NETWORK ADAPTER



Installation and user manual

INTRODUCTION

Thank you for choosing our product.

The accessories described in this manual are of the highest quality, carefully designed and built in order to ensure excellent performance.

This manual contains detailed instructions on how to install and use the product. This manual must be stored in a safe place and <u>CONSULTED BEFORE USING THE DEVICE</u> for proper usage instructions as well as maximum performance from the device itself.

NOTE: Some images contained in this document are for informational purposes only and may not faithfully demonstrate the parts of the product they represent.

Symbols used in this manual:

Warning Indicates important information that must not be ignored.

Information Provides notes and useful suggestions for the User.

SAFETY

This part of the manual contains SAFETY precautions that must be followed scrupulously.

- The device has been designed for professional use and is therefore not suitable for use in the home.
- The device has been designed to operate only in closed environments. It should be installed in rooms where there are no inflammable liquids, gas or other harmful substances.
- Take care that no water or liquids and/or foreign bodies fall into the device.
- In the event of a fault and/or impaired operation of the device, do not attempt to repair it but contact the authorized service centre.
- The device must be used exclusively for the purpose for which it was designed. Any other use is to be considered improper and as such dangerous. The manufacturer declines all responsibility for damage caused by improper, wrong and unreasonable use.

ENVIRONMENTAL PROTECTION

Our company devotes abundant resources to analyzing environmental aspects in the development of its products. All our products pursue the objectives defined in the environmental management system developed by the company in compliance with applicable standards.

Hazardous materials such as CFCs, HCFCs or asbestos have not been used in this product.

When evaluating packaging, the choice of material has been made favoring recyclable materials. Please separate the different material of which the packaging is made and dispose of all material in compliance with applicable standards in the country in which the product is used.

DISPOSING OF THE PRODUCT

The device contains internal material which (in case of dismantling/disposal) are considered TOXIC, such as electronic circuit boards. Treat these materials according to the laws in force, contacting qualified centers. Proper disposal contributes to respect for the environment and human health.

The reproduction of any part of this manual, even in part, is prohibited unless authorized by the manufacturer.
 The manufacturer reserves the right to change the product described at any time without prior notice for improvement purposes.

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DESCRIPTION

OVERVIEW

Netman 204 is an accessory that allows device management through a LAN (Local Area Network); the accessory supports all the main network protocols (SNMP v1, v2 and v3, TCP/IP, HTTP and MODBUS) and is compatible with Ethernet 10/100Mbps IPv4/6 networks. The device can therefore be integrated easily into medium and large-sized networks.

Netman 204 also records device values and events in the history log archive and can manage optional environmental sensors (not supplied with the device, but provided separately)

PACKAGE CONTENTS



Quick start



FRONT PANEL



- A: Network port
- B: LED
- C: Reset button
- D: Micro-USB port
- E: Serial port

Network port

Netman 204 connects to 10/100 Mbps Ethernet networks by means of connector RJ45. The LEDs built into the connector describe the status of the network:

- Left LED SOLID YELLOW: NetMan204 has detected a valid link.
 FLASHING YELLOW: NetMan204 is receiving or transmitting data packets.
- Right LED SOLID GREEN: NetMan204 is connected to a network operating at 100 Megabits per second.

Micro-USB port

NetMan 204 makes available an USB communication port through which it is possible to configure it (see paragraph "Configuration via USB").

Serial port

NetMan 204 makes available a serial communication port to which you can connect environmental sensors (not supplied with the device, but provided separately).

LED

This led describes the status of NetMan 204:

- SOLID RED: NetMan 204 is not communicating with the device (verify PRTK Code).
- FLASHING RED: the DHCP server does not have assigned a valid IP address to NetMan 204.
- OFF: regular working.

GSM Modem

NetMan 204 can send a notification SMS if one or more alarm conditions occur. The SMS can be sent to up to three recipients and they can be sent for seven different kinds of alarm. An external GSM modem (optional accessory) and a SIM card are required. For more details, see paragraph "GSM Modem"

Reset button

The reset button allows to restart the *NetMan204* or to load a default configuration with a predefined static IP address.

To reset *NetMan204*: keep press the reset button until the red led start flashing (ca. 2 seconds) and then release it.

To load a configuration with predefined static IP address: keep press the reset button; first the led starts flashing, then turns to solid red (ca. 10 seconds). When the led is solid red, release the reset button and the *NetMan 204* will reboot with:

- IP address: 192.168.0.204
- Netmask: 255.255.0.0
- SSH service enabled
- HTTP service enabled



HTTP and SSH service are enabled temporarily without changing the configuration saved in non-volatile memory.

USERS

It is possible to access to Netman 204 with four different users:

Username	Default password	Privileges
admin	admin	user with right to modify the configuration (1)
power	N/A ⁽²⁾	user with right to modify the configuration (2)
fwupgrade	fwupgrade	user with right to upgrade the firmware
user	user	user with right to read and download the log files



- (1) Admin user can also operate on the device and therefore shutdown it.
- (2) The user "Power" is disabled by default and has the right to modify the configuration (only via web) but not the right to operate on the device. To enable the user, you must set the password on the web configuration.

NETWORK SERVICES

Netman 204 implements a series of services based on the main network protocols. These services can be activated or deactivated according to requirements (see paragraph "Configuration"). A brief description for each of these is given below.

SSH

By means of a SSH client (available on all the main operating systems) a remote connection with *Netman 204* can be established to change its configuration (see paragraph "Configuration via SSH").

Serial network

To emulate a point-to-point serial connection through the network (TCP/IP protocol) in order to use special function service software.

Wake-on-LAN

Netman 204 can send "Wake-on-LAN" command for remote computers boot.

HTTP

Using the HTTP (Hyper Text Transfer Protocol), is possible to configure the *NetMan 204* and the status of the device can be monitored by means of a web browser without having to install additional software. All the most popular web browsers are supported; only most recent version of browsers are supported.

SNMP

SNMP (Simple Network Management Protocol) is a communication protocol that allows a client (manager) to make requests to a server (agent). *NetMan 204* is an SNMP agent.

To exchange information, manager and agent use an addressing technique called MIB (Management Information Base). There is a MIB file for each agent, defining which variables can be requested and the respective access rights. The agent can also send messages (TRAP) without a prior request from the manager, to inform the latter of particularly important events. SNMPv3 is the evolution of SNMP and introduces new important features related to security.

UDP

UDP (User Datagram Protocol) is a low level network protocol that guarantees speed in the exchange of data and low network congestion. It is the protocol used by the UPSMon software for monitoring and control of the device.

The UDP connection uses the UDP 33000 port by default but can be configured on other ports according to requirements.

Modbus TCP/IP

The device status can be monitored by means of the standard network protocol MODBUS TCP/IP. Modbus TCP/IP is simply the Modbus RTU protocol with a TCP interface that runs on Ethernet.

BACnet/IP

The device status can be monitored by means of the standard network protocol BACnet/IP. BACnet (Building Automation and Control networks) is a data communication protocol mainly used in the building automation and HVAC industry (Heating Ventilation and Air-Conditioning).

FTP

FTP (File Transfer Protocol) is a network protocol used for file exchange. *NetMan 204* uses this protocol for:

- 1. download of files of the device values and events history log archive (Datalog and Eventlog);
- 2. download and upload of configuration files;
- 3. firmware upgrade.

In both cases a client FTP is required, configured with these parameters:

- Host: hostname or NetMan 204 IP address;
- User: see chapter "Users";
- Password: current password.

The connection can also be established using a web browser (all the most popular web browsers are supported), by inserting the hostname or IP address of the *NetMan 204*.

Syslog

Netman 204 can send events to a syslog server over UDP. This service allow to centralize the log of the IT infrastructure on a single server, in order to have them consumed on the preferred way.

Email

Netman 204 can send a notification e-mail if one or more alarm conditions occur. The e-mails can be sent to up to three recipients and they can be sent for seven different kinds of alarm. SMTP (Simple Mail Transfer Protocol) is the protocol used to send the e-mails. The port is configurable. For more details, see paragraph "Configuration"

Reports

Netman 204 can send periodic e-mails with an attachment containing the files of the device values and events history log archive.

This service can be used to periodically save the history log archives.

The "Email" service must be enabled in order to send reports; the reports are sent to all the addresses configured for this service (for more details see paragraph "Configuration").

SSH Client (only for operating system W18-1 or later)

When not feasible to operate on equipment by other means, is possible to execute a script on a host over SSH. For more details, see paragraph "Configuration"

DEVICE VALUES AND EVENTS HISTORY LOG ARCHIVE

NetMan 204 records the device values (Datalog) and events (Eventlog) in a history log database.

Eventlog

The Eventlog service is always active and records all relevant device events in the 'event.db' file. The file can be downloaded via FTP or can be viewed through the web page without credentials. With the "Email report" service, is sent a .csv with the event of the last day or week according to your setting. The data are saved in circular list mode; thus the most recent data are saved by overwriting the oldest data.

On the web page, these icons will be shown on the "type" column:

- A red dot if the event is the start of an alarm condition;
- A green dot if the event is the end of an alarm condition;
- A blue dot otherwise

Datalog (only for UPS devices)

The Datalog service records the main data of the UPS in the 'datalog.db' file.

This service writes a record each hour at 00 minutes, which summarizes the data of the past hour: values are recorded at their minimum, maximum and medium. Records older than one year get overwritten with new records.

The file can be downloaded via FTP or can be viewed through the web page (only the most important values are shown on the web page) without credentials.

With the "Email report" service, the last records (last day or last 7 days according to your settings) will be sent in a .csv format.

ENVIRONMENTAL SENSORS (OPTIONAL)

It is possibile to connect to *NetMan 204* the environmental sensors for monitoring temperature, humidity and digital input/output.

The information provided by these sensors can be showed with the device monitoring and control software or with a web browser.

The values provided by the sensors may also be requested with SNMP according to the RFC 3433 standard (MIB files on the download site).

Available sensors

- Temperature: detects the environmental temperature in °C.
- *Humidity & Temperature*: detects the relative humidity in % and the environmental temperature in °C.
- **Digital I/O & Temperature**: detects the environmental temperature in °C and features a digital input and a digital output.



It is possible to connect up to 3 environmental sensor to a *NetMan 204* (for sensor installation please see the sensors' manual).

INSTALLATION

- 1. Remove the cover of the device expansion slot by removing the two retaining screws.
- 2. Insert NetMan 204 in the slot.
- 3. Secure *Netman 204* in the slot using the two screws removed previously.
- 4. Connect the device to the network by means of connector RJ-45 (see "Specifications for the cabling of the network cable")



CONFIGURATION

OVERVIEW

NetMan 204 can be configured via USB, via SSH or via HTTP.



NetMan 204 comes provided as factory default with DHCP enabled and with the following services active: SSH, HTTP, SNMP, UDP and FTP.

In order to change the configuration of *NetMan 204*, you have to log in as admin (default password "admin").

NetMan 204 needs approx. 2 minutes to become operational from when it is powered up or after a reboot; before this time the device may not respond to commands that are sent to it.

Configuration via HTTP/HTTPS

In order to change the configuration via http/https, you have to insert in your web browser the hostname or IP address of the *NetMan 204* and then log in as admin (default password: "admin").



The HTTPS service uses TLS (transport layer security) in order to provide cryptographic security. However, the certificate used is self-signed and therefore the web browser may prompt a security alert; in this case you can ignore the alert and proceed with the configuration of *NetMan 204*.

Once login has been effected, you can browse through the menus to configure the NetMan 204.



In order to make a new configuration effective, it is necessary to save it. Some changes are applied immediately, while other require a reboot of the *NetMan 204* (as required with a pop-up by your web browser).

Configuration via USB

To configure NetMan 204 via USB it is necessary to:

- Connect, with the USB cable provided, the micro-USB port with the USB port of a PC with Windows operating system.
- If not previously installed, install the USB driver (after driver installation, a virtual COM named "NetMan 204 Serial" will be present in device manager).
- Execute a terminal emulation program with the following settings: COMn ⁽¹⁾, 115200 baud, no parity, 8 databits, 1 stop bit, no flow control.

⁽¹⁾ COMn = COM port assigned to "NetMan 204 Serial" by device manager.

- Press the "Enter" key of the PC.
- At the login prompt, enter "admin".
- At the password prompt, enter the current password (default password: "admin").



During password's typing, no character is shown.

Once login has been effected, the screen of the start menu is displayed. From this screen it is possible to access the various menus to change *NetMan 204* settings (see paragraph "Start menu" and following paragraphs).

Configuration via SSH

To configure NetMan 204 via SSH it is necessary to:

- Execute a SSH client on a PC connected in a network to *NetMan 204* set with the IP address of the device to be configured.
- At the login prompt, enter "admin".
- At the password prompt, enter the current password (default password: "admin").



During password's typing, no character is shown.



For proper configuration of *NetMan 204*, you must configure the SSH client so that the backspace key sends "Control-H". Please verify the keyboard options of your SSH client.

Once login has been effected, the screen of the start menu is displayed. From this screen it is possible to access the various menus to change *NetMan 204* settings (see paragraph "Start menu" and following paragraphs).

CONFIGURATION MENU DESCRIPTION

Start menu

Once login has been effected via SSH or USB, a screen like the following is displayed:

Function	Description	
Setup	To enter main configuration menu	
View status	To see the status of the device	
Change password	To modify the password (see also Password recovery)	
Service log	To generate a log file of the card (when requested by the service)	
Wi-Fi setup	To configure Wi-Fi connection For Wi-Fi connection, an optional card is required. The Wi-Fi card is not provided with <i>NetMan 204</i> but it has to be purchased separately.	
Factory reset	Restore factory configuration	
Expert mode	To enter Expert mode (more information at paragraph "Expert mode")	

To move within this menu and the following menus, use the keys as described in the following table; the arrow or the cursor shows the current selection.

Кеу	Function	
Direction keys (Arrow up, down, right, left)	To move the cursor within the menus	
Tab	Goes on to next option	
Enter (1)	Choice of submenu	
	Confirmation of characters entered	
Esc ⁽¹⁾	Exit main menu ⁽²⁾	
	Return to previous menu	

⁽¹⁾ Some keys can have a different function depending on the menu.

⁽²⁾ To exit from a menu a confirmation ('Y' or 'N') is required after pressing the ESC key.

Setup

The main configuration menu displays a screen like the following:



From this main menu it is possible to access the various submenus, the function of each of which is shown in the table below.

Menu	Function		
IP config	To configure the network parameters		
Wi-Fi setup	To configure Wi-Fi connection For Wi-Fi connection, an optional card is required. The Wi-Fi card is not provided with <i>Netman 204</i> but it has to be purchased separately.		
Enable Sensors	To enable the environmental sensors		
Sensors Config	To configure the environmental sensors		
Expert mode	To enter Expert mode (more information at paragraph "Expert mode")		
Factory reset	Restore factory configuration		
Reboot	Reboots the Netman 204		

IP config

1

// / IP config / //	
Hostnameups-server	
IP address/DHCP:DHCP	
Netmask	
Gateway	
Primary DNS:	
Secondary DNS:	

With this menu the main network parameters can be set as described in the following table.

Field	Parameters to be inserted		
Hostname	Enter the NetMan 204 host name		
IP address/DHCP	Enter the IP address for a static IP; enter "DHCP" for a dynamic IP		
Netmask	Enter the netmask to be used together with the static IP address		
Gateway	Enter the name or the address of the network gateway		
Primary DNS	Enter the name or the address of the preferred DNS to be used		
Secondary DNS	Enter the name or the address of the alternative DNS to be used		

If a static IP address is assigned to the device, all the fields must be configured with the network parameters. If a dynamic IP address is assigned, just enter 'dhcp' in the "IP Address/DHCP" field and provide a hostname; all the other options should be ignored because these are automatically configured with DHCP

After pressing "ESC" and "Y" to confirm exit from the menu, a screen similar to the image below is displayed. Press the "ENTER" key to return to the main menu and the configuration will be immediately applied.

ethu	Link encap:Ethernet HWaddr 00:02:63:04:07:b1
	inet addr:10.1.11.19 Bcast:10.1.255.255 Mask:255.255.0.0
	inet6 addr: fe80::202:63ff:fe04:7b1/64 Scope:Link
	UP BROADCAST RUNNING MULTICAST MTU:1500 Metric:1
	RX packets:145877 errors:0 dropped:0 overruns:0 frame:1
	TX packets:4899 errors:0 dropped:0 overruns:0 carrier:0
	collisions:0 txqueuelen:1000
	RX bytes:12740380 (12.1 MiB) TX bytes:2115614 (2.0 MiB)
	eth0

WEB CONFIGURATION

Login

After setting up the network, all the settings are available on the web configuration when logged is as "admin" or "power" user. Is not possible to have multiple concurrent sessions.

Netman 20	Device Model VST 1500	System status LOAD ON INVERTER
Welcome		
	LOGIN WITH LOCAL AUTHENTICATION Usemanse 1 Password	
	lagin view	

The login password must contain alphanumeric characters and these special characters: , ._+:@%/-. No other characters are allowed to avoid malicious script injections.

Please note that user "fwupgrade" and "user" are not allowed to log in on the web page. Either use "admin", "power" or enter without password.

- Admin user will be able to change the configuration and operate on the device
- Power user will be able to change the configuration but not operate on the device
- Entering without password allows to view the status of the device; no other action is permitted.

Netman 204	Device Model VST 800	System status STAND-BY	
Welcome			
	LOGN WITH LDAP authentication Usemame phil Password		

It is possible to login with local authentication (managed by *Netman 204*) or centrally with LDAP or AD (more information at paragraph "Login access configuration").

Dashboard



On the top area is possible to check the general status of the device, all the active alarm conditions and the privilege level of the user.

Below the navigation area there is the actual dashboard with a synthetic view of the device and main operating values.

On the bottom, there are the values of the environmental sensors (if installed and configured).

Network configuration

	Netman 204	Device model VST 1500	System status LOAD ON INVERTER		~ 🔒	Welcome ADMIN 🗸			
	DASHBOARD DATA SY	STEM OVERVIEW HIS	STORY CONFIGURATION	ADMINISTRATION					
	YOUR NETMAN 204	SENSORS	MODEM	REMOTE HOSTS					
	DEVICE								
	General configuration	General	Network configurat	ion					
	Command configuration								
	Data Log configuration	GEN	ERIC NETWORK CONFIGURATION						
	NETWORK		tname		ork protocol				
	Configuration UDP Firewall		netman63068919 Static IP DHCP						
		-	DNFIGURATION						
	Wake on LAN		ddress ease insert the IP address						
	SNMP	Netr	nask	Gateway					
	MODBUS/BACNET		ease insert the netmask	Please insert the ga	iteway				
	JSON		ease insert the primary DNS	Secondary DNS Please insert the se	condary DNS				
	SYSLOG								
	DATE & TIME	FTP		SERIAL NETWORK	TUNNELING				
	NTP & Timezone	Enable FTF	P protocol	Enable Serial tunne					

On the web page, is possible to configure in depth the network services of <u>Netman</u> 204.

Field	Parameters to be inserted
Hostname	Enter the Netman 204 host name
Static IP/DHCP	Choose between static IP or dynamic IP
IP Address	Enter the IP address
Netmask	Enter the netmask to be used together with the static IP address
Gateway	Enter the name or the address of the network gateway
Primary DNS	Enter the name or the address of the preferred DNS to be used
Secondary DNS	Enter the name or the address of the alternative DNS to be used
Enable FTP protocol	Enables the FTP protocol
Enable Serial network tunneling	Enables the serial network tunnelling protocol
Enable UDP	Enables UDP/UPSMon service
UDP port	Enter the port where the UDP/UPSMon service is started ⁽¹⁾
UDP Password	Change the password used for UDP/UPSMon communication

⁽¹⁾ This port must be the same as configured in the UPSMon software

Device configuration

Netman 204	Device model VST 1500	System status LOAD ON INVERTER		✓ 🛞 Welcome ADMIN ❤	
DASHBOARD DATA SY	STEM OVERVIEW HIS	TORY CONFIGURATION	ADMINISTRATION		
YOUR NETMAN 204	SENSORS	MODEM	REMOTE HOSTS		
DEVICE					
General configuration	General	device configuratior	I.		
Command configuration					
Data Log configuration		CE CONFIGURATION			
NETWORK	PRTK		Name Netman204		
Configuration		al serial number is -			
UDP Firewall		m serial number			
Wake on LAN	offi	ce07			
SNMP					
MODBUS/BACNET	SAVE				
NOSL	JAVE				
SYSLOG					
DATE & TIME					
NTP & Timezone					

Field	Parameters to be inserted
PRTK Code	Enter the PRTK code indicated at the back of the device
Name	Enter the identifying name of the device
Custom serial number	Enter a serial number that will override the default

Command configuration

1	Netman 204	Device model ULC2	System status LOAD ON INVERTER		~ 🔒	Welcome ADMIN 🗸
C	ASHBOARD DATA SY	STEM OVERVIEW HIS	TORY CONFIGURATION	ADMINISTRATION		
	YOUR NETMAN 204	SENSORS	MODEM			
	DEVICE					
	General configuration	Comman	nd configuration			
	Command configuration					
	Data Log configuration		MAND 			
	NETWORK		ble remote commands			
	Configuration					
	UDP Firewall					
	Wake on LAN	SAVE				
	SNMP		-			
	MODBUS/BACNET					
	NOST					
	SYSLOG					
	REMOTE HOSTS SHUTDOWN					
	SSH					

These settings inhibit the execution of commands received from remote connectivity services: SNMP, MODBUS etc.

Field	Parameters to be inserted
Disable remote shutdown	Disables the execution of shutdown commands
Disable remote commands	Disables the execution of the remaining commands

Data log

Netman 204	Device model UOD1	System status ECO-MODE		~ 🚯	Welcome ADMIN 🗸
DASHBOARD DATA	SYSTEM OVERVIEW H	ISTORY CONFIGURATION	ADMINISTRATION		
YOUR NETMAN 204	SENSORS	MODEM			
DEVICE					
General configuration	Data Lo	g configuration			
Data Log configuration					
NETWORK	_	TA LOG			
Configuration	Ena	ible Data Log			
UDP Firewall					
Wake on LAN	SAVE				
SNMP					
MODBUS/BACNET					
JSON					
DATE & TIME					
Configuration					
NTP & Timezone					
EMAILS					

Field	Parameters to be inserted
Enable Data log	Enables the datalog service
Backup UPS data log at boot	At boot <i>NetMan 204</i> downloads the data log of the device for quick access

UDP Firewall

Netman 204		evice model IOD1	Syste ECO-	em status -MODE		Alarm NONE	~		Welcome ADMIN 🗸
DASHBOARD DA	TA SYSTI	EM OVERVIEW	HISTORY	CONFIGURATION	ADMINIST	TRATION			
YOUR NETMA	N 204	SENSORS		MODEM					
DEVICE									
General configu	ration	Firew	wall configuration						
Data Log config	uration								
NETWORK			UDP FIREWALL						
Configuration			Enable Firewall						
UDP Firewall									
Wake on LAN			UDP FIREWALLS IP						
SNMP			IP 1	(1. f., h = 0.0 m)	IP 5	se insert (default			
MODBUS/BACK	ET		IP 2	(default 0.0.0.0)	IP 6	se insert (default			
JSON			Please insert	(default 0.0.0.0)	Plea	se insert (default	0.0.0)		
DATE & TIME			IP 3	(default 0.0.0.0)	IP 7	se insert (default	0.0.0)		
Configuration			IP 4	(action 0.0.0.0)	IP 8	uerauit			
NTP & Timezon	•		Please insert	(default 0.0.0.0)	Plea	se insert (default	0.0.0)		
EMAILS									

With this menu the IP addresses or hostnames of the devices enabled for communication with *NetMan 204* can be configured. The character "*" can be used for one or more fields of the IP address to indicate that all values between 0 and 255 are accepted in that field. The following table provides some possible configuration examples.

IP Access	Description
* * * *	All the devices present on the network are enabled to communicate with <i>NetMan 204</i> (default configuration)
10.1.10.*	The devices with addresses between 10.1.10.0 and 10.1.10.255 are enabled to communicate with <i>NetMan 204</i>
myserver.mydomain	Hostname of the device enabled to communicate with NetMan 204

Wake-on-Lan address

1

Netman204		System status ECO-MODE		~	
DASHBOARD DATA SY	STEM OVERVIEW HISTORY	CONFIGURATION	ADMINISTRATION		<u> </u>
YOUR NETMAN 204	SENSORS	MODEM			
DEVICE					
General configuration	Wake On La	in			
Data Log configuration					
NETWORK	Enable Wa				
Configuration					
UDP Firewall					
Wake on LAN		RESSES & DELAY			
SNMP	MAC Addr			Delay (sec)	
MODBUS/BACNET	MAC Addr	x::X::XX::XX ess 2		Please insert the delay Delay (sec)	
JSON	XX:XX:X	XXXXXXX		Please insert the delay	
	MAC Addr	ess 3		Delay (sec)	
DATE & TIME	XXXXXXX	XXXXXXXX		Please insert the delay	
Configuration	MAC Addr	ess 4		Delay (sec)	
NTP & Timezone	XXXXXXX	XXXXXXXX		Please insert the delay	
	MAC Addr			Delay (sec)	
EMAILS	XXXXXXX	XXXXXXX		Please insert the delay	

With this menu is possible to insert up to 8 MAC address to execute Wake-on-LAN, and the delay times for each Wake-on-LAN. The Wake-on-LAN is sent at *NetMan 204* boot and when the mains returns from black-out.

Please make sure that the target PC supports this function and that is properly configured.

SNMP

Netman2	Device mode VST 800	System status STAND-BY	Alarm NONE	~ 🔒	Welcome ADMIN 🗸		
DASHBOARD	DATA SYSTEM OVERVIEW	W HISTORY CONFIGURATION	ADMINISTRATION				
YOUR N	IETMAN 204 SENS	SORS MODEM	REMOTE HOSTS				
DEVICE							
General	configuration S	NMP configuration					
Comma	nd configuration						
Data Lo	g configuration	SNMP Enable SNMP protocol					
NETWORK		chable of this protocol					
Configu	ration						
UDP Fire	ewall	SYSTEM ADMIN DATA					
Wake or	n LAN						
SNMP		Name					
MODBU	IS/BACNET	Location					
JSON							
SYSLOG	•	Battery replacement notification					
DATE & TIM	E	CONFIGURATION MODE		للتنا			
NTP & T	limezone						

SNMP (Simple Network Management Protocol) is a communications protocol, a tool that allows the client (manager) to effect requests to a server (agent). This protocol is an international standard and so any SNMP manager can communicate with any SNMP agent.

To exchange information, the manager and agent utilise an addressing technique called MIB (Management Information Base). MIB defines which variables can be requested and the respective access rights. MIB is equipped with a tree structure (like the folders on a hard disk), through which manager and agent can use several MIB at the same time, as there is no overlap.

Each MIB is oriented to a particular sector; in particular RFC-1628, also called UPS-MIB, holds the data for UPS remote management.

Furthermore, the agent can submit data without a prior request to inform the manager about particularly important events. These messages are called traps.

For more information about SNMP visit this site: <u>http://www.snmp.com</u>.

NTP & Timezone Configuration EMAILS Configuration	CONFIGURATION MODE Wizard Configuration Advanced File Configuration	
	SNMP configuration wizard	
	SNMP VERSION SNMP VT/V2 SNMP V3	
	SNMP v1/v2	
	COMMUNITY 	
	Set community	
	Trap community	

For configuring SNMP, is possible to use the wizard web page for a simple configuration. The wizard that provide defaults that fit the needs of most use cases for SNMPv1/v2.

NTP & Timezone Configuration	CONFIGURATION MODE
EMAILS	Advanced the Comparation
Configuration	SNMP configuration wizard
	SMP VERSION SMP V/V/2 SMP V3 SMP v3 SMP v3 USERS Username Auth Priv authPassword privPassword User permissions None v None v Get TRAP SET TRAP
	None v None v GET None v None v GET SET SET

When is needed additional security by means of authentication and encryption, it is recommended to use SNMPv3 with the wizard configuration.

	CONFIGURATION MODE	*
NTP & Timezone		
Configuration	Wizard Configuration	
EMAILS	Advanced File Configuration	
Configuration		
	SNMP configuration file upload	
	CURRENT CONFIGURATION FILE	
	Netman 204 plus SNMP configuration each line must begin with one of these kayword: for comment, the line is skipped add/lise for adding a new user and setting add/lise for adding shift adding private setting add/lise for adding shift adding and setting add/lise for adding shift adding private setting add/lise for adding shift adding add/lise for adding shift adding private setting add/lise for adding shift adding add/lise for adding add/lise for adding add/lise for adding add/lise	
	Drag & drop here your SNMP configuration file	

Advanced configuration requires to edit snmp.conf (please see chapter "SNMP configuration").

Field	Parameters to be inserted
Enable SNMP protocol	Enables the SNMP service
Contact	Enter the string to be associated with these SNMP variable
Name	Enter the string to be associated with these SNMP variable
Location	Enter the string to be associated with these SNMP variable
Battery replacement notification	Enter the date to be notified when battery should be replaced
Configuration mode	Choose between wizard configuration or to upload a configuration file
SNMP version	Choose between SNMPv1/v2 or SNMPv3
Get community	Enter the community for read access
Set community	Enter the community for write access
Trap community	Enter the community for traps
Trap receiver	Enter the IP addresses to which traps are sent
Username	Enter the USM username
Auth	Enter the authentication algorithm
Priv	Enter the privacy algorithm
AuthPassword	Enter the authentication password
PrivPassword	Enter the privacy password
Permissions	Choose the permissions for each users

MODBus/BACNET

Netr	man 204	Device model UOD1	System status ECO-MODE		✓ 🕜 Welcome
DASHB	OARD DATA SY	STEM OVERVIEW HIST	ORY CONFIGURATION	ADMINISTRATION	
Y	OUR NETMAN 204	SENSORS	MODEM		
DEV	/ICE				
	General configuration	MODBUS	/BACNET configurati	on	
	Data Log configuration	MODB	211		
NET	TWORK		MODBUS		
	Configuration				
	UDP Firewall	BACNE			
	Wake on LAN	Enable	BACNET		
	SNMP				
	MODBUS/BACNET	BACNE	ET DATA		
	JSON	BACNE	ET Address (Number)	BACNET Client (IP)	
DAT	FE & TIME	Plea	se insert the address (default 1968	Please insert the BACNET cli	ent IP
	Configuration				
	NTP & Timezone	0.05			
EM/	AILS	SAVE			

For information about MODBus registries, please check the "MODBus TCP/IP protocol" section. For information about BACNET, please check "BACNET/IP configuration" section.

Field	Parameters to be inserted			
Enable MODBUS	Enables the MODBUS protocol			
Enable BACNET	Enables the BACNET protocol			
BACNET Address (Number)	Enter the BACNET address of the device			
BACNET Client (IP)	Enter the IP address of the bacnet client			

Netman 204	Device model UOD1	System status ECO-MODE	Alarm NONE	~ (?	Welcome ADMIN ~
DASHBOARD DATA SYS	STEM OVERVIEW HIS	TORY CONFIGURATION	ADMINISTRATION		
YOUR NETMAN 204	SENSORS	MODEM			
DEVICE					
General configuration	JSON				
Data Log configuration					
NETWORK		– JSON notification			
Configuration	Linab	e 550M Houndation			
UDP Firewall					
Wake on LAN	RECE	IVER			
SNMP		toring host IP ase insert address		Host port	
MODBUS/BACNET		cation interval (minutes)			
JSON	Ple	ase insert interval			
DATE & TIME	SEND	NOTIFICATION ON EVENT			
Configuration	UF	PS Lock			
NTP & Timezone	0	erload / overtemp			
EMAILS		PS Failure			

Netman 204 can send a periodic message in JSON trap format that contains the status and the values of the UPS. The trap can also be sent on the specified conditions.

Field	Parameters to be inserted				
Enable JSON	Enables the JSON notification service				
Monitoring host IP	Enter the IP address to which send the JSON traps				
Host port	Enter the port where traps will be sent				
Notification interval (minutes)	Enter the interval between JSON trap sending				
Send notification on event	Choose the even upon which the trap will be sent				

It requires a license.txt file to be uploaded on the *Netman 204*. The content of the file will be included in the trap.

Example trap:

```
Γ
   Ł
     "timestamp": 1464255869,
     "model": "UPS 6kVA",
     "license": "00-B3-74-98-ED-43=2D84-1234-9E4B-5FAD",
     "io conf": 1,
     "status": [ 123, 255, 0, 97, 132, 12 ],
     "measures":
     {
        "vin1": 231,
        "vin2": 0, // (1)
"vin3": 0, // (1)
"fin": 499, // Hz/10
        "vbyp1": 231,
        "vbyp2": 0, // (2)
"vbyp3": 0, // (2)
"fbyp": 499, // Hz/10
"vout1": 231,
        "vout2": 0, // (2)
"vout3": 0, // (2)
        "fout": 499,
        "load1": 0,
        "load2": 0, // (2)
"load3": 0, // (2)
"vbat": 817, // V/10
"authonomy": 475, // min
        "batcap": 100,
        "tsys": 33
     }
  }
1
```

timestamp is the instant of the trap in reference to Unix epoch.

model is the model of the UPS.

io_conf is the UPS configuration, some values depends on it (see notes).

license is the content of the license file.

status is an array that must be interpreted as follows:

byte	bit	Description
	0	UPS Mainteinance
	1	Communication lost
	2	Battery low
0	3	Battery work
0	4	On bypass
	5	UPS Failure
	6	Overload/Overtemperature
	7	UPS Locked
	0	SWIN Open/Battery Low
	1	SWBYP Open/Battery Working
1	2	SWOUT Open/UPS Locked
	3	Output Powered
	4	SWBAT Open

	5	SWBAT_EXT Open
	6	Battery not present
	7	Battery overtemp
	0	Buck Active
	1	Boost Actived
	2	O.L./L.I. function
2	3	Load threshold exceeded/On Bypass
2	4	EPO command active
	5	BYPASS command active
	6	Service UPS
	7	Service battery
	0	Replace Battery
	1	Battery Charged
	2	Battery Charging
3	3	Bypass Bad
3	4	Low redundancy
	5	Lost redundancy
	6	System anomaly
	7	
	0	Bypass backfeed/Beeper On
	1	Test in progress
	2	Shutdown Imminent
4	3	Shutdown Active
4	4	PM1 fault/lock
	5	PM2 fault/lock
	6	PM3 fault/lock
	7	PM4 fault/lock
	0	PM5 fault/lock
5	1	Alarm Temperature
	2	Alarm Overload
	3	PM6 fault/lock
5	4	PM7 fault/lock
	5	BM fault/lock
	6	Power supply PSU fail
	7	Battery unit anomaly

measures, contains the instant values of the UPS at the timestamp time. The measures with note (1) aren't meaningful when io_conf is 1, the measures with note (2) aren't meaningful when io_conf is 1 or 3.
Syslog configuration

Netman 204	Device model UIDR	System status LOAD ON INVERTER		• 🚯 🤇	Welcome ADMIN 🗸
DASHBOARD DATA	SYSTEM OVERVIEW	HISTORY CONFIGURATION	ADMINISTRATION		
YOUR NETMAN 2	04 SENSO	RS MODEM			
DEVICE					
General configuratio	SYS	SLOG			
Data Log configurati	on				
NETWORK		SYSLOG ————————————————————————————————————			
Configuration		Litable remote 313200			
UDP Firewall					
Wake on LAN		SERVER CONFIGURATION			
SNMP		SYSLOG server IP 10.1.30.36	Server UD	IP port	
MODBUS/BACNET					
JSON					
SYSLOG		SAVE			
DATE & TIME					
Configuration					
NTP & Timezone					

This menu allow to configure the syslog service over UDP port.

Field	Parameters to be inserted
Enable remote syslog	Enables the syslog service
Syslog server IP	Enter the IP address of the syslog server
Server UDP port	Enter the UDP port where the events will be sent

SSH client configuration (only for operating system W18-1 or later)

Netman 204	Device model VST 1500	System status LOAD ON INVERTER		~ 🔒	Welcome ADMIN 🗸
DASHBOARD DATA SY	STEM OVERVIEW	HISTORY CONFIGURATION	ADMINISTRATION		
YOUR NETMAN 204	SENSORS	MODEM	REMOTE HOSTS		
REMOTE HOSTS SHUTDOWN	SSH				
VMware ESXi					
	-	SH nable remote SSH commands			
	н	SH AUTHENTICATION		_	
		root@myserver		VALIDATE	
		Please insert user@hostname		VALIDATE	
		SH COMMANDS			

This menu allow to configure the SSH client service. After inserting the SSH credential for the first time you will be asked for the authentication password for the remote host.

NETWORK	
Configuration	-
UDP Firewall	Authentication required for × root@10.1.30.1
Wake on LAN	Please insert the password.
SNMP	
MODBUS/BACNET	0k
NOZL	Please insert userghostname VALIDATE
SYSLOG	
SSH	
DATE & TIME	SSH COMMANDS
Configuration	Please enter credentials above for host 1
NTP & Timezone	Please enter script Please enter credentials above for host 2
EMAILS	Please enter script
Configuration	
	RUN SCRIPTS ON EVENT
	After mains failure (minutes)
	When authonomy is below (percent)

After inserting a valid password, you will be able to execute scripts on the remote host with the authenticated user. This is confirmed by the "Validated" badge.

SYSLOG		*
SSH		
DATE & TIME	SSH COMMANDS	
Configuration	ssh root@10.1.30.57 (/ Vuideed)	
NTP & Timezone	Please enter script Please enter credentials above for host 2	
EMAILS	Please enter script	
Configuration		
	After mains failure (minutes) Within authonomy is below (percent) (percent) Additionally, the scripts will be executed when on battery low and when abutdown is active Minimum delay between execution (minutes)	



The SSH client service is not compatible with hosts with Windows operating systems. With these hosts, we recommend installing the communication and shutdown software, which has similar or superior functionality.

Field	Parameters to be inserted
Enable remote SSH commands	Enables the ssh client service
Host 1 login credentials	Enter the ssh credentials for host 1
Host 2 login credentials	Enter the ssh credentials for host 2
SSH commands	Enter the script to be executed for each host
After mains failure	Scripts will be executed after the set minutes of delay after mains failure
When authonomy is below (percent)	Scripts will be executed when authonomy is below the set percent
Minimum delay between execution (minutes)	Cooldown for script execution to prevent script to be executed within the set time

VMware ESXi

YOUR NETMAN 204	SENSORS	MODEM	REMOTE HOSTS	
REMOTE HOSTS SHUTDOWN	VMware E	SXi		
VMware ESXI	Enable	E ESXI /Mware ESXi shutdown		•
	Host/vCer	iter Server App	liance	
	1 2 3		Hostname or IP address	
	4		User name admin Password	
	6		Priority	
	7 8		2 Delay to next 12	

This menu allows to configure the VMware Esxi shutdown service. Up to 10 hosts or vCenter server appliances can be shut down, each with their separate credentials, priority and delay. It is also possible to shutdown the UPS at the end. The validity of the credentials is checked periodically and, if not valid, an alarm is issued.

Field	Parameters to be inserted
Enable ESXi shutdown	Enable the ESXi shutdown service
Hostname or IP address	Enter the hostname of the ESXi host
User name	Enter the user name for ESXi administrator
Password	Enter the password for ESXi administrator
Priority	Enter the priority. (1 is max priority and will be shut down first)
Delay to next	Enter the delay between entries of the table
After mains failure	Shutdown will be executed after the set minutes of delay after mains failure
When autonomy is below (percent)	Shutdown will be executed when autonomy is below the set percent
Then, UPS shutdown after	Enable and set seconds delay to shutdown the UPS as well

To configure VM power-on and/or shutdown priority the VCSA or ESXi configuration must be used:

Esxi configuration:

Image: Participancy Manage Image: Participancy Manage Partin	P Bold Years Pacage Services Beauty & uses Monitor Advoided settings Pacage Services Services <th< th=""><th>Host Syn</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th></th<>	Host Syn							
Masser Motor Advanced settings ✓ Ed settings Advanced settings Image Ima	Masser Montor Advanced settings E at settings E at settings Strate discussion Sing discussi	Manage	Hardware Liconsin						
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Adotativ Seap	Autostant Swp Swp Swp Twe & date Sup delay Stant delay 120s Stant delay Sigo delay Stant delay Sigo delay Stant delay Sigo delay Stant delay Sigo delay Sigo delay Sigo delay <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>								
Binding Instructions Single Instructions Instructi	Singe Take & date Singe Lakes Take Sorage Sorage 120			🥜 Edit settings					
Sign being Tuto Sign being System detalt Wat for hardbeat No Vitati macine © Contours © Basics © Datals If Referal O Actous Vitati macine Sign being Sign being </td <td>Sing desay Italia Sing desay System default Wat for heartbeatt No Vital machine © Configure Vital machine © Referent © Mainton System default Unset 129 s © Mainton System default Unset 129 s 129 s © Mainton System default Unset 129 s 129 s © Mainton System default Unset 129 s 129 s © Mainton System default Unset 129 s 129 s © Mainton System default Unset 129 s 129 s © Mainton System default Unset 129 s 129 s © Mainton System default Unset 129 s 129 s</td> <td>😚 Virtual Machines 🛛 🚺</td> <td></td> <td>Enabled</td> <td>Yes</td> <td></td> <td></td> <td></td> <td></td>	Sing desay Italia Sing desay System default Wat for heartbeatt No Vital machine © Configure Vital machine © Referent © Mainton System default Unset 129 s © Mainton System default Unset 129 s 129 s © Mainton System default Unset 129 s 129 s © Mainton System default Unset 129 s 129 s © Mainton System default Unset 129 s 129 s © Mainton System default Unset 129 s 129 s © Mainton System default Unset 129 s 129 s © Mainton System default Unset 129 s 129 s	😚 Virtual Machines 🛛 🚺		Enabled	Yes				
is go every 10 Ar Sign every 2016 betar 10 every Agelanor behavior 2016 to 10 every Agelanor 10 every Agelanor 2016 to 10 every 2016 to	Sign breight Total Sign breight System detault Wat for heartbeatt No Vitual machine Configure Vitual machine Configure Vitual machine Spaces Vitual machine Spaces Vitual machine Spaces Vitual machine Spaces Spaces 035 Spaces Spaces 045 Spaces 045 Spaces 045 Spaces 045 <	Storage 3		Start delay	120s				
Valt for haartbeat No In factors In factors <t< td=""><td>Wat for heartbeat No Static & Stati ester & Configure & Dasse C Referent Actors Statister of Statisterof Statister of Statister of Statisterof Statister of Statisterof</td><td>Networking</td><td></td><td>Stop delay</td><td>120s</td><td></td><td></td><td></td><td></td></t<>	Wat for heartbeat No Static & Stati ester & Configure & Dasse C Referent Actors Statister of Statisterof Statister of Statister of Statisterof Statister of Statisterof	Networking		Stop delay	120s				
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Vitual machineSinutdeemSinutdeemAustrat orderSinut dealSinut deal<	Vitual machine Studown behavior Statister			Wait for heartbeat	No				
B Jessie OT5 120 s 120 s <t< td=""><td>Bysiem default Unset 120 s 120 s Bybien 10 System default 1 10 s 120 s Bybien 10 System default 1 10 s 120 s Bybien 10 System default Umset 120 s 120 s Bybien 10 Soft-41 System default Umset 120 s 120 s Bybien 10 Soft-41 System default Umset 120 s 120 s Bybien default Unset 120 s 120 s 120 s Bybien default Unset 120 s 120 s 120 s</td><td></td><td></td><td>🚜 Enable 🛛 🦓 Start earlier 🖓 Config</td><td>ure 🙀 Disable 🙋 Refresh 🔅 Actions</td><td></td><td></td><td>Q</td><td>Search</td></t<>	Bysiem default Unset 120 s 120 s Bybien 10 System default 1 10 s 120 s Bybien 10 System default 1 10 s 120 s Bybien 10 System default Umset 120 s 120 s Bybien 10 Soft-41 System default Umset 120 s 120 s Bybien 10 Soft-41 System default Umset 120 s 120 s Bybien default Unset 120 s 120 s 120 s Bybien default Unset 120 s 120 s 120 s			🚜 Enable 🛛 🦓 Start earlier 🖓 Config	ure 🙀 Disable 🙋 Refresh 🔅 Actions			Q	Search
B Debin 10 System default 1 120 s 120 s B Windows Strew 2016 System default Unset 120 s 130 s B Debin 10 System default Unset 120 s 130 s B Debin 10 Gebalt System default Unset 120 s 130 s B Debin 10 Gebalt System default Unset 120 s 120 s B ArthUmar Window vCenter Strever Applance System default Unset 120 s	B Debian 10 System default 1 120 s			Virtual machine		 Shutdown behavior 	 Autostart order ~ 	Start delay	~ Stop delay
By Windows Sterver 2016 System default Unset 120 s 120 s G) Deban S1D 64-bt System default Unset 120 s 120 s 120 s G) Zeban S1D 64-bt System default Unset 120 s 120 s 120 s G) Zeban S1D 64-bt System default Unset 120 s 120 s 120 s G) Zeban S2D 64-bt System default Unset 120 s 120 s 120 s	By Windows Skrive 2016 Distant Gebruit Unset 139 s 120 s B) Detaint SID 64-bit Distant SID 64-bit Distant SID 64-bit Unset 120 s B) Zobitant SID 64-bit Distant SID 64-bit Distant SID 64-bit Unset 120 s 120 s B) Zobitant SID 64-bit Distant SID 64-bit Distant SID 64-bit Distant SID 64-bit 120 s 120 s B) Zobitant SID 64-bit Distant SID 64-bit Distant SID 64-bit Distant SID 64-bit 120 s 120 s			B) Jessie QT5		System default	Unset	120 s	120 s
B Debian SID 54-bit System default Unset 120 s 120 s B ArchiLhux System default Unset 120 s 120 s B Vibrare vCenter Server Appliance System default Unset 120 s 120 s	Debin SID 64-bit Stystem default Unset 120 s 1			🚯 Debian 10		System default	1	120 s	120 s
B ArchLinux System default Unset 120 s 120 s B VMivae vCenter Server Appliance System default Unset 120 s 120 s	By ActhLinux System default Unset 120 s 120 s 120 s Whave vCenter Server Applance System default Unset 120 s 120 s			Windows Server 2016		System default	Unset	120 s	120 s
Withvare vCenter Server Applance System default Unset 120 s 120 s	Withvare vCenter Server Appliance System default Unset 120 s			B Debian SID 64-bit		System default	Unset	120 s	120 s
				ArchLinux		System default	Unset	120 s	120 s
Ouici fiters	Duol Mers			B VMware vCenter Server Appliance		System default	Unset	120 s	120 s
				Quick filters	v				6 it

Select Yes to enable changing the autostart configuration.

Option	Description
Start delay	Configure the start time of the VM.
Stop delay	Configure the stop time of the VM.
Stop action	Select the System default, Power off, Suspend,
	or Shut down option.
Wait for heartbeat	Select Yes to enable the Wait for heartbeat
	option.

Click Save.

Change autostart configuration	
Enabled	• Yes O No
Start delay	120 seconds
Stop delay	120 seconds
Stop action	~
Wait for heartbeat	◯ Yes ● No
	Save Cancel

Use this option when you need the delay of the virtual machine to be different than the default delay for all machines. The settings that you configure for individual virtual machines override the default settings for all machines.

a) To change the startup order of virtual machines, select one from the Manual Startup category and use the up arrow to move it up to Automatic Startup or Any Order.

Use the up and down arrows to change the startup order for virtual machines in the Automatic Startup category. During shutdown, the virtual machines shut down in the reverse order.

b) Click Start delay behaviour, select Use specified settings, and configure the startup delay before the next virtual machine in the sequence is powered on.

d) Click Stop delay behaviour, select Use specified settings, and configure the shutdown action and delay.

Configure autostart - Windows Serv	rer 2016
Start delay	120 seconds
Stop delay	120 seconds
Stop action	System default
Wait for heartbeat	◯ Yes ◯ No . System default
	Save Cancel

vSphere Server configuration:

	■ 10.1.30.11 ACTIONS ~					
10.1.30.20	Summary Monitor Configure Pe	rmissions VMs Datastores Networks	Updates			
Riello UPS Datacenter	▼ Storage	lachine Startup and Shutdown				ED
Riello UPS Cluster	Charges Adapters	art of a vSphere HA cluster, the automatic startup and s	butdown of virtual mad	hines is disabled		
10.1.30.12	Storage Devices		Startup	Startup Delay (s)	Shutdown Behavior	Shutdown Delay (s)
🔂 ArchLinux	Host Cache Configur.	AM MOTIO	Startup	Startup Delay (s)	Shutowin Bellavior	Shuttown Delay (s)
🛱 Check Point Gaia 77.30	Protocol Endpoints	Deblan 10	Enabled	120	Power off	120
🔂 Debian 10	VO Filters Manual Start		Chooled	120	T ONGE ON	12.0
🛱 Debian SID 64-bit	Virtual switches	Debian SID 64-bit	Disabled	120	Power off	120
Esxi 6.7	VMkernel adapters	Windows Server 2016	Disabled	120	Power off	120
🔂 Jessie QT5	Physical adapters	ArchLinux	Disabled	120	Power off	120
Linux ServerUbuntu 17.10 OpenLDAP Turnkey	TCP/IP configuration	VMware vCenter Server Applian	Disabled	120	Power off	120
OpenLDAP Turnkey PCNS_4_3_vapp_en	Virtual Machines	Jessle QT5	Disabled	120	Power off	120
struxureWareDCExpert	VM Startup/Shutdo					
Termocamera	Agent VM Settings					
VMware vCenter Server Appliance	Default VM Compati					
Windows 10	Swap File Location					
🛱 Windows Server 2016	▼ System					
🔂 Windows Server 2019	Licensing					
	Host Profile					
	Time Configuration Authentication Servi					
	Certificate					
	Power Management					
	Advanced System S					
	System Resource Re.					
	Firewall					
	Services					

Procedure to enable the automatic startup/shutdown:

- 1 In the vSphere Web Client, navigate to the host where the virtual machine is located.
- 2 Select Manage > Settings.
- 3 Under Virtual Machines, select VM Startup/Shutdown and click Edit.

The Edit VM Startup and Shutdown dialog box opens.

System influenc	e	🗹 Auto	matically start an	d stop the virtual m	achines with the s	ystem			
Startup delay		120	120 Continue if VMware Tools is started						
Shutdown delay		120							
Shutdown actio	n	Power	off v						
Automatic							,	1	
Move Up 🛛	VM Nar		Startup	Startup Delay (s)	VMware Tools	Shutdown Behav	Shutdown Delay		
Automatic								4	
	Debian	SID 6	Enabled	120	Walt for startu	Power off	120		
Manual Start									
	Debian	10	Disabled	120	Walt for startu	Power off	120		
	Window	vs Ser	Disabled	120	Walt for startu	Power off	120		
	ArchLir	nux	Disabled	120	Walt for startu	Power off	120		
	VMwar	e vCe	Disabled	120	Walt for startu	Power off	120		
	Jessie	QT5	Disabled	120	Walt for startu	Power off	120		

4 Select Automatically start and stop the virtual machines with the system.

5 (Optional) In the Default VM Settings pane, configure the default startup and shutdown behaviour for all virtual machines on the host.

Option	Action
Startup Delay	After you start the ESXi host, it starts powering
	on the virtual machines that are configured for
	automatic startup. After the ESXi host powers
	on the first virtual machine, the host waits for
	the specified delay time and then powers on the
	next virtual machine. The virtual machines are
	powered on in the startup order specified in the
	Per-VM Overrides pane.
Continue immediately if VMware Tools starts	Shortens the startup delay of the virtual
	machine. If VMware Tools starts before the
	specified delay time passes, the ESXi host
	powers on the next virtual machine without
	waiting for the delay time to pass.
Shutdown Delay	When you power off the ESXi host, it starts
	powering off the virtual machines that run on it.
	The order in which virtual machines are
	powered off is the reverse of their startup order.
	After the ESXi host powers off the first virtual
	machine, the host waits for the specified
	shutdown delay time and then powers off the

	next virtual machine. The ESXi host shuts down only after all virtual machines are powered off.
Shutdown Action	Select a shutdown action that is applicable to the virtual machines on the host when the host shuts down. • Guest Shutdown • Power Off • Suspend • None

6 (Optional) In the Per-VM Overrides pane, configure the startup order and behaviour for individual virtual machines.



Use this option when you need the delay of the virtual machine to be different than the default delay for all machines. The settings that you configure for individual virtual machines override the default settings for all machines.

a) To change the startup order of virtual machines, select one from the Manual Startup category and use the up arrow to move it up to Automatic Startup or Any Order.

Use the up and down arrows to change the startup order for virtual machines in the Automatic Startup category. During shutdown, the virtual machines shut down in the reverse order.

b) Click Startup Behaviour, select Use specified settings, and configure the startup delay before the next virtual machine in the sequence is powered on.

c) Click Continue immediately if VMware Tools starts and select whether the ESXi host waits for the delay to pass when VMware Tools is already installed on the virtual machine.

If you select the Continue if VMware Tools is installed the ESXi host powers on the next virtual machine without waiting for the delay to pass. If you unselect the Continue if VMware Tools is installed the ESXi host waits for the delay to pass.

d) Click Shutdown Behaviour, select Use specified settings, and configure the shutdown action and delay.

7 Click OK to close the dialog box and save your settings

Testing the configuration.

It is also possible to test the procedure without actually performing a real shutdown by pressing "Dry Run". The logs on the target host or vCenter Server Appliance will confirm the correctness of the configuration.

vm vSphere Client Menu V	Q Search in all environments		(C ? ~ Administrate	or@VSPHERE.LOCAL V
	₽ 10.1.30.20 Act	Construction C		Extensions Updates	Event Type ID COA Conservation Conservat
Windows 10		Sensor -1 type . Description intel Corporation Sky Lake-E Ubox Registers #8 state assert f Sensor -1 type . Description intel Corporation Sky Lake-E Ubox Registers #8 state assert f Sensor -1 type . Description intel Corporation Sky Lake-E IOAPIC #5 state assert for . Part	Information 14/11/2019, 12:27:38 Information 14/11/2019, 12:27:38 Information 14/11/2019, 12:27:38	101.30.11 System 101.30.11 System 101.30.11 System 101.30.11 System	com.vmware.vc.Har
		Sensor -1 type , Description Intel Corporation Sky Lake-E RAS #5 state assert for . Part Na	Information 14/11/2019, 12:27:38	101.30.11 System	com.vmware.vc.Har 100 ltr
		Date Time: 14/11/2019, 12:27:53 User: VSPHERE LOCALL/Administrator Description:	Type: User Target: 🔛 10.1.30.12		

NTP & Timezone configuration



Some *Netman 204* services require a correct date and time in order to work properly. It is therefore necessary to configure them as soon as possible to avoid malfunctions.

Netman 204	Device model System status VST 800 STAND-BY	Alami v 🛞 Welcome
DASHBOARD DATA SY	STEM OVERVIEW HISTORY CONFIGURATION	N ADMINISTRATION
YOUR NETMAN 204	SENSORS MODEM	REMOTE HOSTS
DEVICE		
General configuration	NTP & Timezone configur	ration
Command configuration	Current date is 13 Nov 15:35 UTC 2019	
Data Log configuration	SET A NEW TIMEZONE	SET A NTP SERVER
NETWORK	Select the right timezone	NTP server address (IP)
Configuration	ROME	Please insert the NTP address
UDP Firewall		
Wake on LAN	SAVE	
SNMP		
MODBUS/BACNET		
JSON		
SYSLOG		
DATE & TIME	_	
NTP & Timezone		

With this menu is possible to configure the NTP synchronization.

Field	Parameters to be inserted
NTP server address (IP)	Enter the name or address of the NTP server



Only for some UPS models; if a valid time is received by the configured NTP server, *Netman 204* will synchronize the clock of the UPS daily at 00:30.

Date & Time configuration

Netman 204	Device model VST 800	System status STAND-BY		°
DASHBOARD DATA SY	STEM OVERVIEW HISTO	RY CONFIGURATION	ADMINISTRATION	
YOUR NETMAN 204	SENSORS	MODEM	REMOTE HOSTS	
DEVICE				
General configuration	Date & Tin	ne configuration		
Command configuration	Current date is 13	Nov 15:36 UTC 2019		
Data Log configuration	SET A N	EW DATE		
NETWORK	Date		Hour Minutes	
Configuration	dd/mr	п/уууу	00 🗸 00 🗸	
UDP Firewall				
Wake on LAN	SAVE			
SNMP				
MODBUS/BACNET				
JSON				
SYSLOG				
DATE & TIME				
NTP & Timezone				

Field	Parameters to be inserted
Date	Enter the current date
Hour	Enter the current hour
Minutes	Enter the current minutes

Email configuration

Netman 204	Device model UOD1	System s ECO-MO	itatus DE		~ 🚯	Welcome ADMIN 🗸
DASHBOARD DATA	SYSTEM OVERVIEW	HISTORY	ONFIGURATION	ADMINISTRATION	Ŭ	
YOUR NETMAN 204	SENSORS	s Mot	DEM			
DEVICE						
General configuration	Emai	l configuratio	on			
Data Log configuration						
NETWORK		Enable Email				
Configuration		MAIL HOST & SMTP				
UDP Firewall		Mail host			SMTP port	
Wake on LAN		Please insert the a	ddress		SMTP Port	
SNMP		OTHER PARAMETER	s			
MODBUS/BACNET		Sender address		Transport		
JSON		Please insert send	er email	Plain	~	
DATE & TIME		Username		Password		
Configuration		Please insert userr	name	Please insert passv	vord	
NTP & Timezone		EMAILS				
EMAILS			Email #1	Email #2	Email #3	

This menu may be used to configure the addresses to which to send the alarm notification and report e-mails and other parameters of the e-mail service as described in the following table.

Field	Parameters to be inserted
Enable Email	Enables the Email service
Mail host	Enter the name or the address of the SMTP server to be used to send emails. $^{\mbox{(1)}}$
SMTP port	The IP port used by the SMTP protocol
Sender address	Enter the address from which the e-mails are sent. ⁽²⁾
Username	If the server requires authentication, insert the "User name".
Password	If the server requires authentication, insert the password.
Transport	It is possible to choose between plain, SSL or TLS.
Email #1	
Email #2	Enter the e-mail addresses to which to send the alarm notifications and reports (see note).
Email #3	
Device events	Choose the event upon which the email will be sent
Send report every day	Sends the email report every day at 00:00
Send report every week	Sends the email report every Monday at 00:00

⁽¹⁾ Ensure that the SMTP server accepts connections on the configured port

⁽²⁾ Do not use the "space" character in this field

After inserting the data and saving, the service can be tested. If the test is performed, a test email is sent to all the configured email addresses.



Report e-mails are sent to all the addresses inserted; for alarm notification e-mails see paragraph "*Email logic*".

Email logic

The following table describes the meaning of the events. These can vary depending on the device connected.

Event	Meaning
Device Lock	Device is locked or in a severe failure state
Ovrload/Ovrtemp	Device in overload or in overtemperature
General Failure	Failure of the device
On bypass	Operation from bypass
Input blackout	The input source is in blackout
Battery low	Battery low
Communic lost	Communication between the <i>Netman 204</i> and the device has been interrupted

GSM Modem

Netman 20	4	Device model UOD1	Sys ECC	tem status D-MODE		~ 🚷	Welcome ADMIN 🗸			
DASHBOARD	DATA	SYSTEM OVERVIEW	HISTORY	CONFIGURATION	ADMINISTRATION					
YOUR NE	TMAN 204	SENSORS		MODEM						
MODEM	tion	GSM	Modem o	configuration						
		1.1	Enable SMS	-						
			EM CONFIGURA Carrier	TION						
		FEATI	URES & NOTIFIC	CATION						
				SMS #1	SMS #2	SMS #3				
				Phone number	Phone number	Phone number				
		Device	e Lock							
		Overla	oad / overtemp							
		Gener	al Failure							
		On By	pass							
		Input	blackout							

This menu may be used to configure the GSM modem in order to send SMS.

Field	Parameters to be inserted
Enable SMS	Enables the SMS service
GSM carrier	Enter the phone number of the carrier
SMS #1	
SMS #2	Phone numbers that will receive SMS
SMS #3	
Device events	Choose the events upon which the SMS will be sent
Send report every day	Sends the SMS report every day at 00:00
Send report every week	Sends the SMS report every Monday at 00:00

Sensors

Netman 204	Device model System TT5K100 LOAD 0	status N INVERTER		✓ 🔐 Welcome	
DASHBOARD DATA SYS	TEM OVERVIEW HISTORY	CONFIGURATION	ADMINISTRATION		
YOUR NETMAN 204	SENSORS	DDEM			
SENSORS					
Main	General Sensors	configuration	1		
Install a new sensor	SENSOR LOGIC				
Configuration	Contact logic	,	IORMALLY OPEN NORM	ALLY CLOSE	
		SENSOR	THRESHOLD FOR ALARM		
	Device Lock	~	Temperature high [*C] 30		
	Overload / overtemp	~	Temperature low [*C]		
	General Failure	~	5 Temperature hysteresis [°C]		
	On Bypass	~	3		
	Input blackout	~	Humidity high [%RH]		
	Battery Low	~	80 Humidity low [%RH]		
	Communication lost	~	0		
	Innut sensor		Humidity hysteresis (%RH)		

Field	Parameters to be inserted
Enable sensors	Enables the sensor service
Contact logic	Choose between normally open or normally closed
Output contact	Choose the output signal to be activated on event
Temperature high [°C]	Enter the high temperature threshold
Temperature low [°C]	Enter the low temperature threshold
Temperature hysteresis [°C]	Enter the temperature hysteresis
Humidity high [%RH]	Enter the high humidity threshold
Humidity low [%RH]	Enter the how humidity threshold
Humidity hysteresis [%RH]	Enter the humidity hysteresis



As well as being configured, the sensors must also be activated to function correctly (see paragraph "Sensors config").

Sensors Config over SSH or USB



To enter on the "Sensors config" menu is necessary to enable the "Sensors" service and to reboot the *NetMan 204*.



Enter on the "Config sensor" menu, connect the first sensor and press "C". After some instants the device will be recognized and the device will be given an identifier number [1]. Connect the next sensor, if present, and press "N". After some instants the device will be recognized and the device will be given an identifier number [2]. Repeat the procedure for all the sensors and when the configuration is finalized press "Y".



For proper working of the devices, it is necessary to add just one device for each iteration and wait that it is recognized by *NetMan 204*.

Example: how to connect a *Temperature* sensor, a *Humidity* & *Temperature* sensor and a *Digital I/O* & *Temperature* sensor in exactly this order.

Sensor list	
Press [C] to change sensors,	[E] to exit

Connect the first sensor (Temperature), and press "C".

Sensor list 1) Temperature	[F10000013BE0628]
Press [Y] to confirm, [N] to	insert a new sensor

Wait until the first sensor is identified and then connect the second sensor (*Humidity & Temperature*), and press "N".



Wait until the second sensor is identified and then connect the third sensor (*Digital I/O & Temperature*), and press "N".



Press "Y" to confirm.

Sensors Config over HTTP

Netman 204	Device model VST 800 YSTEM OVERVIEW HIST	System status STAND-BY ORY CONFIGURATION	Alarm NONE ADMINISTRATION	~ 🚯	Victore 1 INFO: YOU NEED TO REBOOT YOUR NETMAN 204. DO YOU WANT TO REBOOT NOW?	
YOUR NETMAN 204	SENSORS	MODEM	REMOTE HOSTS	(
SENSORS Main	General S	ensors configuration	on			
Install a new sensor	SENSO	DRS CONFIGURATION				
	Enable	sensors				
	ENVIR	ONMENTAL SENSORS				
	SAVE					
						,

Enable the "Sensors" service and to reboot the Netman 204.

Netman 204	Device model ULC2	System status STAND-BY		~ 🚷 Welce	ome IN ~	
DASHBOARD DATA SY	STEM OVERVIEW HIS	TORY CONFIGURATION	ADMINISTRATION			
YOUR NETMAN 204	SENSORS	MODEM	REMOTE HOSTS			
SENSORS						
Main	Sensor in	nstallation - First st	tep	RESET CONFIGURATION		
install a new sensor				91		
		Q	, ,			
		Connect VOL	ir brand new sens	sor		
			act just one sensor at a time.	501		
		Fiease, conne	ou just one sensor at a time.			
	START LISTE	NING				

Click "Install a new sensor" to access the sensor installation page. Click "Reset configuration" and then connect the first sensor and click "Start listening".

Netman 204	Device model ULC2	System status STAND-BY		Velcome	
DASHBOARD DATA S	SYSTEM OVERVIEW HISTO	RY CONFIGURATION	ADMINISTRATION		
YOUR NETMAN 204	SENSORS	MODEM	REMOTE HOSTS		
SENSORS					
Main Install a new sensor		stallation - Second			
		J	(0		
		The syste	em is listening		

After some instant, the sensor will be detected

Netman 204	Device model ULC2	System status STAND-BY		~ 🚯	Welcome ADMIN 🗸	
DASHBOARD DATA SY	STEM OVERVIEW HISTO	RY CONFIGURATION	ADMINISTRATION			
YOUR NETMAN 204	SENSORS	MODEM	REMOTE HOSTS			
SENSORS						
Main		tallation - Second	step	RESET CONFIGURATION		
Install a new sensor	Setting up you	Ir new sensors				
	-					
		Ę	ρ 🥥 💿			
	Т	he system has	found this 1 s	sensors		
		I/	O Sensor			
	SAVE AND CONF	IGURE ADD ANOTHER SET	ISOR			

Click "Add another sensor" if another sensor needs to be installed, or "Save and configure" to complete the installation.

Login access configuration

Netman 204	Device model VST 1500	System status LOAD ON INVERTER		~ 🔒	Welcome ADMIN 🗸
DASHBOARD DATA SY	STEM OVERVIEW	HISTORY CONFIGURATION	ADMINISTRATION		
ADMINISTRATION	DEVICE C	OMMANDS			
ADMINISTRATION					
Firmware upgrade		Enable USB			
Reset to defaults					
Reset Log		Enable SSH			
Reboot					
Login access		Enable HTTP			
		HTTP port	80		
		Enable HTTPS			
		HTTPS port			
		Enable Local authentication (NOTE: adm	in is always available on SSH)		
		Enable AD/LDAP authentication			

It is possible to manage the login via LDAP or AD. The user must be present on the server and must belong to a specified group. If the group is the "Admin group" then the user will be granted the "admin" privileges. If the group is the "Power group" then the user will be granted the "power" privileges (i.e. without the privilege of performing shutdown on the device). After configuration, on the login screen it must be insterted only the username (instead of the full Distinguished Name) and the password.

Field	Parameters to be inserted
Enable USB	Enables login over USB cable
Enable SSH	Enables login over SSH
Enable HTTP	Enables the HTTP service
HTTP port	Enter the port where HTTP service is started (default: 80)
Enable HTTPS	Enables the HTTPS service
HTTPS port	Enter the port where HTTPS service is started (default: 443)
Enable local authentication	Enable local authentication
Enable LDAP/AD authentication	Enables login via LDAP or AD
Server address	The address of the server, can be either Idap:// or Idaps://
LDAP users folder	The folder of users allowed to log in
Admin group name	The group with "Admin" privileges
Power group name	The group with "Power" privileges

Examples of LDAP server addresses:

ldap://myserver:389/ ldap://10.1.10.99:389/

Over secure socket:

ldaps://myserver:636/ ldaps://10.1.10.99:636/

If the user "john" is present on the LDAP server and it belongs to the configured groups, it will be possible to login with username "john" and its LDAP password.

Password recovery

If the default password for the admin user is changed and forgotten, it is possible to recover it with the unlock key provided by the service department of the manufacturer.

To obtain the unlock key, you must send to the service department the service code of your *NetMan 204*. This code can be read via USB or via HTTP.

Via USB log in to NetMan 204 with user "user" and password "user".

Via HTTP when you insert an incorrect password you are offered a link to a password recovery. Click the link to start the recovery.

In both case a message like this will be shown:

To restore the default password, please enter the unlock key. If you don't know it, please send to service this code: 204:XX:XX:XX:XX:XX:XX



Please note that the unlock key is valid only for the corresponding service code which is specific for every *NetMan 204*.

Wi-Fi setup (optional card required)



For Wi-Fi connection, an optional card is required. The Wi-Fi card is not provided with *NetMan 204* but it has to be purchased separately.

After installing the optional Wi-Fi card, you can access to the "Wi-Fi setup" menu.



For *NetMan 204*, Wi-Fi is an exclusive alternative to cabled Ethernet: only one at time can be used. Therefore, after enabling Wi-Fi, it is not more possible to use cabled Ethernet.

After selecting Wi-Fi setup you get this prompt:



Insert 'n' to use Ethernet or 'y' to use Wi-Fi. In the latter case, a list of available Wi-Fi access points will be shown with the following request:

Please insert the SSID you want to connect without quotes

Type the SSID of the desired Wi-Fi access point.

Please insert the password for <Wi-Fi access point>

Here you insert the authentication password for Wi-Fi.

OK, you want to connect to <Wi-Fi access point> with password <Wi-Fi password>. Confirm [y/n]? >

After confirmation, you will return to the Main setup. At the next boot the *NetMan 204* will use Wi-Fi instead of Ethernet.

Expert mode

Expert mode enables the configuration of advanced parameters that should be set by skilled technicians. These commands are supported:

help	prints the help
get	shows all values
set <var> <value></value></var>	set VAR to VALUE
delete <var></var>	removes VAR
<pre>sendtrap + <trapcode></trapcode></pre>	send a test SNMP trap (alarm added)
sendtrap - <trapcode></trapcode>	send a test SNMP trap (alarm removed)
testemail	send a test email
reboot	reboot the NetMan 204
erasefram	erase the FRAM module
clearlog	clear data log and event log
exit	closes the connection

CONFIGURATION OF SEVERAL DEVICES

If several *NetMan 204* have to be configured with similar parameters, you can configure the first *NetMan 204*, then connect via FTP with the admin user, download all the configuration files in the folder /cfg, and upload all them via FTP in the folder /cfg of all devices to be configured.

FIRMWARE UPGRADE

The Netman 204 firmware can be updated via HTTP or via FTP.

A valid upgrade file is named fwapp.204. If you downloaded a .zip file, you need to extract a fwapp.204 from the folder that matches the operating system of the *Netman 204*.

FIRMWARE UPGRADE VIA HTTP

Netman 204	Device model VST 1500	System status LOAD ON INVERTER		✓ 🛞 Welcome	
DASHBOARD DATA S	YSTEM OVERVIEW	ISTORY CONFIGURATION	ADMINISTRATION		
ADMINISTRATION	DEVICE COMM	MANDS			
ADMINISTRATION					
Firmware upgrade	Applica	tion version 03.07.00	1 [e589]		
Reset to defaults					
Reset Log	UF	LOAD A FIRMWARE COMPATIBLE WIT	TH SYSTEM VERSION \$19-2		
Reboot					
Login access		Drag & drop he	re your firmware file		
	L				

Connect via HTTP to the *Netman 204* to be upgraded inserting in your web browser the hostname or IP address and then log in as admin (default password: "admin"). Then click on the "Administration" page.

Drag and drop the upgrade file. When the upgrade file is uploaded, the Netman 204 will reboot automatically.

FIRMWARE UPGRADE VIA FTP

Connect via FTP with the user "fwupgrade" (default password "fwupgrade") and copy the updated firmware on the /fwupgrade folder. Then restart the card by pressing the reset button.

SNMP CONFIGURATION

For configuring SNMP, is possible to use the wizard web page for a simple configuration. Advanced configuration requires to edit snmp.conf. This file can be downloaded and uploaded from the web page or via FTP with user "admin" (default password: "admin").

Each line of the file is parsed by NetMan 204 and must begin with one of these keyword:

- #: for comment, the line is skipped.
- *addUser*: for adding a new user and setting the passwords
- *addGroup*: for putting a user into a group
- *addAccessEntry*: for enabling access privileges to a group
- addView: for adding privileges
- addManager: for adding SNMP Manager which will receive SNMP traps.

The correct syntax for addUser is:

addUser <userName> <authProtocol> <privProtocol> <authPassword> <privPassword>

<userName> is the name of the user.

<authProtocol> is the protocol for authentication of this user during SNMP sessions. Possible values are:

- *noauth* (no authentication will be used)
- *md5* (MD5 will be used for authentication)
- sha (SHA will be used for authentication)

<privProtocol> is the protocol for privacy of this user during SNMP sessions. Possible values are:

- nopriv (no privacy will be used)
- *des* (DES will be used for privacy)

<authPassword> is the password for authentication. It must be set to * when not used. <privPassword> is the password for privacy. It must be set to * when not used.

The correct syntax for addGroup is:

addGroup <securityModel> <userName> <groupName>

<securityModel> is the security model. When using authentication and/or privacy, securityModel must be USM. Possible values are:

- USM (User-based Security Model with SNMPv3)
- v2 (SNMPv2)
- v1 (SNMPv1)

<userName> is the name of the user, must match one of the user name defined with addUser. <groupName> is the name of the group.

Please note that a userName can be assigned to only one group.

The correct syntax for addAccessEntry is:

addAccessEntry <groupName> <contextName> <securityModel> <securityType> <contextMatch> <readView> <writeView> <notifyView>

<groupName> is the name of the group to which this access right applies, must match one of the group name defined with addGroup.

<contextName> is the name of the context.

<securityModel> is the security model that must be used in order to gain access to this access right, must match the security model defined with addGroup.

<securityType> is the minimum security level that must be used to gain access to this access right. Possible values are:

• *noauthnopriv* (no authentication and no privacy)

- *authnopriv* (authentication but no privacy)
- authpriv (authentication and privacy)

<contextMatch> the type of match required. Possible values are:

- *exact* (the context name must exactly match the value in contextName)
- *prefix* (the context name must match the first few starting characters of the value in contextName)

<readView> the authorized MIB view name used for read access, must match one of the view name.

<writeView> the authorized MIB view name used for write access, must match one of the view name.

<notifyView> the authorized MIB view name used for notify access, must match one of the view name.

The correct syntax for addView is:

addView <viewName> <subtree> <mask> <included>

<viewName> is the name of the view.

<subtree> is the OID subtree which when combined with the corresponding instance of MASK defines a family of view subtrees.

<mask> the mask for filtering OID.

<included> the OID can be included or excluded. Possible values are:

- *included* (for including)
- excluded (for excluding)

The correct syntax for addManager is:

addManager <security> <ipAddress> <credentials> <securityType>

<security> is the security type for the notification. Possible values are:

- USM (User-based Security Model with SNMPv3)
- V2 (SNMPv2)
- *v1* (SNMPv1)

<ipAddress> is the IP address of the SNMP manager.

<credentials> is either the user name (when using USM security) or the trap community (when using v1 security)

<securityType> is either:

- noauthnopriv (for SNMPv1 and SNMPv2)
- *authpriv* (for SNMPv3)

addManager do not allow duplicate entries (one ipAddress can receive only one trap).

A sample snmp.conf is provided; the default users authorized are:

Name	Auth protocol	Priv protocol	Auth password	Priv password
unsecureUser	Noauth	nopriv		
MD5	md5	nopriv	MD5UserAuthPassword	
SHA	Sha	nopriv	SHAUserAuthPassword	
MD5DES	md5	des	MD5DESUserAuthPassword	MD5DESUserPrivPassword
SHADES	Sha	des	SHADESUserAuthPassword	SHADESUserPrivPassword

Trap explanation:

OID	Description
1.3.6.1.2.1.33.2.0.1	Sent whenever the UPS transfers on battery, then sent every minutes until the UPS Comes back to AC Input.
1.3.6.1.2.1.33.2.0.3	Sent whenever an alarm appears. The matching alarm oid is added as binded variables in the alarm table.
1.3.6.1.2.1.33.2.0.4	Sent whenever an alarm disappears. The matching alarm oid is added as binded variables in the alarm table.

MODBUS TCP/IP PROTOCOL

This service is active on the TCP port 502. The supported function are listed below, together with the accessible registers.

SUPPORTED FUNCTION

SUPPORTED FUNCTION	FUNCTION DESCRIPTION	ACCESSIBLE DATA AREA
1 (0x01)	BIT READING	STATES
2 (0x02)	BIT READING	STATES
3 (0x03)	REGISTERS READING	ALL
4 (0x04)	REGISTERS READING	ALL
6 (0x06)	SINGLE REGISTER WRITING	COMMANDS
16 (0x10)	MULTIPLE REGISTER WRITING	COMMANDS

UPS: TABLES OF STATES, MEASUREMENTS, NOMINAL DATA AND COMMANDS

REGISTER ⁽¹⁾		UPS - ST	ATES	Bľ	Г ⁽²⁾
NUMBER	ADDRESS	0P5-51	NUMBER	ADDRESS	
				1	0
		Test in progress	[0=No / 1=YES]	2	1
				3	2
		Shutdown active	[0=No / 1= YES]	4	3
				5	4
		Battery charged	[0=No / 1= YES]	6	5
		Battery charging	[0=No / 1= YES]	7	6
1	0	Bypass bad	[0=No / 1= YES]	8	7
1	0			9	8
		Normal operation	[0=No / 1= YES]	10	9
				11	10
		On bypass	[0=No / 1= YES]	12	11
		Battery low	[0=No / 1= YES]	13	12
		Battery working	[0=No / 1= YES]	14	13
		UPS locked	[0=No / 1= YES]	15	14
		Output powered	[0=No / 1= YES]	16	15
				17÷28	16÷27
		Input Mains present	[0=No / 1= YES]	29	28
2	1	Alarm temperature	[0=No / 1= YES]	30	29
		Alarm overload	[0=No / 1= YES]	31	30
		UPS failure	[0=No / 1= YES]	32	31
3	2			33÷48	32÷47
				49÷63	48÷62
4	3	Communication lost with l	JPS [0=No / 1= YES]	64	63
5÷8	4÷7			65÷128	64÷127

(1) The register number \mathbf{n} must be addressed $\mathbf{n-1}$ in the data packet

(2) The bit number n must be addressed n-1 in the data packet.

REGI	STER ⁽¹⁾		
NUMBER	ADDRESS	UPS - MEASUREMENTS	UNIT
9÷11	8÷10		
12	11	Input mains star voltage V1	V
13	12	Input mains star voltage V2	V
14	13	Input mains star voltage V3	V
15	14	Input current phase L1	0.1*A
16	15	Input current phase L2	0.1*A
17	16	Input current phase L3	0.1*A
18	17	Input frequency	0.1*Hz
19÷21	18÷20		
22	21	Bypass mains star voltage V1	V
23	22	Bypass mains star voltage V2	V
24	23	Bypass mains star voltage V3	V
25	24	Bypass frequency	0.1*Hz
26	25	Output star voltage V1	V
27	26	Output star voltage V2	V
28	27	Output star voltage V3	V
29÷31	28÷30		
32	31	Output current phase L1	0.1*A
33	32	Output current phase L2	0.1*A
34	33	Output current phase L3	0.1*A
35	34	Output peak current phase L1	0.1*A
36	35	Output peak current phase L2	0.1*A
37	36	Output peak current phase L3	0.1*A
38	37	Load phase L1	%
39	38	Load phase L2	%
40	39	Load phase L3	%
41	40	Output active power phase L1	0.1 kW
42	41	Output active power phase L2	0.1 kW 0.1 kW
43	42	Output active power phase L3	
44	43	Output frequency	0.1*Hz
45÷47 48	44÷46 47	Detter weltere	0.4*\/
40	47	Battery voltage Positive battery voltage	0.1*V 0.1*V
49 50	40	Negative battery voltage	0.1 V 0.1*V
50	49 50	Battery current	0.1 V 0.1*A
52	51	Remaining Battery Capacity	0.1 A
53	52	Remaining Dattery Capacity	/0
54	53	Remaining back-up time	Minutes
55÷58	54÷57		Winterco
55÷58	54÷57 58	Least Significant Register	
60	59	Total output energy (32 bit) Most Significant Register	0.1 kWh
61	60	wost organicant register	
62	61	Internal UPS temperature	°C
63	62	Sensor 1 temperature	°C
64	63	Sensor 2 temperature	°C
65÷72	64÷71		
65÷72	64÷71		

(1) The register number n must be addressed n-1 in the data packet.



Some measures may not be available for all the UPS. In this case, the relative register remains at 0xFFFF value.

REGI	STER ⁽¹⁾	UPS – NOMINAL DATA	UNIT
NUMBER	ADDRESS	UPS - NOMINAL DATA	
73÷77	72÷76		
78	77	Output nominal voltage (star)	V
79	78	Output nominal frequency	0.1*Hz
80	79	Output nominal power	100*VA
81÷83	80÷82		
84	83	Battery nominal capacity (battery expansion included)	Ah
85	84	Battery benches	(1 or 2)
86	85	Battery type	Integer
87÷112	86÷111		

REGI	STER ⁽¹⁾		UNIT
NUMBER	ADDRESS	UPS - COMMANDS	
113	112	Command code ⁽²⁾	Integer
114	113	Shutdown delay time	Seconds
115	114	Restore delay time	Minutes
116	115		
117	116	Command result ⁽³⁾	Integer
118	117		

REGISTER ⁽¹⁾		DIAGNOSTIC	UNIT
NUMBER	ADDRESS	DIAGNOSTIC	UNIT
119	118	Counter of processed correct messages	Integer
120	119	Counter of processed NOT correct messages	Integer

(1) The register number n must be addressed n-1 in the data packet.

(2) Refer to "Command codes" paragraph

(3) Command result = Command code if command is handled from the UPS
 Command result = Command code + 100 if command is NOT handled from the UPS
 Command result = 0 if Command code is wrong

REG	ISTER ⁽¹⁾		
NUMBER	ADDRESS	SPECIAL FLAGS (SENTR UPS)	UNIT
121	120	Byte 1 of "s = xx" code / Byte 2 of "s =xx" code	Flag
122	121	Byte 1 of "c = xx" code / Byte 2 of "c =xx" code	Flag
123	122	Byte 1 of "b = xx" code / Byte 2 of "b =xx" code	Flag
124	123	Byte 1 of "r = xx" code / Byte 2 of "r =xx" code	Flag
125	124	Byte 3 of "r =xx" code / Byte 1 of "i = xx" code	Flag
126	125	Byte 2 of "i =xx" code / Byte 3 of "i =xx" code	Flag
127	126	Byte 1 of "a = xx" code / Byte 2 of "a =xx" code	Flag
128	127	Byte 3 of "a =xx" code / Byte 4 of "a =xx" code	Flag

REGISTER ⁽¹⁾		NETMAN DATA	UNIT
NUMBER	ADDRESS	NETMAN DATA	UNIT
129	128	Firmware version	Integer
130÷131	129÷130		

(1) The register number n must be addressed n-1 in the data packet.

⁽²⁾ In order to decode these registers, please refer to the UPS manual.

UPS: COMMANDS CODES

CODE	COMMAND
1 (0x0001)	Command Shutdown
2 (0x0002)	Command Shutdown and Restore
3 (0x0003)	Delete Command (code 1, 2, 12)
12 (0x000C)	UPS on Bypass
20 (0x0014)	Test Battery
22 (0x0016)	Test Panel

Please refer to the Modbus table document for additional information about registers for other devices.

BACNET/IP CONFIGURATION

Analogue Input 0Input voltage line 1VAnalogue Input 1Input voltage line 2VAnalogue Input 2Input voltage line 3VAnalogue Input 3Input current line 1AAnalogue Input 4Input current line 2AAnalogue Input 5Input current line 3AAnalogue Input 6Input frequencyHzAnalogue Input 7Bypass voltage line 1V	
Analogue Input 2Input voltage line 3VAnalogue Input 3Input current line 1AAnalogue Input 4Input current line 2AAnalogue Input 5Input current line 3AAnalogue Input 6Input frequencyHz	
Analogue Input 3Input current line 1AAnalogue Input 4Input current line 2AAnalogue Input 5Input current line 3AAnalogue Input 6Input frequencyHz	
Analogue Input 4Input current line 2AAnalogue Input 5Input current line 3AAnalogue Input 6Input frequencyHz	
Analogue Input 5Input current line 3AAnalogue Input 6Input frequencyHz	
Analogue Input 6 Input frequency Hz	
Analogue Input 7 Bypass voltage line 1	
Analogue input 7 bypass voltage inte i V	
Analogue Input 8 Bypass voltage line 2 V	
Analogue Input 9 Bypass voltage line 3 V	
Analogue Input 10 Bypass frequency Hz	
Analogue Input 11 Output voltage line 1 V	
Analogue Input 12 Output voltage line 2 V	
Analogue Input 13 Output voltage line 3 V	
Analogue Input 14 Output current line 1 A	
Analogue Input 15 Output current line 2 A	
Analogue Input 16 Output current line 3 A	
Analogue Input 17 Output peak current line 1 A	
Analogue Input 18 Output peak current line 2 A	
Analogue Input 19 Output peak current line 3 A	
Analogue Input 20 Output power line 1 W	
Analogue Input 21 Output power line 2 W	
Analogue Input 22 Output power line 3 W	
Analogue Input 23 Output frequency Hz	
Analogue Input 24 Output load line 1 %	
Analogue Input 25 Output load line 2 %	
Analogue Input 26 Output load line 3 %	
Analogue Input 27 Battery voltage V	
Analogue Input 28 Battery current A	
Analogue Input 29 Battery capacity %	
Analogue Input 30 UPS temperature °C	
Analogue Input 31 Autonomy min	
Analogue Input 32 Nominal power VA	
Binary Input 0 Mains status Present / Not prese	ent
Binary Input 1 Bypass status Active / Not active	Э
Binary Input 2 Battery status Working / Not work	ing
Binary Input 3 Battery level Low / Not low	
Binary Input 4 UPS locked Locked / Not locked	d
Binary Input 5 UPS fail Fail / Not fail	
Binary Input 6 Load Overload / Norma	ıl
Binary Input 7 Temperature Overtemperature / No	ormal
Binary Input 8 Bypass bad Bad / Not bad	
Binary Input 9 Replace battery Replace / Not repla	се
Binary Input 10 Shutdown Active / Not active	
Binary Input 11 Shutdown imminent Imminent / Not immin	
Binary Input 12 Communication status Lost / OK	
Analog Input 33 System status group 1	
Analog Input 34 System status group 2	

Ameles a languit OF	Oriente en estetuire energine O	
Analog Input 35	System status group 3	
Analog Input 36	Bypass module alarms	
Analog Input 37	Power module 1 alarms	
Analog Input 38	Power module 2 alarms	
Analog Input 39	Power module 3 alarms	
Analog Input 40	Power module 4 alarms	
Analog Input 41	Power module 5 alarms	
Analog Input 42	Power module 6 alarms	
Analog Input 43	Power module 7 alarms	
Analog Input 44	Bypass module status	
Analog Input 45	Power module 1 status	
Analog Input 46	Power module 2 status	
Analog Input 47	Power module 3 status	
Analog Input 48	Power module 4 status	
Analog Input 49	Power module 5 status	
Analog Input 50	Power module 6 status	
Analog Input 51	Power module 7 status	

EVENTLOG CODES

EVENT	DESCRIPTION
Battery low	Battery Low or Shutdown imminent
On battery	On battery
On bypass	On bypass
UPS lock	UPS lock
UPS fail	UPS failure
Overload	Overload
Overtemperature	Overtemperature
Output off	Output off
Bypass bad	Bypass bad
Comm lost	Communication lost
Battery bad	Battery bad
UPS generic alarm (SENTR)	UPS generic alarm (SENTR)
UPS internal alarm (SENTR)	UPS internal alarm (SENTR)
IRMS blackout	IRMS blackout
IRMS overload	IRMS overload
Synchro bad	Synchronisation wrong
Overload/overtemp	Overload/Overtemperature
xTS failure	ATS/STS failure
transfer active	Load Transfer active
source S1 bad	Source S1 bad
source S2 bad	Source S2 bad
MANUAL_BYPASS_ACTIVE_C01	Manual bypass active
LOW_INPUT_VOLTAGE_A01	Low input voltage
HIGH_INPUT_VOLTAGE_A02	High input voltage
OVERLOAD1_F01	Overload output 1
OVERLOAD2_F02	Overload output 2
OVERLOAD3_F03	Overload output 3
OVERLOAD4_F04	Overload output 4
OVERLOAD5_F05	Overload output 5
OVERLOAD6_F06	Overload output 6
OVERLOAD7_F07	Overload output 7
OVERLOAD8_F08	Overload output 8
LOW_INPUT_CURRENT_F09	Low input current
HIGH_INPUT_CURRENT_F10	High input current
POWERFAIL_AUX1_F11	Powerfail auxiliary powersupply 1
POWERFAIL_AUX2_F12	Powerfail auxiliary powersupply 2
OVERLOAD_LOCK1_L01	Lock due Overload output 1
OVERLOAD_LOCK2_L02	Lock due Overload output 2
OVERLOAD_LOCK3_L03	Lock due Overload output 3
OVERLOAD_LOCK4_L04	Lock due Overload output 4
OVERLOAD_LOCK5_L05	Lock due Overload output 5
OVERLOAD_LOCK6_L06	Lock due Overload output 6
OVERLOAD_LOCK7_L07	Lock due Overload output 7
OVERLOAD_LOCK8_L08	Lock due Overload output 8
TMAX1	Temerature high sensor 1
TMIN1	Temperature low sensor 1
Input1	Input contact sensor 1
Hum1	Humidity high sensor 1

Hum low1	Humidity low sensor 1
TMAX2	Temerature high sensor 2
TMIN2	Temperature low sensor 2
Input2	Input contact sensor 2
Hum2	Humidity high sensor 2
Hum low2	Humidity low sensor 2
TMAX3	Temerature high sensor 3
TMIN3	Temperature low sensor 3
Input3	Input contact sensor 3
Hum3	Humidity high sensor 3
Hum low3	Humidity low sensor 3
TMAX4	Temerature high sensor 4
TMIN4	Temperature low sensor 4
Input4	Input contact sensor 4
Hum4	Humidity high sensor 4
Hum low4	Humidity low sensor 4
TMAX5	Temerature high sensor 5
TMIN5	Temperature low sensor 5
Input5	Input contact sensor 5
Hum5	Humidity high sensor 5
Hum low5	Humidity low sensor 5
TMAX6	Temerature high sensor 6
TMIN6	Temperature low sensor 6
Input6	Input contact sensor 6
Hum6	Humidity high sensor 6
Hum low6	Humidity low sensor 6

SERIAL PORT CONFIGURATION



Net	lan 204		Modem		
R	J-12		DB-25 DB-9		DESCRIPTION
POSITION	DESCRIPTION		POSITION	POSITION	DESCRIPTION
1	+5V _{DC}				
2	GND	LEAVE UNCONNECTED			
3	Environmental sensors bus				
4	GND	\leftarrow CONNECT TO \rightarrow	7	5	GND
5	RXD	$\leftarrow CONNECT \ TO \rightarrow$	3	2	TXD
6	TXD	$\leftarrow CONNECT \ TO \rightarrow$	2	3	RXD

TECHNICAL DATA

NETWORK CABLE

To connect the device to the Ethernet (10Base-T) or Fast Ethernet (100Base-T) network, a UTP (Unshielded Twisted Pair) or STP (Shielded Twisted Pair) cable with RJ45 connectors is required. The cable must conform to the standard IEEE 802.3u 100Base-T with 2 pairs of UTP cables of category 5 or higher. The cable between the adaptor and the hub must not be more than 100m and not less than 2.5m.

NETWORK CABLE CONNECTIONS		
Signal	Pin # to Pin #	
TX+	$1 \leftrightarrow \rightarrow 1$	
TX-	$2 \leftrightarrow 2$	
RX+	$3 \leftrightarrow 3$	
RX-	$6 \leftrightarrow 96$	



Pins 1 and 2 must be connected to one twisted pair, pins 3 and 6 to another.

OPERATING AND STORAGE CONDITIONS

Operating temperature range	[°C]	0 ÷ +40	
Storage temperature range	[°C]	-5 ÷ +50	
Maximum operating relative humidity	[%]	80	
Maximum storage relative humidity	[%]	90	

LEGAL INFORMATION

The firmware of *Netman 204* includes some open source components. For more information please visit the website of the manufacturer.