V6IP:** The IP address for the IPv6 domain name server.

#### System

- 1) Host Name: The SNMP IPv6 Host Name on the network.
- 2) System Contact: System contactor information.
- 3) **System Location:** System location information.
- Link
  - 1) **Auto-Negotiation:** Enable/ Disable automatic transfer rate (10/ 100M bps) negotiation.
  - 2) **Speed:** If the Auto-Negotiation is disabled, you can specify the transfer rate.
  - 3) **Duplex:** If the Auto-Negotiation is disabled, you can specify the duplex mode.

#### Web

This allows Administrator to enable/ disable HTTP/ HTTPS communication protocols.

ADELTA		InsightPowe	r UPS Web
Monitor	Device	System	System Time : Thu 02/10/2011 AM 10:02:0
Administration	N	lotification	
User Manager	0	System » Administration » Web	
ТСРЛР	0	► Web	SSL Certificate
Web	0	HTTP: 💿 🔿 Disable	Certificate File (PEM format):
Console	0	HTTPS:  Enable  Disable HTTP Port  80	Update the certificated file which is generated by openal for new SSL connections.
FTP	0	HTTPS Port 443	
Time Server	0		
Syslog	0	Web Refresh Period: 10 Seconds	Submit
Batch Configuration	0		
Upgrade	0	Canvialt@2010.Dalt	Clastranian Jan All Diable Dessent

#### • Web

- 1) **HTTP:** Enable/ disable HTTP connection.
- 2) HTTPS: Enable/ disable HTTPS connection.
- 3) HTTP Port: Assign an HTTP port number (default: 80).
- 4) **HTTPS Port:** Assign an HTTPS port number (default: 443).
- 5) Web Refresh Period: Web refresh update interval.

#### SSL Certificate

- To ensure connection security between the SNMP IPv6 and the connecting workstation, SSL certificate can be used to encrypt and secure the integrity of transmitting data.
- Certificate File: This allows you to replace your own SSL certificate file. The SNMP IPv6 supports PEM format which is generated by OpenSSL. Click Choose File to upload a certificate file.

NOTE 🗲

For more information regarding generating a private SSL certificate file, please refer to *Chapter 7: Troubleshooting Q12*, or visit http://www.openssl.org/.

### Console

This menu allows the Administrator to enable or disable Telnet/ SSH communication protocols.

A DELTA	InsightPov	ter UPS Web
OWER & COOLING SOLUTIONS	The power behind competitiveness	System Time : Thu 02/10/2011 AM 10:0
Monitor	Device System	
Administration	Notification	
User Manager	O System » Administration » Console	
TCP/IP	O Console	► Host Key
Web	O Telnet ③ Enable 〇 Disable	DSA Key:
Console	SSH/SFTP:      Enable O Disable     Teinet Port:      23	RSA Key:
FTP	SSH Port 22	Choose File
Time Server	0	openssh for new SSH connections.
O value o	0	

- **Telnet:** Enable/ disable Telnet connection.
- SSH/ SFTP: Enable/ disable SSH/ SFTP connection.
- **Telnet Port:** Assign a Telnet port number (default: 23).
- SSH Port: Assign an SSH protocol port number (default: 22).
- Host Key:

**DSA/ RSA Key:** This allows you to replace your own SSH keys. The SNMP IPv6 supports key files generated by OpenSSH. Please refer to **Chapter 7: Troubleshooting Q13**.

#### FTP

This allows Administrator to enable/ disable FTP communication protocol.

→ C ☆ http	o://192.16	8.1.100/	
ADELTA		InsightPower UPS Wel	🔂 Home 🗔 Logout English 💌
POWER & COOLING SOLUTION	The po	er behind competitiveness	System Time : Thu 02/10/2011 AM 10:03:04
Monitor	Device	System	
Administration	1	otification	
User Manager	0	System » Administration » FTP	
TCP/IP	0	► FTP	
Web	0	FTP: O Enable O Disable	
Console	0	FIP POR 21	
FTP	0	Submit	
Time Server	0		
Syslog	0		
Batch Configuration	0	Copyright © 2010 Delta Electronics, Inc	c. All Rights Reserved.

- FTP: Enable/ disable FTP connection.
- **FTP Port:** Assign an FTP port number (default: 21).

#### Time Server

You can manually set the time and date, or allow automatic time synchronization with SNTP servers. Please note that if the SNTP server is not responsive, the event and data log will not register even when SNTP is enabled.

ADELTA	Desa	Insight	Power UPS Web
POWER & COOLING SOLUTION	The pow	er behind competitiveness	System Time : Thu 02/10/2011 AM 10:03:
Monitor	Device	System	
Administration	N	otification	
User Manager	0	System » Administration » Time Server	
ТСР//Р	0	Time Server	Manual
Web	0	System Time: SNTP	Set Current Time:
Console	0	Manual	Refer to Local PC Time
570	~	Simple Network Time Server	Date 01/01/2000 (MM/DD/YYY)
FIP	0	Time Zone:	Time 00:00:00 (httmm:se)
Time Server	0	GMT+08 Beijing,Taipei 💌	(in, ini, ss)
	~	Primary Time Server:	
Syslog	~	POOL.NTP.ORG	
Batch Configuration	0	Secondary Time Server:	Submit
Upgrade	0	172.16.186.173	
		Enable Daylight Saving (MM/DD): From 04/01 to 11/01	

#### • Simple Network Time Server

- 1) **Time Zone:** From the dropdown menu, select the time zone for the location where the SNMP IPv6 is located.
- Primary/ Secondary Time Server: Two time servers can be added. Every 60 minutes, the SNMP IPv6 synchronizes with the first responding server.
- 3) **Enable Daylight Saving:** Check to enable daylight saving time. During this period, the SNMP IPv6 adjusts time forward one hour.

#### Manual

If a time server is not accessible, you can still manually set time and date. Please note that every time you restart the SNMP IPv6's network module, time and date is reinstated to previous assigned settings.

### Syslog

Syslog is used to store event logs on remote syslog servers. This will not affect the local event logs.

ADELTA		InsightPower UPS W	🔂 Home 🛄 Logout English 🔽
POWER & COOLING SOLUTIONS	The pow	er behind competitiveness	System Time : Thu 02/10/2011 AM 10:03:
Monitor	Device	System	
Administration	N	otification	
User Manager	0	System » Administration » Syslog	
TCP/IP	0	► Syslog	
Web	0	Syslog: O Enable 💿 Disable	
Console	0	Syslog Server 1:	
FTP	0	Syslog Server 3:	
Time Server	0	Syslog Server 4:	
Syslog	0	Submit	
Batch Configuration	0		

### Batch Configuration

The SNMP IPv6 provides batch configuration to allow quick and effortless setup on multiple SNMP devices. You can duplicate settings by exporting configuration files from the SNMP IPv6 that you have successfully configured, and import the configuration files on other devices.

• 🔶 C 🕁 ht	ttp://192.16	8.1.100/	
ADELT	1	InsightPow	rer UPS Web
POWER & COOLING SOLUTIO	INS The pol	ver behind competitiveness	System Time : Thu 02/10/2011 AM 10:03:19
Administration	Device	atification	
User Manager	0	System » Administration » Batch Configuration	
ТСРЛР	0	System Configuration	SNMP Configuration
Web	0	System Configuration: Download	SNMP Configuration: Download
Console	0	Choose File Upload	Choose File Upload
FTP	0	Description The batch configuration is used to configure	Description The batch configuration is used to configure all of the SNMP parameters at one time. Please follow
Time Server	0	all of the system parameters at one time. Please follow the following steps to complete	Step 1 Press the Download button to download the
Syslog	0	Step 1 Press the Download button to download the	snmp.ini file which includes all of the system parameters.
Batch Configurat	tion	configure.ini file which includes all of the system parameters.	Step 2 Please follow the file format, There must has a (Section) before item name=item value, And the
Upgrade	0	Step 2 Please follow the file format, There must has a [Section] before item_name=item_value. And the last line must be [End] section.	last line must be [End] section. Step 3 Edit the snmp.ini file by the text edit software.
		Step 3 Edit the configure ini file by the text edit software. Remove the items which you don't	Remove the items which you don't want to be changed, just leave the items which you want to configure.
		want to be changed, just leave the items which you want to configure.	Step 4 Select the modified snmp.ini file and press the Upload button to upload the file.
		Step 4 Select the modified configure ini file and press the Upload button to upload the file.	Step 5 Wail for about 10 seconds for the system to update the changes.

#### • System Configuration

The **System Configuration** includes settings saved in the **Management** and **Administration** tabs. To download a configuration file, simply click **Download**. To upload a configuration file, click **Choose File**, select the file you wish to upload, and click **Upload**.

If the IP address is static and you wish to copy settings to other devices on the same LAN, you must manually remove the following line **IP=xxx**. **xxx.xxx.xxx** under the [System] section from the exported configuration file. You can open the configuration file with text editors such as Notepad and WordPad. To modify/ assign IP address for the SNMP IPv6, please see **Chapter 4: System Configurations**.

#### • SNMP Configuration

The **SNMP Configuration** includes settings in the **Notification** tab. To download a configuration file, simply click **Download**. To upload a configuration file, click **Choose File**, select the file you wish to upload, and click **Upload**.

If you need to modify the command lines, please do not delete the unmodified ones. They should be left intact to assure the integrity of the configuration file.

### Upgrade

This menu allows the Administrator to update the SNMP IPv6's firmware.

A DELTA		InsightPower UPS Web	🖬 Home 📮 Logout English 🔊
POWER & COOLING SOLUTIONS	The power	r behind competitiveness	System Time : Thu 02/10/2011 AM 10:03
Monitor	Device	System	
Administration	Not	ification	
User Manager	0	System » Administration » Upgrade	
ТСРЛР	0	Network Card Firmware	
Web	0	Current Ver.: 01.11.0e	
Console	0	Firmware File: Choose File:	
FTP	0	Upload	
Time Server	0	Description This feature is used to update the network card firmware. Please follow the following steps to	
Syslog	0	complete the process:	
Batch Configuration	0	the Upload button to upload the file to the network card.	
Upgrade	0	Step 2 Wait about 1 minute for the network card to reporgram the flash and reboot again.	

# 5-3-2 Notification

**SNMP Access** 

			insightPower UPS W	eb
Monitor	Device	System		System Time : Thu 02/10/2011 AM 10:03:
Administration	N	lotification		
SNMP Access	0	System » Notification » SNMP	Access	
SNMPv3 USM	0	SNMP Access		
SNMP Trap	0		Port Configuration	Enviro Station MIB
Mail Server	0	SNMP Server Port 1	61 Submit	Download UPSv4 MIB
Wake On LAN	0		NMS List	
		Allov Comm Ar	wed NIMS IP: 0.0.0.0 nunity String: [public ccess Level: Read Only 💌 Add Updale	IP address 0.0.0.0 represents if allows to receive the SMMP padeos from any host.
		NMS IP	Community	Access Level
		1 0000		Dead Only

The SNMP IPv6 supports SNMP protocol and SNMP NMS (Network Management System), which are commonly used to monitor network devices for conditions that call for administrative attention. To prevent unauthorized access, you can specify the NMS IP addresses that are allowed to access, their community strings and access levels. The maximum number of IP entries is 256.



If IP address **0.0.0.0** is enlisted, the NMS IP access restriction is ignored. The SNMP IPv6 checks the community string to identify the access level and permission according to your setting.

### SNMPv3 USM

SNMPv3 offers features such as the encryption of packets and authentication to improve security. The SNMPv3 USM (User Session Management) allows you to assign eight User Names whose access is granted via SNMPv3 protocol. You can also define their respective Security Levels, Auth Passwords, Priv Passwords and Access Levels.

C DELTA			InsightPow	er UPS Web	🔂 Home	Logout English
OWER & COOLING SOLUTIONS	The pow	ver behind competitiveness			System Time	: Thu 02/10/2011 AM 10:03
Monitor	Device	System				
Administration	N	otification				
SNMP Access	0	System » Notification » SNN	MPv3 USM			
SNMPv3 USM	0	SNMPv3 USM				
SNMP Trap	0	Auth Protocol: MD5	c	ontext Name: cn 1027		2013.12.11 N
Mail Server	0	Priv Protocol: CBC-D	DES			
Wake On LAN	0	(16 bytes max.)	Security Level	(>= 8 bytes)	(>= 8 bytes)	Access Level
		1	noAuth, noPriv 💌			Read Only 💌
		2	noAuth, noPriv 💌			Read Only
		3	noAuth, noPriv 💌			Read Only
		4	noAuth, noPriv 💌			Read Only 🔽
		5	noAuth, noPriv 💌			Read Only 💌
		6	noAuth, noPriv 💌			Read Only
		7	noAuth, noPriv 💌			Read Only
		8	noAuth, noPriv 💌			Read Only 💌
		6 7 8	noAuth, noPriv 💌 noAuth, noPriv 💌 noAuth, noPriv 💌			Read Only Read Only Read Only

### SNMP Trap

SNMP Trap alerts users to event occurrences in your monitored environment. To enable SNMP Trap, you must add Target IP addresses to the Target IP list. Specify the Community String, Trap Type, MIB, SNMPv3 User Name, UDP port, and Event Level, and click **Add**. If you wish to update or delete a Target IP address, specify the IP address in the Target IP list, and click **Update** or **Delete**.

AAFIT		/				💼 Home	🖬 Logout 🛛 English 🛩
CA DELIA	1		Insight	Power UPS	Web		
POWER & COOLING SOLUTIO	NS The por	ver behind competitiveness				System Time	: Thu 02/10/2011 AM 10:03:
Monitor	Device	System					
Administration							
SNMP Access	0	System » Notification » S	NMP Trap				
SNMPv3 USM	0	SNMP Trap Tar	get List				
SNMP Trap	0	Та	rget IP: 192 168 168 157	7	Community St	ring: public	
Mail Server	0	Tra	p Type: SNMPv1 💌	_		MIB: UPSv4	1
Wake On LAN	0	SNMPv3 User	Name: 112		UDP	Port: 162	
		The User Name mus <u>SNMPv3 USM</u> table	t match with the same fiel	d in the	Event Lo	evel: Information	~
			A	dd Update	Delete		1.52.522
		Target IP	Community	Port Mil	3 Type	Event Level	SNMPv3 User
		1 192.168.168.1	57 public	162 UPS	v4 None	Information	112
		2 192.168.168.1	11 public	162 RFC1	628 None	Information	



The SNMP IPv6 provides SNMPv1, v2c and v3 traps to satisfy most of customers' environments. If you use the SNMPv3 trap, please provide one of the user names in the SNMPv3 USM table.

You can determine what event notifications should be sent to the Target IP(s) from **Event Level**. Three Event Levels are listed as follows:

- Information: All event notifications are sent to the target address.
- **Warning:** Both Warning and Alarm event notifications are sent to the target address.
- Alarm: Only Alarm event notifications are sent to the target address.

You can go to  $Device \rightarrow Management \rightarrow Event Level$  to change the event level.

### Mail Server

You can set up an SMTP Server and specify a list of E-mail recipients who will receive notifications when events occur. The maximum number of recipients is 256.

A DELTA		InsightPower UPS Web
POWER & COOLING SOLUTION	s The pol	wer behind competitiveness System Time : Thu 02/10/2011 AM 10:03
Administration	Device	system :
SNMP Access	0	System » Notification » Mail Server
SNMPv3 USM	0	Mail Server Configuration
SNMP Trap	0	SMTP Senier Name nr IP
Mail Server	0	Account (32 bytes max.)span>
Wake On LAN	0	Password (16 bytes max.)
		Mail List
		Receiver: name@company.com Event Level: None Add Test e-mail
		Receiver Event Level

NOTE If a DNS server is not available in the network, you need to manually assign an SMTP server address to enable the E-mail notification system.

#### • SMTP Server Name or IP

If a Host Name is entered, a **DNS IP** should be added in **TCP/ IP**. Please see *5-3-1 Administration – TCP/ IP*.

#### Account

The mail server login account.

Password

The mail server login password.

Receiver

The recipients' E-mail addresses.

#### • Event Level

Select the Event Level that when triggered, an E-mail notification is sent to the corresponding recipient.

- 1) Information: All event notifications are sent to the target address.
- 2) **Warning:** Warning and Alarm event notifications are sent to the target address.
- 3) Alarm: Only Alarm event notifications are to the target address.

#### Wake On LAN

Wake On LAN function can start up clients' PCs from network with MAC address, and you can set up at maximum 256 MAC addresses. The configuration can wake up clients' PCs after power restores or the SNMP IPv6 starts up.

A DELTA			InsightF	Power UF	'S We	b	<b>1</b> H	Home	🗖 Logout 🛛 English 🗍
OWER & COOLING SOLUTIONS	The po	wer behind competitive	eness				Syste	m Time	: Thu 02/10/2011 AM 10:03
Monitor	Device	System							
Administration	1	lotification							
SNMP Access	0	System » Notificat	ion » Wake On LAN						
SNMPv3 USM	0	► WOL Host	List						
SNMP Trap	0		MAC (xx-xx-xx-xx-xx-xx): 00-	11-22-55-66-8	8				
Mail Server	0		Delay: 0	minute(s)					
Wake On LAN	0		Wake Up Condition: V F	Power Restore	Delete	em Star	tup		
			MAC		Delau		Postoro		Startua
		1	mAC 00 11 22 55 66 99	1	Delay	:	Voc	1	No
		2	00-11-22-55-66-11		0		No		No

# Chapter 6 : SNMP Device Firmware Upgrade

With the provided program EzSetting, you can effortlessly perform a firmware upgrade for SNMP devices discoverable on the LAN. Please refer to the following instructions to upgrade your devices.

Press "Discover" button to search all of the SNMP devices in the LAN.       Discover         Then select one of device in the "Device List" which you would like to configure or upgrade it. But before to do that please provide the account name and password by pressing the "Modify" button.       122.16.166.104         Image: Solid Configuration is used to stup the IP address, network, enable or disable networking services       Configuration       172.16.186.0         Image: Solid Configuration is used to load the device firmware file then transmit it to the single selected device. (Ignore the checkbox)       Upgrade       174.186.0         Image: Solid Configuration is used to load the device firmware file then transmit it to the single selected device. (Ignore the checkbox)       Upgrade       252.255.254.0         Image: Solid Configuration is used to load the device firmware file then transmit it to the Device List       Add an new item of SIMP device to the Device List manually.       Add an new item of SIMP device to the Device List manually.         Image: Solid Configuration is used to load the device firmware file then transmit it to the Device List manually.       Model/Product       Add an new item of SIMP device to the Device List manually.         Image: Solid Configuration is used to load the device firmware file then transmit it to the Device List manually.       Model/Product       Add an new item of SIMP device to the Device List manually.         Image: Solid Configuration is used to be device firmware file then transmit it to the Device List manually.       Model/Product       Add an new item of SIMP device	🕺 InsightPower EzSetting v2.0.6	
Device List <pre></pre>	Press "Discover" button to search all of the SNMP devices in the LAN.     Discover       Then select one of device in the "Device List" which you would like to configure or upgrade it. But before to do that please provide the account name and password by pressing the "Modify" button.     Image: Configuration is used to setup the IP address, netmask, enable or disable configuration       Image: Configuration is used to setup the IP address, netmask, enable or disable configuration     Configuration       Image: Configuration is used to load the device firmware file then transmit it to the single selected device. (Ignore the checkbox)     Upgrade	LAN 172.16.186.104 Subnet: 172.16.186.0 IPv4 Mask / IPv6 Prefix length: 255.255.254.0
Please mark the checkbox of the devices which are listed in the Device List then press the	PAddress Host Name Account Password Version Model/Product      Account Password Version Model/Product      Select All      Please mark the checkbox of the devices which are listed in the Device List then press the	Add Add an new item of SNMP device to the Device List manually. Modify Set the account and password for the selected device. Remove Remove the selected device from the Device List.

Step 1 The subnet mask allows you to refine the device discovery range in the specified subnets. Make sure the SNMP device you wish to upgrade is in the subnet that is specified. If it is not, please modify the subnet and subnet mask.

**Step 2** Click **Discover**. A list of SNMP devices on the specified subnet is shown.

🗱 InsightPower EzSetting v2.0.6	
Press "Discover" button to search all of the SNMP devices in the LAN.     Discover     Then select one of device in the "Device List" which you would like to configure or upgrade it. But     before to do that please provide the account name and password by pressing the "Modify" button.     "Configuration" is used to setup the IP address, netmask, enable or disable     configuration     Upgrade' button is used to load the device firmware file then transmit it to     upgrade	LN 172.16.186.104 Subnet: 172.16.186.0 IPv4 Mask / IPv6 Prefix length: 255.255.254.0
Device List         Praddress         Host Name         Account         Password         Version         Model/Product           172.016.186.161         EMS1         ???????         01.11.02         EMS2000000         00           172.016.186.053         FDU1         ???????         01.11.0g         FDU1113         00           172.016.186.053         FDU2         ???????         01.11.0g         FDU1113         00           172.016.186.136         INSIGHTPOW         ???????         01.11.0e         GES203NH20098         00           172.016.186.132         INSIGHTPOW         ?????????         1.16h         GES-102R1120         00	Add Add an new item of SNMP device to the Device List manually. Modify Set the account and password for the selected device. Remove Remove
Select <u>A</u> II Deselect AII	from the Device List.
Please mark the checkbox of the devices which are listed in the Device List then press the "Batch Upgrade" button to upgrade all of the marked devices sequentially.	Batch Upgrade

**Step 3** Select a device from the Device List, click **Modify**, and key in Administrator account and password.

IP & Account							
SNMP Device Address							
IP Address:	s: 172 . 16 . 186 . 234						
Administrator Account							
Account: admin Default: admin							
Password: ****** Default: password							
ОК							

**Step 4** Click **Upgrade**. The upgrade dialog box pops up. Click **Browse** to select a valid SNMP IPv6 firmware binary file. Verify the firmware version listed under File Information, and then click **Upgrade Now** to continue.

Upgrade	X
Select Firmware File	1
Firmware File Name:	
D:\TFTP-Root\bbs-snmp.tar.gz	
File Information:	
Upgrade Now Exit	

**Step 5** The upgrade process should take about 20 seconds.

Upgrading Now	

**Step 6** When the upgrade is completed, the following dialog box appears. It takes about 1 minute for the device to reboot.



# **Chapter 7 : Troubleshooting**

#### Q1. How to set up a SNTP server on my workstation for the SNMP IPv6 to synchronize?

To enable SNTP services in Windows XP, go to **Start**  $\rightarrow$  **Control Panel**  $\rightarrow$  **Add**/ **Remove Programs**  $\rightarrow$  **Add**/ **Remove Windows Components**  $\rightarrow$  **Networking Services**  $\rightarrow$  check **Simple TCP**/ **IP Services**  $\rightarrow$  **OK**. To enable time synchronization, you need to set SNTP time server addresses in **Time Server**. Please refer to **Chapter 4: System Configurations**.

# Q2. How to make sure that network connection is established between my workstation and the SNMP IPv6?

To check connection between the SNMP IPv6 and workstation, in Windows please launch DOS prompt mode (**Start**  $\rightarrow$  **Run**  $\rightarrow$  key in **cmd** and press **Enter**). In Linux, launch Shell. Enter the following command: **ping Host Name** (default: InsightPower). If the connection is correctly established, you should be able to receive replies from the SNMP IPv6.

```
C:\>ping 172.16.186.230
Pinging 172.16.186.230 with 32 bytes of data:
Reply from 172.16.186.230: bytes=32 time=2ms TTL=64
Reply from 172.16.186.230: bytes=32 time=2ms TTL=64
Reply from 172.16.186.230: bytes=32 time=4ms TTL=64
Ping statistics for 172.16.186.230:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 2ms, Maximum = 4ms, Average = 2ms
C:\>
```

#### Q3. I can access the login page, but cannot log in the InsightPower UPS Web.

Please check the IP addresses of the SNMP IPv6 and the workstation you are trying to log in. The cause could be they are not connected to the same LAN. In that case, launch **EzSetting** and change **User Limitation** settings to **Allow Any**. Please see the following figure.

Configuration	
System Identification *Host Name(NetBIOS): INSIGHTPOWER System Contactor:	IPv4           BOOTP/DHCP Client:         O Enable         > Disable           *IP Address:         172 , 16 , 186 , 241
System Location:	"Subnet Mask: 255 . 255 . 254 . 0 Gateway IP: 172 . 16 . 186 . 254 DNS IP: 172 . 16 . 1 . 86
Time 20ne: CMT Dublin,Lisbon,London	IPv6         DHCPv6 Client:         © Enable         * Disable           *1/P Address:         FE80::230.ABFF:FE25.E8ED           *Prefix Length:         64           Gateway IP:         ::
User Limitation Administrator: O In The LAN Device Manager: O In The LAN Read Only User: O In The LAN Reset to Default CK Cancel	UNS IP: :: System Configuration HTTP Server: O Enable Obiable Tehet Server: OEnable Obiable HTTP Server Port: 80 Tehet Server Port: 22
It is recommended to provide a static "IP Address" and disable the "BOOTP/DHCP Client" option. If it is the first time to configure your InsightPower device, pli given a "Time Server" for the device throught "SNTP" protoco	ease assign an unique name in the "Host Name" field and ol if possible.

#### Q4. How to refresh the NetBIOS table in Windows Systems?

If you assign a new static IP address to the SNMP IPv6, you may need to refresh the NetBIOS table so that it corresponds with the new one. Although Windows updates its NetBIOS table periodically, you can still manually force it to refresh by entering the following command **nbtstat** –**R** in DOS prompt mode or shell. After that, you can now connect to the SNMP IPv6 by its Host Name.

#### Q5. How to obtain the IP address and MAC address from my workstation?

For Windows, please enter **ipconfig /all** in DOS prompt mode. For UNIX, please enter **ifconfig** in shell. You should be able to check your IP and MAC (Physical Address) now.

Physical Address
DHCP Enabled Yes
Autoconfiguration Enabled : Yes
Link-local IPv6 Address : fe80::ad55:5b9b:74c6:e5fc%12(Preferred)
IPv4 Address
Subnet Mask : 255.255.254.0
C:\>

#### Q6. Unable to ping or connect to the SNMP IPv6?

Check connection by following the measures below.

- 1) Ensure that your workstation and the SNMP IPv6 are on the same LAN.
- 2) You can connect to the SNMP IPv6 only when the IP addresses of your workstation and the SNMP IPv6 are from the same address block. Normally, private LANs use IP Addresses from one of the following blocks:

10.0.0.0~10.255.255.255

172.16.0.0~172.31.255.255

192.168.0.0~192.168.255.255

The default IP address (192.168.1.100) for the SNMP IPv6 is on the 192.168.1.1~ 192.168.1.254 block. If your workstation's IP is on a different address block, you will not be able to connect to the SNMP IPv6. To solve this problem, you can either:

- 1) Use the COM port connection to change the SNMP IPv6's IP address. Please see **4-4 Configuring through COM port**.
- 2) Change the workstation's IP address so that they are on the same block. (192.168.1.0~192.168.1.255)

#### Q7. Unable to perform an SNMP Get operation?

Check the SNMP settings of the SNMP IPv6. Please see **5-3-2 Notification**. Make sure that the workstation's IP address is added on the NMS IP list with Read or Read/ Write access. The community string on the PC and the SNMP IPv6 must match.

#### Q8. Unable to perform an SNMP Set operation?

Check the SNMP settings of the SNMP IPv6. Please see **5-3-2 Notification**. Make sure that the workstation's IP address is added on the NMS IP list, with Read/ Write permission. The community string on the PC and the SNMP IPv6 must match.

#### Q9. Unable to receive SNMP traps?

Check the SNMP Trap settings of the SNMP IPv6. Please see **5-3-2 Notification**. Make sure that the workstation's IP address is added on the Target IP list.

#### Q10. Forgot Administrator account and password?

To reset account and password, connect the RJ45 to DB9 serial cable to the console port. Start Text Mode (Please refer to **4-4** Configuring through COM **Port**), when the login information is prompted, key in **rstadmin** within 30 seconds and then press enter. The Administrator account and password are now reset to default (admin/ password).

#### Q11. How to enable IPv6 on the SNMP IPv6?

If you are operating in Windows XP, please enable IPv6 first (click **START**  $\rightarrow$  **RUN**, and enter **ipv6 install**). The SNMP IPv6 supports IPv6, therefore, no additional configuration is required. However, please note that IPv6 is automatically disabled if an identical LLA (Local-link Address) already exists in the LAN. Also, when the IPv4 and IPv6 settings coexist, IPv4 is used as the primary IP address for the SNMP IPv6.

To learn more information regarding IPv6 compatibility, please visit **IETF** (http:// tools.ietf.org/html), or **IPv6 Ready Logo Program** (http://www.ipv6ready.org).

# Q12. How to generate a private SSL (Secure Socket Layer) certificate file (in PEM format) for HTTP connection?

To ensure connection security between the SNMP IPv6 and your browser, you can create your own SSL certificate file on Linux. Please download and install OpenSSL from http://www.openssl.org. Launch shell and enter the following command to create your own certificate file:

```
Openssl req -x509 -nodes -days 3650 -newkey rsa:1024 -keyout cert.pem -out cert.pem
```

- Answer the prompted questions. Proceed as directed by the messages. Once it is completed, a file named **cert.pem** is created in the current working directory.
- Upload cert.pem on the InsightPower UPS Web. Please refer to 5-3-1 Administration – Web.

#### Q13. How to generate DSA and RSA keys for SSH?

#### For Linux:

1) Please download and install OpenSSH from http://www.openssh.org.

2) Launch shell and enter the following command to create your own keys: Please ignore it when prompted to provide passphrase.

```
DSA Key:ssh-keygen -t dsa
RSA Key:ssh-keygen -t rsa
```

 Upload DSA and RSA key files on the InsightPower UPS Web. Please refer to 5-3-1 Administration – Console for more information.

#### For Windows:

- 1) Please download and install PuTTY from http://www.putty.org.
- 2) Run **puttygen.exe** from the installed directory.
- Select SSH-2 RSA from the Parameters area and click Key → Generate key pair to generate a RSA key.
- Select Conversions → Export OpenSSH Key and assign a file name to the RSA key. Please ignore it when prompted to provide key passphrase.
- Select SSH-2 DSA from the Parameters area and select Key → Generate key pair to generate a DSA key.
- 6) Select **Export OpenSSH Key** from **Conversions** and assign a file name to the DSA key. Please ignore it when prompted to provide key passphrase.
- 7) Upload the DSA and RSA key files to the InsightPower UPS Web. Please refer to **5-3-1** Administration Console for more information.

### Q14. How to test SNMPv3 in Linux?

Before you can access the SNMP OID (Object Identifier) via SNMPv3 protocol, the SNMPv3 USM table must be organized. Please refer to **5-3-2 Notification** – **SNMPv3 USM** for more information.

To test SNMPv3 in Linux, launch shell and key in the following command:

```
snmpwalk -v 3 -u <user> -l authPriv -A <pass-
word> -X <password> -n <context name> -t 3 <ip>
1.3.6.1.2.1.1.1.0
```

-v: 1 for SNMPv1, 3 for SNMPv3.

-I: Follow the security levels. They are: noAuthNoPriv, authNoPriv and authPriv.

-u: The user name which is assigned from SNMPv3 USM table.

- -A: The Auth Password which is assigned from SNMPv3 USM table.
- -X: The Priv Password which is assigned from SNMPv3 USM table.
- -n: The Context Name which is assigned from SNMPv3 USM table.
- -t: Timeout in seconds.
- <ip>: The IP address of the SNMP IPv6.
- <oid>: The next available SNMP OID (for example: 1.3.6.1.2.1.1.1.0). Please refer to the RFC1213 MIB.

# **Appendix A : Specifications**

Model Name	InsightPower SNMP IPv6
Power Input	12 Vdc
Power Consumption	2 Watt (Max.)
Network Connection	RJ-45 jack connector (10/ 100M)
Physical	
Size (W x D )	130 mm x 60 mm
Weight	75 g
Environmental	
Operating Temperature	0 ~ 60°C
Storage Temperature	-40 ~ 125℃
Operating Humidity	0 ~ 90 % (Non-condensing)



\* Refer to the rating label for the safety rating.

\* All specifications are subject to change without prior notice.

# **Appendix B : Warranty**

Seller warrants this product, if used in accordance with all applicable instructions, to be free from original defects in material and workmanship within the warranty period. If the product has any failure problem within the warranty period, Seller will repair or replace the product at its sole discretion according to the failure situation.

This warranty does not apply to normal wear or to damage resulting from improper installation, operation, usage, maintenance or irresistible force (i.e. war, fire, natural disaster, etc.), and this warranty also expressly excludes all incidental and consequential damages.

Maintenance service for a fee is provided for any damage out of the warranty period. If any maintenance is required, please directly contact the supplier or Seller.



**WARNING :** The individual user should take care to determine prior to use whether the environment and the load characteristic are suitable, adequate or safe for the installation and the usage of this product. The User Manual must be carefully followed. Seller makes no representation or warranty as to the suitability or fitness of this product for any specific application.

