



PowerShield SNMP Card Lite User Manual

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SNMP Card Lite
Basic Web-based SNMP Card for UPS
User's Manual
Of SNMP CARD LITE (NML)



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Product Introduction

The SNMP LITE CARD UPS network monitoring adapter supports basic UPS monitoring functions with an intuitive user interface and is an entry level UPS monitoring product to meet the general monitoring requirement of the Powershield single phase UPS portfolio.

Functional Characteristics

1. Stand-alone embedded system
2. User configurable accessibility rights
3. The built-in optimized IP Power communication protocol ensures real-time performance of data collection and can be used together with IP Power SE software to realize remote centralized monitoring.
4. Supports WEB browser configuration management modes.
5. Users can remotely control UPS shutdown, self-test, and restart.
6. Supports standard UPS MIBs (RFC1628) and PPC MIBs.
7. 10/100Mbps Ethernet network
8. Support TLS/SSL protocol
9. Automatically sends event and alert notifications via E-mail, SNMP Trap and IP Power messages
10. With IP Power SE software installed, Network servers/workstations can be safely and smoothly shut down to avoid data loss and equipment damage caused by utility power failure.
11. Support SSL/STARTTLS encrypted mailbox protocol (For example, Gmail, Outlook, etc).

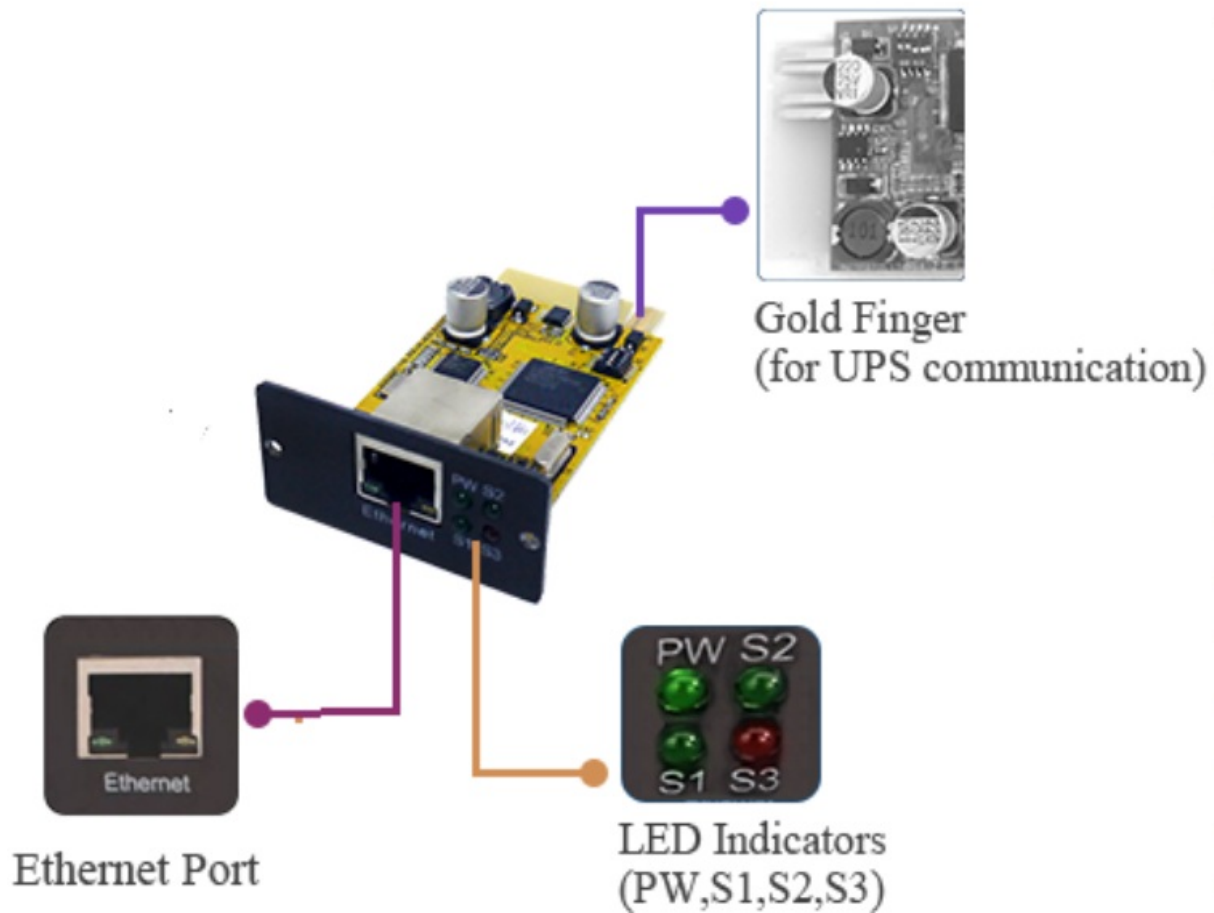
Installation Requirement

- The UPS with RS232 port or internal slot;
- The computer (with administrator privileges) with Ethernet port;

Note: Please read this user manual before installation.

Ports Definition

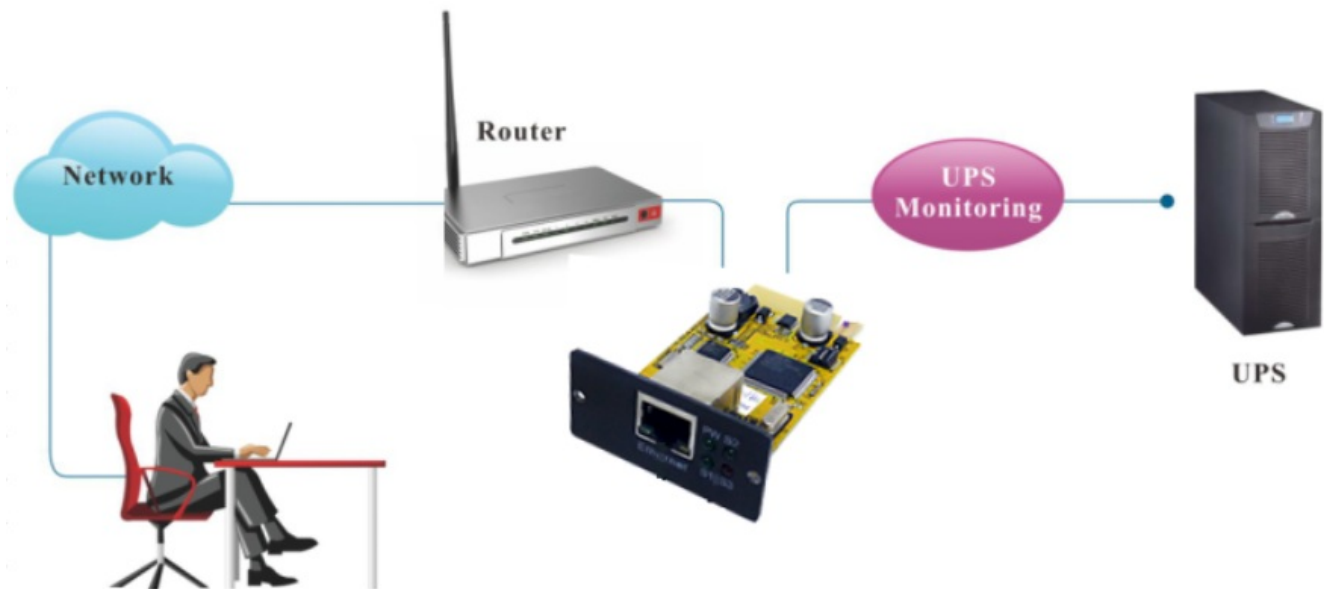
SNMP Lite (NML) network card



1. Ethernet Port: UTP 10/100M RJ45 Ethernet port;
2. PW (Green): Power status indicator, constantly on means power connected well, no light means no power connected;
3. S1 (Green): Running indicator, slow flash is normal;
4. S2 (Green): Not used;
5. S3 (Red): Device status indicator (red), constantly on means connected well with UPS and have data communication, flash means disconnected or UPS communication failed;
6. Gold Finger: Insert into UPS internal slot.

Installation

2.1 Network Diagram

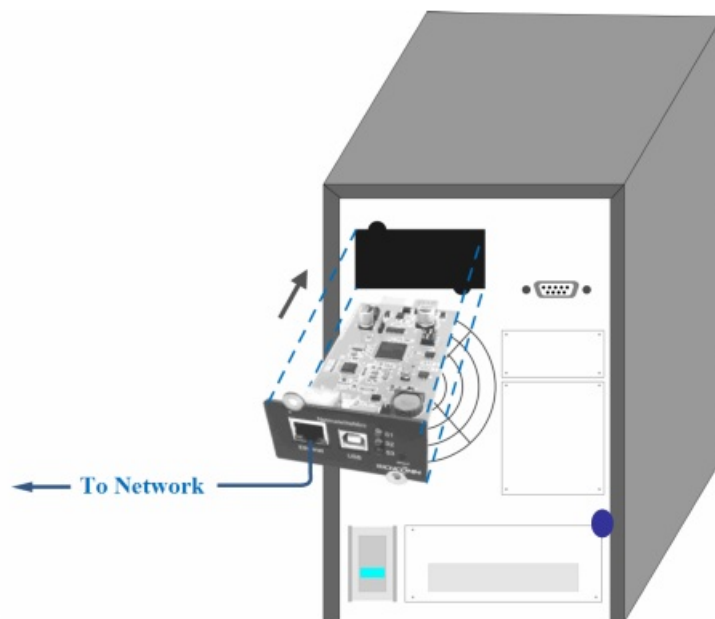


2.2 Hardware Installation

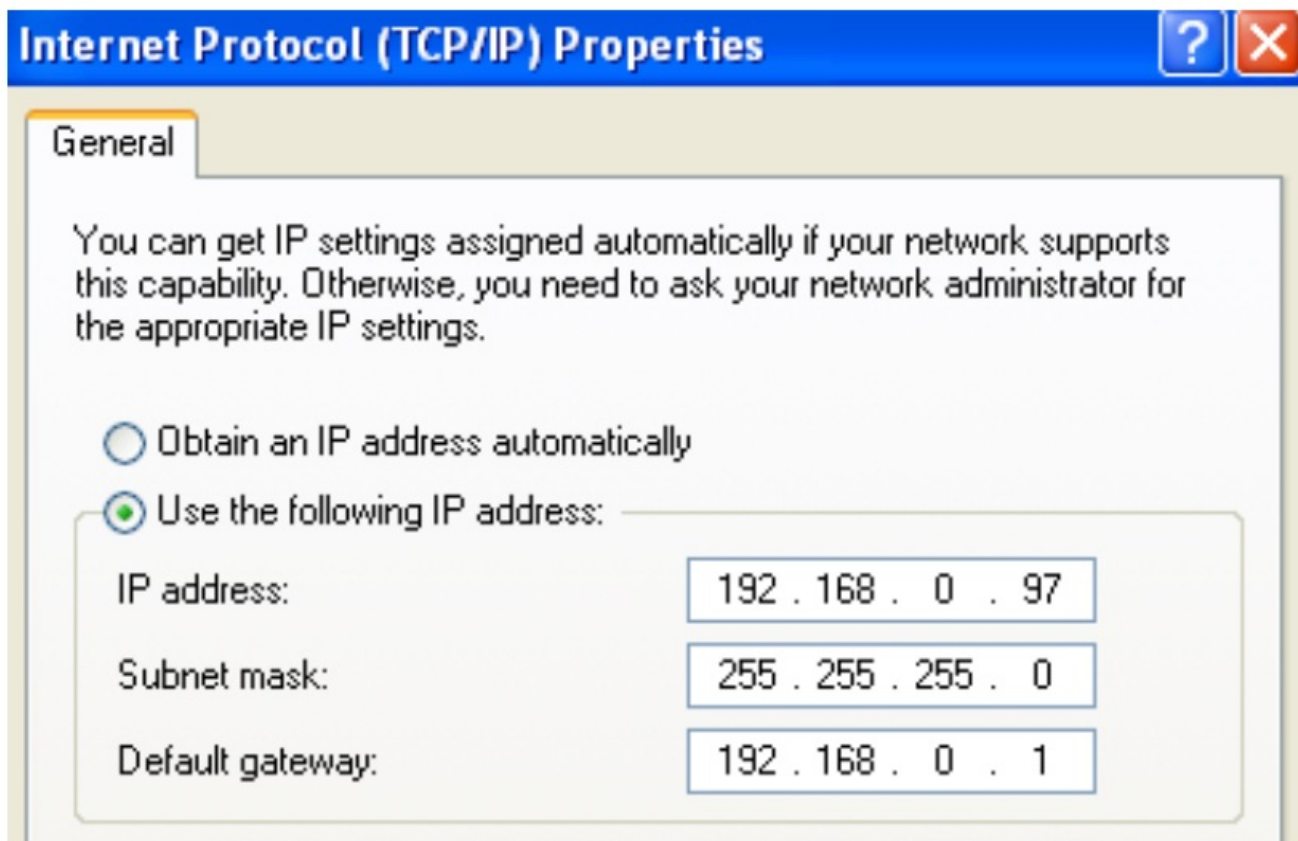
Internal SNMP Cards

Procedure:

1. Insert internal SNMP card to UPS slot
2. Use T568B network cable connect to network



2.3 Set Network Segment



For initial configuration, first we should set a same network segment before sign in web interface, since default IP is: 192.168.0.100, so network segment should be set as 192.168.0.XXX

2.4 Command “ping”

Before sign in the web interface, we can check the default IP address whether available in your network by command “ping”

```
C:\WINDOWS\system32\cmd.exe
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

C:\Documents and Settings\Administrator>ping 192.168.0.100

Pinging 192.168.0.100 with 32 bytes of data:

Reply from 192.168.0.100: bytes=32 time=5ms TTL=255
Reply from 192.168.0.100: bytes=32 time<1ms TTL=255
Reply from 192.168.0.100: bytes=32 time<1ms TTL=255
Reply from 192.168.0.100: bytes=32 time<1ms TTL=255

Ping statistics for 192.168.0.100:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 5ms, Average = 1ms

C:\Documents and Settings\Administrator>
```

Ping Pass

```
C:\WINDOWS\system32\cmd.exe
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

C:\Documents and Settings\Administrator>ping 192.168.0.100

Pinging 192.168.0.100 with 32 bytes of data:

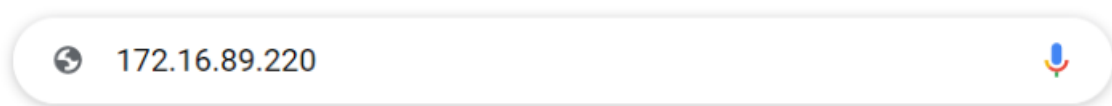
Request timed out.
Request timed out.
Request timed out.
Request timed out.

Ping statistics for 192.168.0.100:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

C:\Documents and Settings\Administrator>
```

Ping Fail

2.5 Sign in Web Monitoring Interface



After completing the above steps, open a web browser (IE/firefox/chrome etc), input default IP address 192.168.0.100

Sign in

http://172.16.89.220

Your connection to this site is not private

Username

Password

Sign in

Cancel

Input user name and password , default user name & Password are both "admin". (User name and Password by can be changed by setting)

2.6 Web Monitoring Interface

After entering the user name and password, the monitoring homepage will display the UPS current status and the user can commence the desired changes to the SNMP Lite configuration settings



<Home page>

Software Configuration Setting Introduction

3.1 UPS Information

Sub-Menu

- System Information
- Device Information
- Current Status
- Remote Control

3.1.1 System Information

This page is to display SNMP Lite card basic information and network information. The information shown is provided by SNMP Card Lite SNMP card itself and parameter settings

PowerShield

UPS Information

System Information

Device Information

Current Status

Remote Control

Parameter Settings

History Record

NetmateLite

admin

Welcome

Authorization: Manage

Time: 2082-5-12 8:1:1

System Information

IP Address	Subnet Mask	Gateway	Product Serial Number
172.16.89.220	255.255.254.0	172.16.88.1	00:00:00:00:00:0F

System Name	System Administrator	System Installation Path

Software Version	Hardware Version
\$Rev: 1806 \$ Dec 23 2022 16:23:09-43-RCEXV:2-0-34-0-1-ISPR-1284-0	2.00.4.1

A, IP Address

This part will automatically display when users finish the [Network Setting] **B, Subnet Mask**

This part will automatically display when users finish the [Network Setting] **C, Gateway**

This part will automatically display when users finish the [Network Setting] **D, System Name**

This part will automatically display when users finish the [SNMP Setting] **E, System Administrator**

This part will automatically display when users finish the [SNMP Setting] **F, System Installation Position**

This part will automatically display when users finish the [SNMP Setting] **G, Other information will be provided by SNMP Card Lite monitoring system**

3.1.2 Device Information

This part is to display each part of device information (UPS basic information, battery information and rated information). The contents will change according to user setting and UPS real status. UPS Manufacturer/Model/Version will be provided by the UPS itself.

PowerShield

UPS Information

System Information

Device Information

Current Status

Remote Control

Parameter Settings

History Record

NetmateLite

admin

Welcome

Authorization: Manage

Time: 2082-5-12 8:1:16

Device Information

Manufacturer	Model	Version
richcomm	UPS 5K-11A	Version1.0

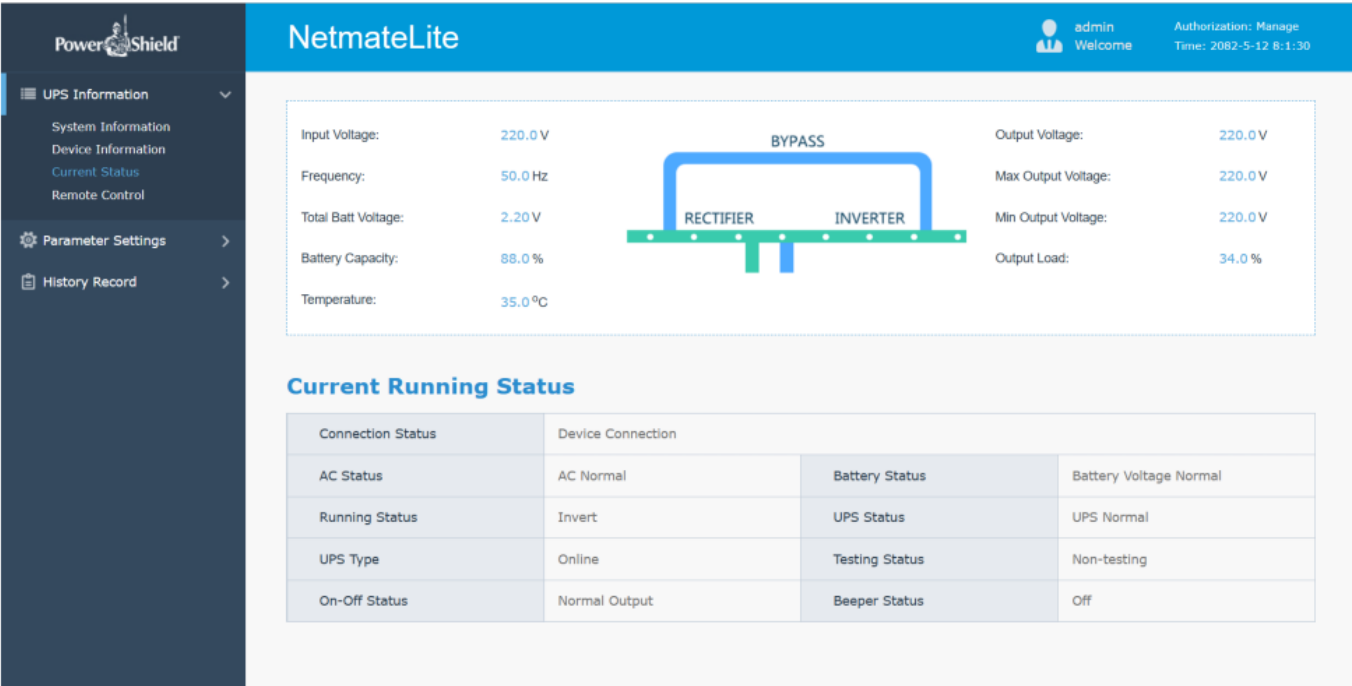
Rated Output Voltage	Rated Current	Rated Battery Voltage
220.0V	100A	02.55V

Rated Frequency	Baud Rate	Battery Quantity
50.0Hz	2400	1

3.1.3 Current Status

This menu displays the UPS current running status. The Graphical User Interface clearly displays the UPS current running status. When an abnormal alarm occurs, figures will turn in to red font accordingly.

Single-phase UPS Monitoring

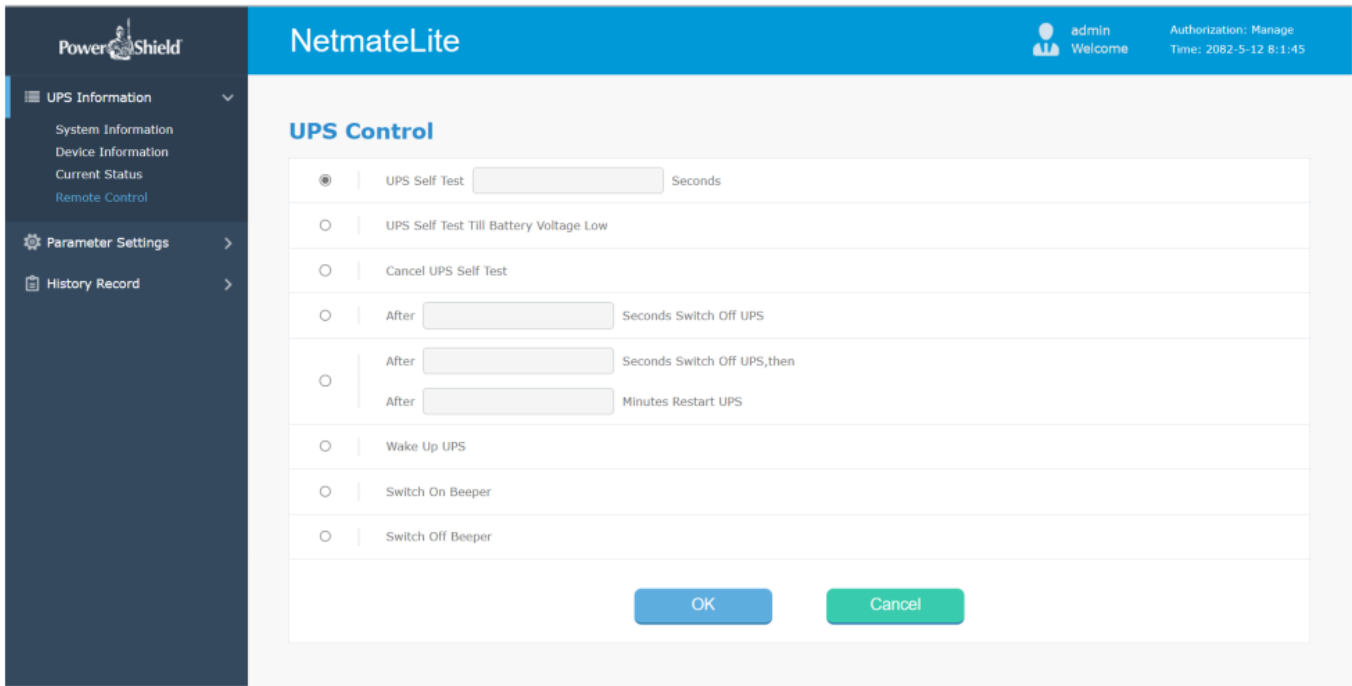


Basic Information parameters displayed include:

Input Voltage/Input Frequency/Battery Voltage/Battery Content/UPS Temperature/Output Voltage/Output Max Voltage/Output Min Voltage/ Current Load /Temperature and Humidity.

3.1.4 Remote Control

This menu is to run ups self test, remotely switch on/off, and restart UPS.



3.2 Parameter Setting

Sub-Menu:

- System Settings
- Network Settings
- SNMP Settings

- E-mail Settings
- User Settings
- IP POWER Settings

3.2.1 System Settings

Basic Parameter Settings

This menu is used to configure UPS basic parameters, Baud Rate/ Offline Times/Alarm Times/Inquiry/Battery Quantity/ Battery Type/System Date Time/NTP server need to be set according to real UPS information.

Shutdown settings:

Configure the parameters indicated in Red rectangle to set UPS shutdown options, when UPS constantly in AC break or battery low voltage, will shutdown computer and then UPS. And then when AC recover, UPS will auto restart and computer will restart.

System Parameter settings

Centurion (RT) 1000 / 2000SB / 2000 / 3000 / 6000 / 10K

Communication Protocol: Standard

Battery Quantity: 3 / 4 / 6 / 6 / 16 – 20 / 16 -20

Battery Type: 12V

Lithium Centurion RT 1000 / 2000 / 3000

Communication Protocol: Standard

Battery Quantity: 8 / 24 / 24

Battery Type: 2V

Commander (RT) 1100 / 2000 / 3000

Communication Protocol: Standard

Battery Quantity: 1 / 1 / 1

Battery Type: 12V-1

For additional BBs need to select correct Ah settings on LCD of UPS Menu

Defender 800 Rackmount PSDR800

Communication Protocol: Standard V1

Battery Quantity: 1

Battery Type: 2V

Ninja 600 Standby UPS

Communication Protocol: Standard V1

Battery Quantity: 1

Battery Type: 2V

Tested ntp servers

1. ntp.adelaide.edu.au (129.127.40.3)
2. US CO time-a.nist.gov (129.6.15.28)

Note: The time and date must be synchronized to a network time server (ntp) selected by the user in system parameters. On system start-up the ups will need to synchronize the time and date from the ntp server. During synchronization the time and date will default to the factory settings and you may receive event alerts with unsynchronized time and date.

3.2.2 Network Settings

This menu is used to configure the network settings: IP address, subnet mask, gateway information and work mode of SNMP Lite card.

Network Settings	
IP Address:	172.16.89.220
Subnet Mask:	255.255.254.0
Gateway:	172.16.88.1
Primary DNS Server:	8.8.8.8
Secondary DNS Server:	0.0.0.0
Work Mode	AUTO

OK System Reboot

Basic Setting

A, SNMP System Name: Name this SNMP system

B, SNMP System Administrator: Set this SNMP system administrator

C, SNMP System Installation Path: Set SNMP system installation location

The basic settings are used to uniquely identify the SNMP Lite card for central monitoring and management by IP Power SE.

- UPS Information
- Parameter Settings
 - System Settings
 - Network Settings
 - SNMP Settings
 - Email Settings
 - User Settings
 - IPPOWER Settings
- History Record

NetmateLite

admin

Welcome

Authorization: Manage

Time: 2082-5-12 8:2:58

Basic Settings

SNMP System Name

SNMP System Administrator

SNMP System Installation Path

OK

Cancel

SNMP Settings

This menu is used to configure SNMP user IP address, community and set relevant authorizations.

Users can enable SNMP Lite card accessibility to 6 unique SNMP user IP addresses with the following permission levels: No Authorization, Readable, Readable/Writable.

- UPS Information
- Parameter Settings
 - System Settings
 - Network Settings
 - SNMP Settings
 - Email Settings
 - User Settings
 - IPPOWER Settings
- History Record

NetmateLite

admin

Welcome

Authorization: Manage

Time: 2082-5-12 8:3:12

Basic Settings

SNMP System Name

SNMP System Administrator

SNMP System Installation Path

OK

Cancel

SNMP Settings

ID	IP User	Community	Permission
01	172.16.88.135	public	Readable/Writable
02	0.0.0.0	public	No Permission
03	0.0.0.0	public	No Permission
04	0.0.0.0	public	No Permission
05	0.0.0.0	public	No Permission

Trap Setting

The Receiver IP Address is used for receiving the Traps that are sent by SNMP system. Users can set 6 Trap receivers IP addresses, and choose whether to receive the traps or not.

- UPS Information
- Parameter Settings
 - System Settings
 - Network Settings
 - SNMP Settings
 - Email Settings
 - User Settings
 - IPPOWER Settings
- History Record

NetmateLite

admin Welcome Authorization: Manage Time: 2082-5-12 8:3:26

OK Cancel

TRAP Settings

ID	Receiver IP Address	Community	Receive	XPPC	RFC1628
01	172.16.88.135	public	Receive	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
02	0.0.0.0		None	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
03	0.0.0.0		None	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
04	0.0.0.0		None	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
05	0.0.0.0		None	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
06	0.0.0.0		None	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

OK Cancel

3.2.4 E-mail Settings

Configuration of email parameters.

Note: For Office365 please select USE_TLS, Port 587 and de-activate multi factor authentication on this email account.

- UPS Information
- Parameter Settings
 - System Settings
 - Network Settings
 - SNMP Settings
 - Email Settings
 - User Settings
 - IPPOWER Settings
- History Record

NetmateLite

admin Welcome Authorization: Manage Time: 2082-5-12 8:3:41

Email Settings

Authentication: | USE_TLS

SMTP Server: | NO_SECURITY

Sender Email: | longye166@outlook.com

User Name: | longye166@outlook.com

Password: | *****

Port: | 587

Receiver Settings

Receiver Settings

Receiver Mailbox 1 |

Receiver Mailbox 2 |

Receiver Mailbox 3 |

Receiver Mailbox 4 |

Receiver Mailbox 5 |

Receiver Mailbox 6 |

OK Cancel

3.2.5 User Settings

This menu is used to set the user identifications, permissions and passwords.

Passwords may have up to 16 characters and only use combinations of the following characters:

0 to 9, a to z, A to Z and . * @ /

Any attempt to use characters outside of the above set may permanently lockout user password entry and recovery will only be possible with assistance from Power Shield.

- UPS Information
- Parameter Settings
 - System Settings
 - Network Settings
 - SNMP Settings
 - Email Settings
 - User Settings
 - IPPOWER Settings
- History Record

NetmateLite

admin

Welcome

Authorization: Manage

Time: 2082-5-12 8:4:2

User Settings

ID	User Name	Permission	Password	Confirm Password
01	admin	Manage		
02		Check		
03		Check		
04		Check		
05		Check		
06		Check		

OK

Cancel

3.2.6 IP POWER Settings

This menu is to set the authorization addresses. All authorization addresses are for remote monitoring and management via IP Power SE. Authorization permissions including Control and Access.

- UPS Information
- Parameter Settings
 - System Settings
 - Network Settings
 - SNMP Settings
 - Email Settings
 - User Settings
 - IPPOWER Settings
- History Record

NetmateLite

admin

Welcome

Authorization: Manage

Time: 2082-5-12 8:4:12

IPPOWER Settings

User IP	Subnet Mask	Permission
0.0.0.0	0.0.0.0	Check
0.0.0.0	0.0.0.0	Check
0.0.0.0	0.0.0.0	Check
0.0.0.0	0.0.0.0	Check
0.0.0.0	0.0.0.0	Check
0.0.0.0	0.0.0.0	Check

Comm timeout reset cycle 0 Min

OK

Cancel

3.3 History Event

This page is used to display history events and records including the Date/Time/ Log.

PowerShield

UPS Information >

Parameter Settings >

History Record >

History Event

NetmateLite

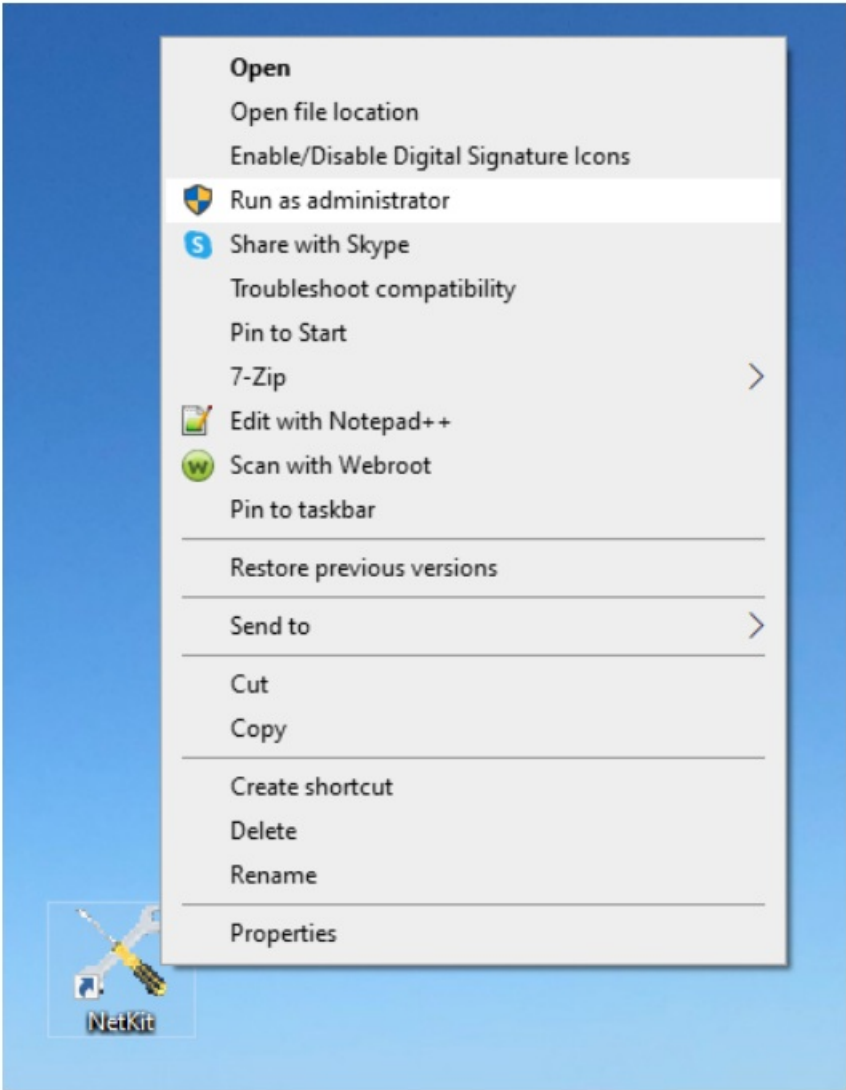
admin Welcome Authorization: Manage Time: 2082-5-12 8:4:22

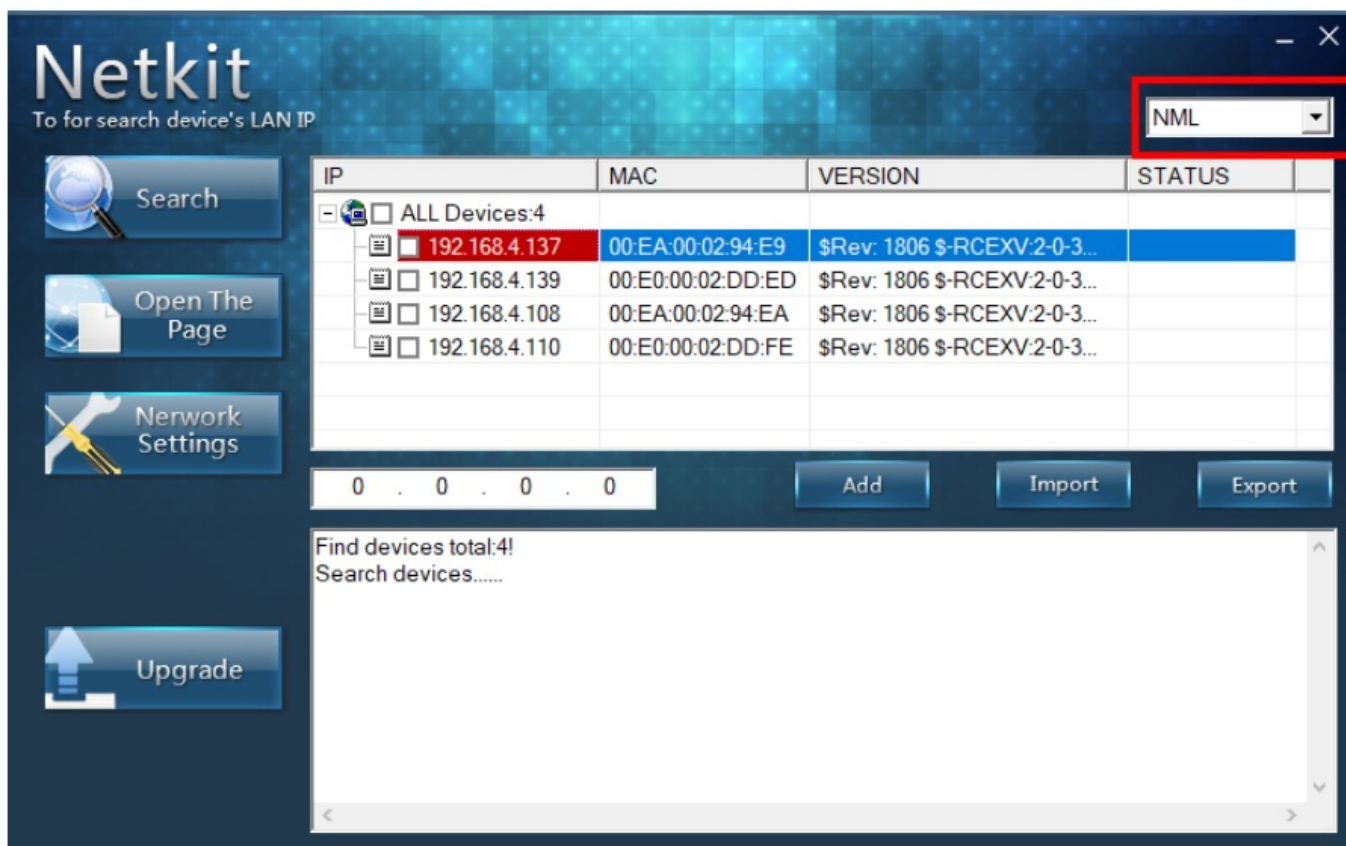
History Event

Date	Time	Log Content
2082/05/12	08:00:13	System Startup
2082/05/12	07:57:52	Device Disconnection
2082/05/12	07:57:49	System Startup
2082/05/12	07:50:25	Device Disconnection
2082/05/12	07:50:22	System Startup
2082/05/12	07:48:46	Device Disconnection
2082/05/12	07:48:43	System Startup
2023/02/08	16:35:25	Device Disconnection
2023/02/08	16:35:22	System Startup

First Page 1 2 3 4 5 6 7 8 9 10 next Last Page go to P: 1

3.4 NetKit
Network utility kit, for scanning SNMP lite cards on the network.
Run Net Kit as administrator



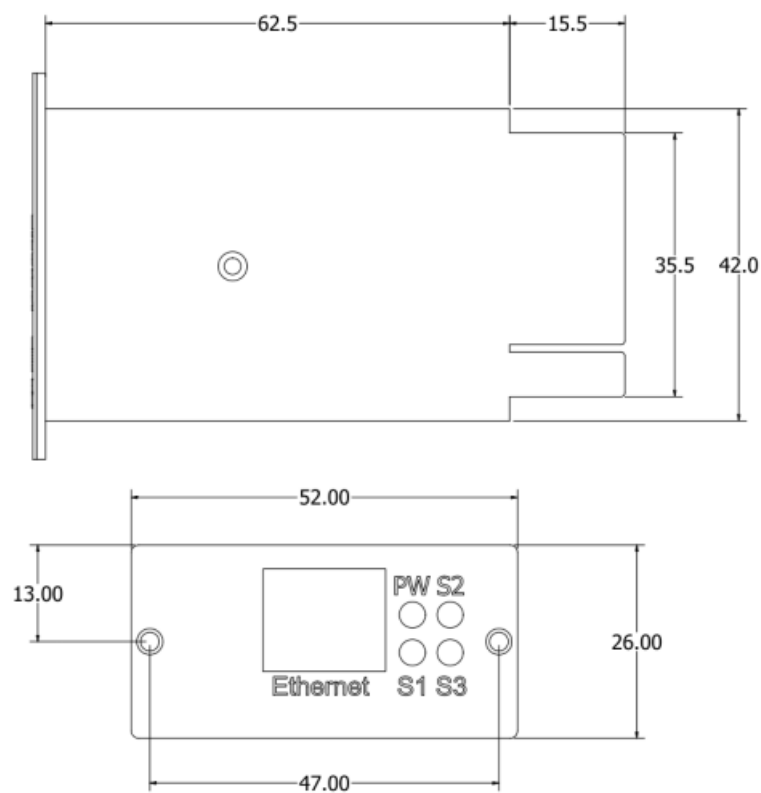


Please select NML and then Search to find your SNMP LITE Card(s).
Press Open The Page or enter IP address in your browser of choice.

Technical Specifications

CPU	ARM Cortex-M4 micro-controller
RAM	160KB SDRAM
Flash	512KB Flash
Network Port	10/100mbps high speed Ethernet adaptive
Serial Port	A high speed asynchronous RS232 serial port be used for UPS communication and upgrade process
Support Browser	Chromium based browsers, Chrome &Edge.
SNMP MIB	Support MIB-II(RFC1213,RFC1315,RFC1316),PPC MIB
Network Protocol	TCP/IP UDP SNMP etc.
Input Power(DC)	Rated:12V Allowed Range:8Volt-14Volt
LED Indicator Light	Power Status, LAN 10/100M Link/Active
Working Current	70mA~150mA MAX:1W
Operating Environment	Environment Temperature 20°C 70°C Relative Humidity:95% non-condensing
System Security	Supply filtering mechanism based on IP, user ID and password protect of system operation and control management

Physical Dimensions



Documents / Resources

<div><div>SNMP Card Lite</div><div>Basic Web-based SNMP Card for UPS</div><div>User's Manual</div><div>OF SNMP CARD LITE (NMA)</div><div></div></div>	<div>PowerShield SNMP Card Lite [pdf] User Manual</div> <div>SNMP Card Lite, SNMP, Card Lite, Lite</div>
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