

# Connectivity

## Index of configurations

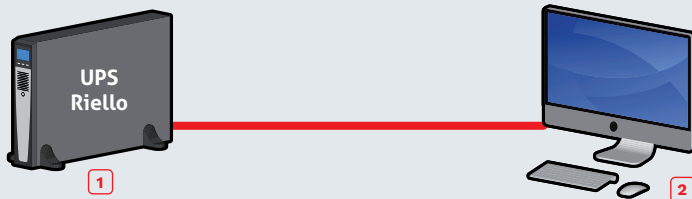
Connecting a UPS to other devices, sensors, computers and other specific devices, means on the one hand allowing the user to monitor UPS operating parameters and prevent critical situations, and on the other hand provides the UPS with input parameters from the working environment. By processing these parameters the UPS is able to activate/

deactivate itself, communicate its status and much more.

This brief overview summarises some of the basic connectivity configurations, grouped according to the end purpose and situation surrounding each case.

- Point to point connections;
- Multipoint connection;
- Connection for UPS in parallel setup;
- Connection with several systems in parallel setup and STS;
- Field bus connections;
- Bus connections over Ethernet;
- Field bus connections;
- Serial bus connections.

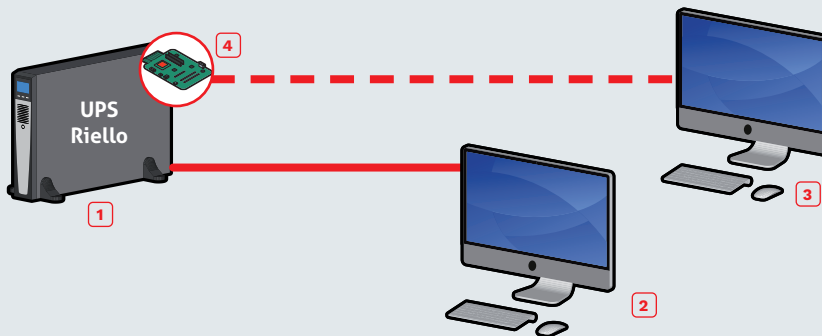
### POINT TO POINT CONNECTIONS



Controlling the UPS from 1 workstation

- 1 UPS connected to load
- 2 Local computer with PowerShield<sup>®</sup> version FREE

— USB or RS232

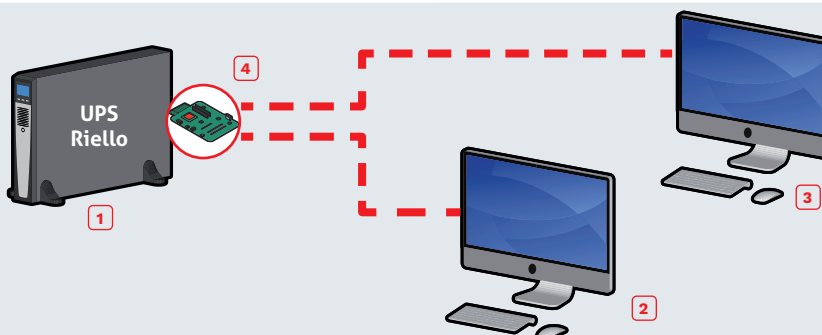


Controlling the UPS from different workstations

- 1 UPS connected to load
- 2 Local computer with PowerShield<sup>®</sup> version FREE
- 3 Local computer with PowerShield<sup>®</sup> software version FULL
- 4 MultiCom 372 board

--- RS232

— USB or RS232

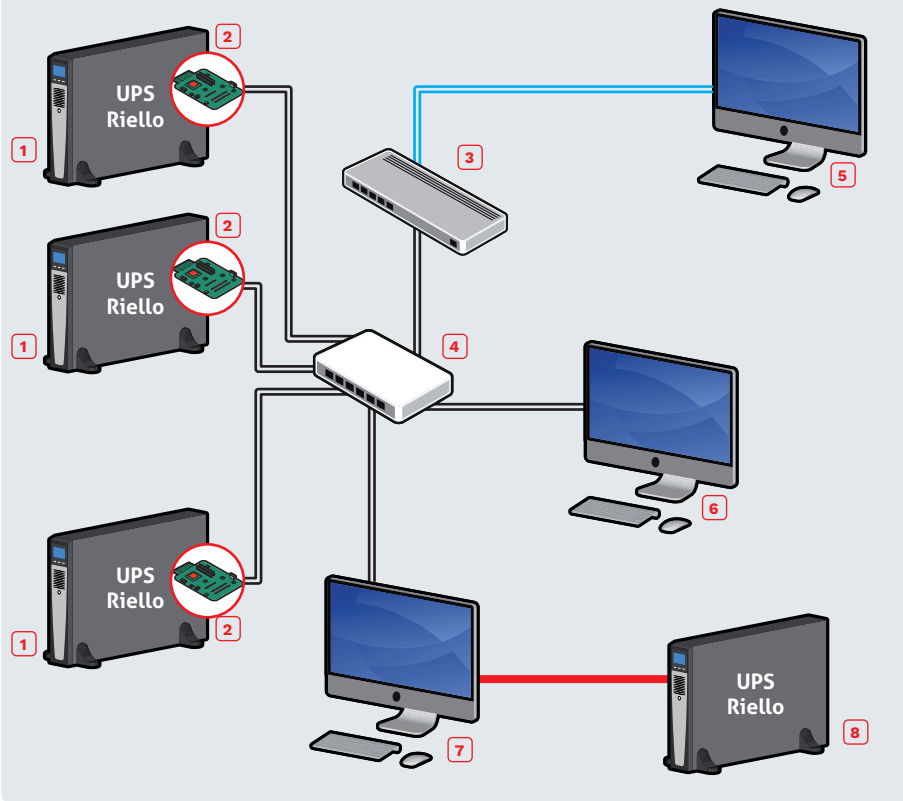


UPS control from several workstations, using 2 serial ports

- 1 UPS connected to load
- 2 Local computer with PowerShield<sup>®</sup> version FREE
- 3 Local computer with PowerShield<sup>®</sup> version FREE
- 4 MultiCom 352 board

--- RS232

## DISTRIBUTED CONNECTION (MULTIPOINT)

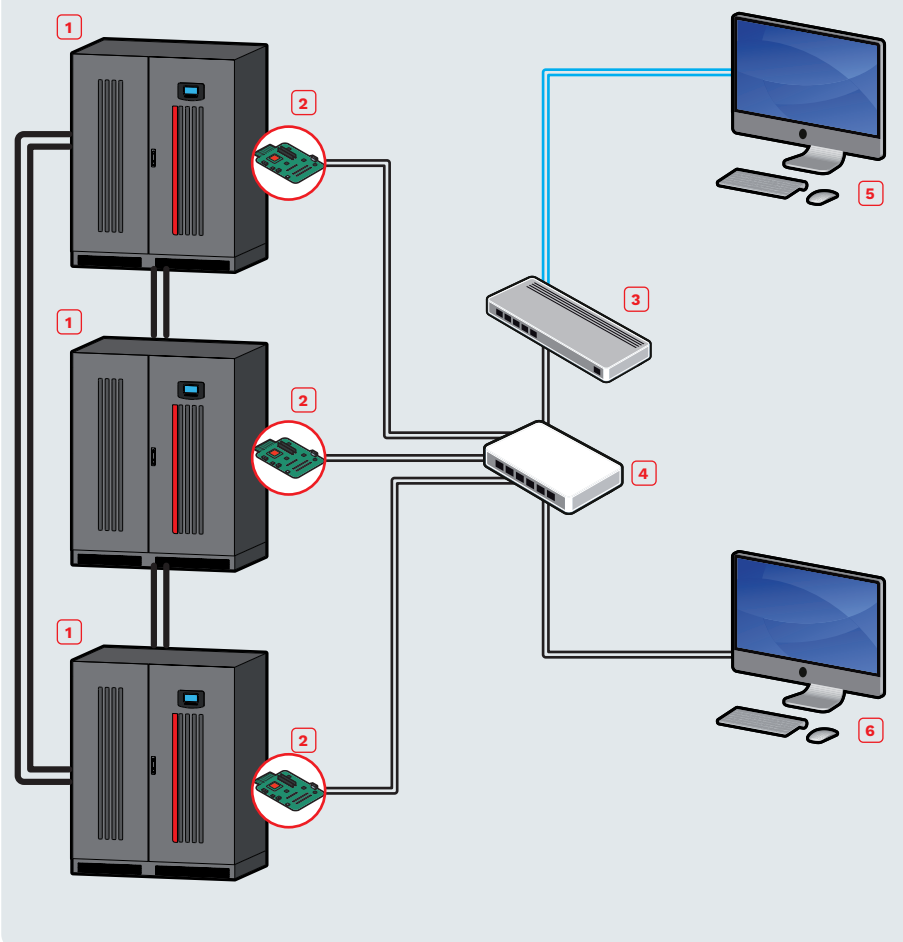


Connection with more than 1 UPS.  
The FULL version of PowerShield<sup>3</sup> software is required as well as a NetMan 204 communication board on each UPS.

- 1 UPS connected to load
- 2 NetMan 204 board
- 3 Firewall
- 4 Switch
- 5 Remote computer connected via web
- 6 Local computer
- 7 Local computer that controls the UPS (8) via USB or RS232, and UPS (1) via LAN and Ethernet
- 8 UPS connected to load


 USB or RS232  
 Ethernet  
 World Wide Web

## CONNECTION FOR UPS IN PARALLEL SETUP

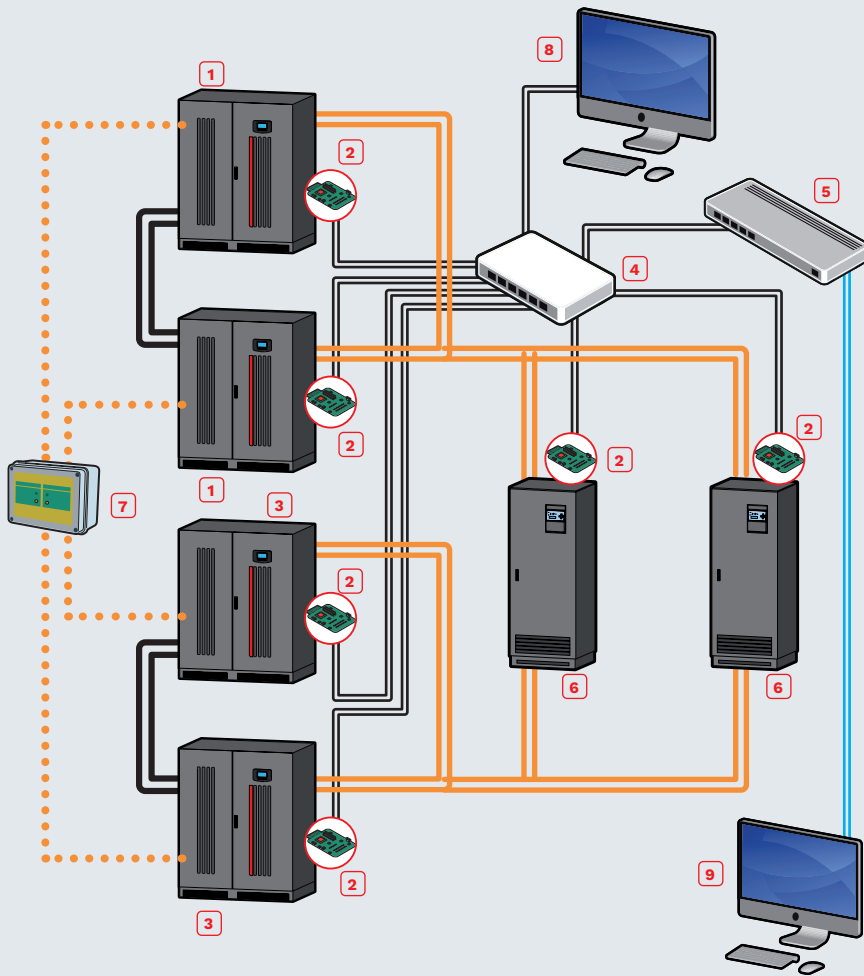


The FULL version of PowerShield<sup>3</sup> software should be used for managing setups with several UPS installed in parallel, and each UPS must have a NetMan 204 board installed.

- 1 UPS in parallel setup connected to the load
- 2 NetMan 204 board
- 3 Firewall
- 4 Switch
- 5 Remote computer connected via web
- 6 Local computer

 Ethernet  
 World Wide Web  
 Parallel setup bus

## CONNECTION WITH SEVERAL SYSTEMS IN PARALLEL AND STS



The FULL version of PowerShield<sup>3</sup> software should be used for managing setups with several UPS installed in parallel, and each UPS must have a NetMan 204 board installed.

- 1 UPS arranged in parallel connected to an STS channel
- 2 NetMan 204 board
- 3 UPS arranged in parallel connected to an STS channel
- 4 Switch
- 5 Firewall
- 6 STS connected to load
- 7 UGS
- 8 Local computer with PowerShield<sup>3</sup> software version FULL
- 9 Remote computer connected via web, running PowerShield<sup>3</sup> software version FULL

●●●● UGS management of parallel setup

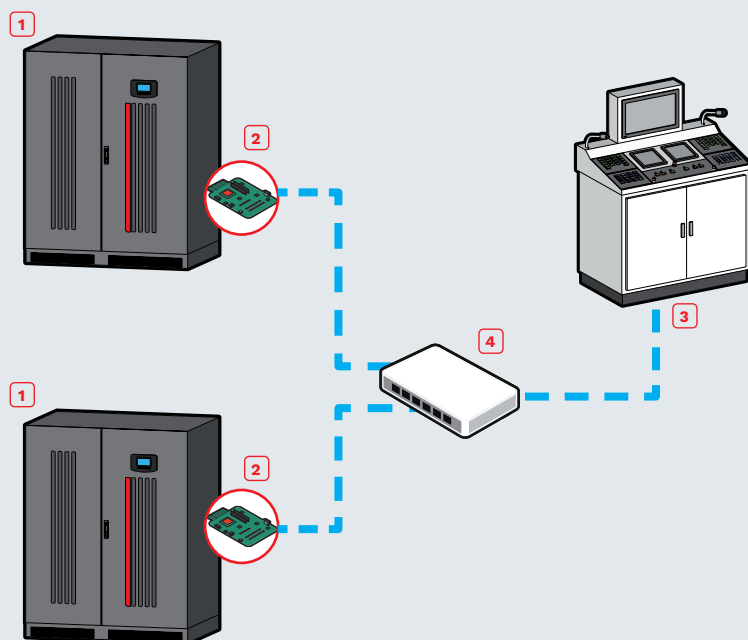
— Ethernet

— World Wide Web

— Parallel setup bus

— Power connection

## FIELD BUS CONNECTION OVER ETHERNET

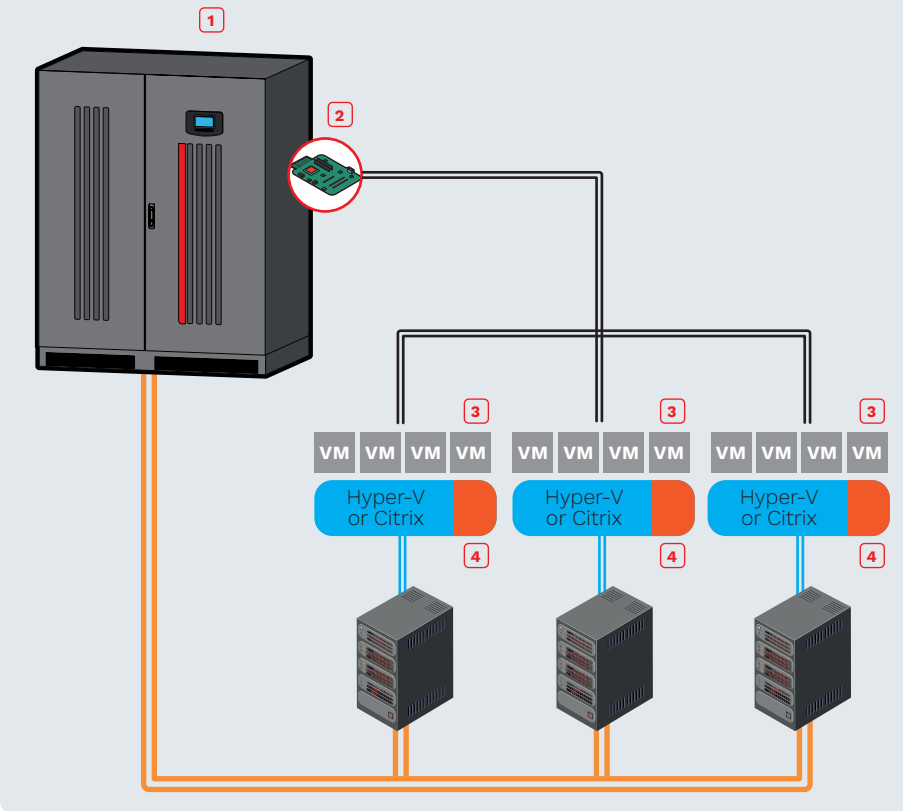


For UPS management in industrial or civil environments requiring Modbus protocol communication over Ethernet.



- 1 UPS connected to load
- 2 NetMan 204 board
- 3 SCADA management system
- 4 Switch

— Modbus / TCP over Ethernet

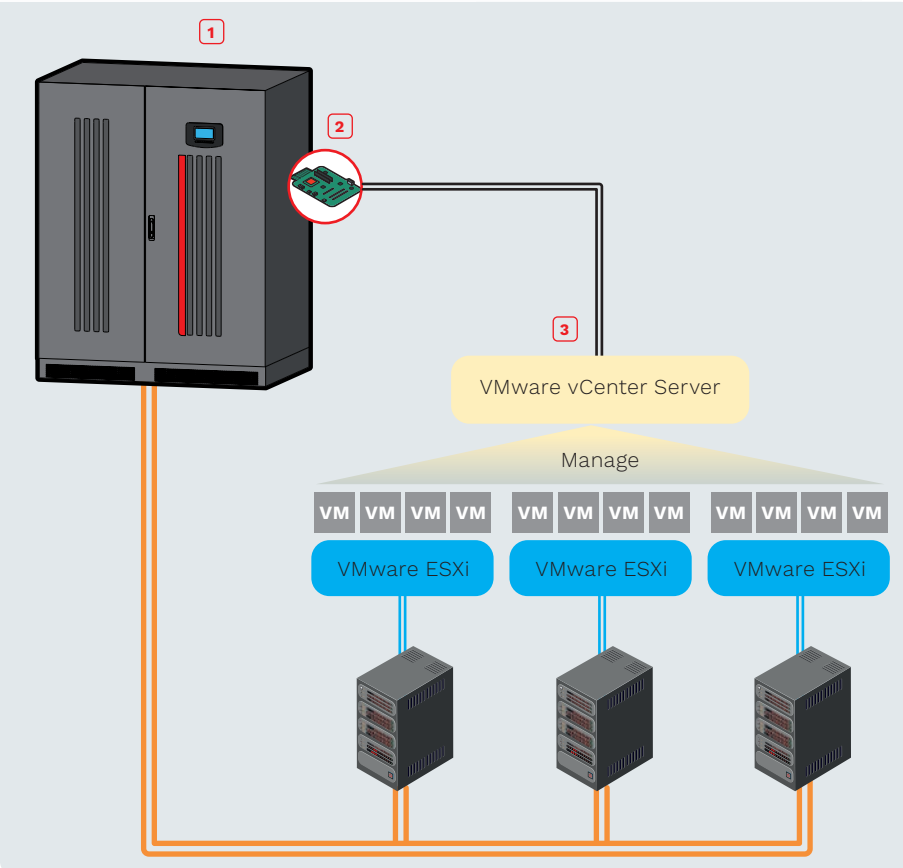
## POWERSHIELD<sup>3</sup> ON VIRTUALIZED SYSTEMS: MICROSOFT HYPER-V; CITRIX





PowerShield<sup>3</sup> software should be used for managing setup with UPS, a specific script to shut down the virtualized system must be used, UPS must have a NetMan 204 board installed.

- 1 UPS
  - 2 NetMan 204
  - 3 Virtualized system
  - 4 PowerShield<sup>3</sup>
-  Ethernet  
 Power connection

## NETMAN 204 ON VIRTUALIZED SYSTEMS: VMWARE ESXI



NetMan 204 should be used for managing Esxi hosts and vCenter servers, enabling you to manage your virtual network to perform shutdown or live migrations of active virtual machines as well as shutdown of physical hosts with delay and priority.

- 1 UPS
  - 2 NetMan 204
  - 3 Virtualized system
-  Ethernet  
 Power connection