Remote UPS monitoring

Programming UPS via Ethernet and UPS-CONF

Application note
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1   Description

This document describes remote configuration of an uninterruptible power supply (UPS) across an Ethernet network using the UPS-CONF software. An IFS-RS232-DATACABLE (Order No. 2320490) is required as well as a protocol converter to convert the Modbus® TCP to Modbus RTU. Any of the following will provide this function:

– GW MODBUS TCP/RTU 1E/1DB9 (Order No. 2702764)
– GW MODBUS TCP/RTU 1E/2DB9 (Order No. 2702765)
– GW MODBUS TCP/RTU 2E/2DB9 (Order No. 2702799)
– GW MODBUS TCP/RTU 2E/4DB9 (Order No. 2702767)

i	The UPS-CONF software communicates via a fixed device ID. Connecting more than one UPS per gateway is not possible.

i	Make sure you always use the latest documentation. It can be downloaded at phoenixcontact.net/products.

2   Configuring the GW MODBUS TCP/RTU... DB9

1. Insert the 12-pos. IFS connector of the IFS-RS232-DATACABLE into the UPS.
2. Insert the female D-SUB 9 connector into the GW MODBUS TCP/RTU... DB9.
   The pinout for the cable is:

Table 1   RS-232 pinout

	IFS-RS232-DATACABLE	**GW MODBUS TCP/RTU... DB9**
D-SUB	Signal	Signal
1	DCD	DCD
2	TxD	RxD
3	RxD	TxD
4	DTR	DTR
5	GND	GND
6	-	DSR
7	-	RTS
8	-	CTS
9	-	RI

3. Using an Ethernet cable, connect a PC to the GW MODBUS TCP/RTU... DB9.
4. Set the IP address of the PC to the sub-network of the GW MODBUS TCP/RTU... DB9. For example, IP = 192.168.254.10, sub-network = 255.255.255.0.
5. Open a web browser and enter the IP address of the GW MODBUS TCP/RTU... DB9 in the address field. The default IP address upon delivery is 192.168.254.254.
6. Open the web-based management page for the gateway and enter the username and password to configure the settings. The default user name is "Admin" with a password of "admin".
7. Navigate to the corresponding port configuration under the "Serial Settings" tab and set the appropriate serial settings.

Figure 1   Serial port settings

Depending upon the UPS, set the communication parameters to:

Table 2   Communication parameters

	Baud rate	Start bit	Data bits	Parity	Stop bit
QUINT-UPS/24DC/24DC… QUINT-UPS/24DC/24DC…AH QUINT UPS/1AC/24DC/5	115200	1	8	Even	1
TRIO-UPS/1AC/24DC/5	19200	1	8	Even	1
GW MODBUS TCP/RTU	Set accordingly	1	8	Even	1

8.   When finished, click the "Apply Changes" button on the bottom right of the page to apply the settings.

3   Configuring UPS-CONF

1.   Launch the UPS-CONF software (version 2.2 or higher is required) and locate the "Software Settings" option at the top right corner (see Figure 2)
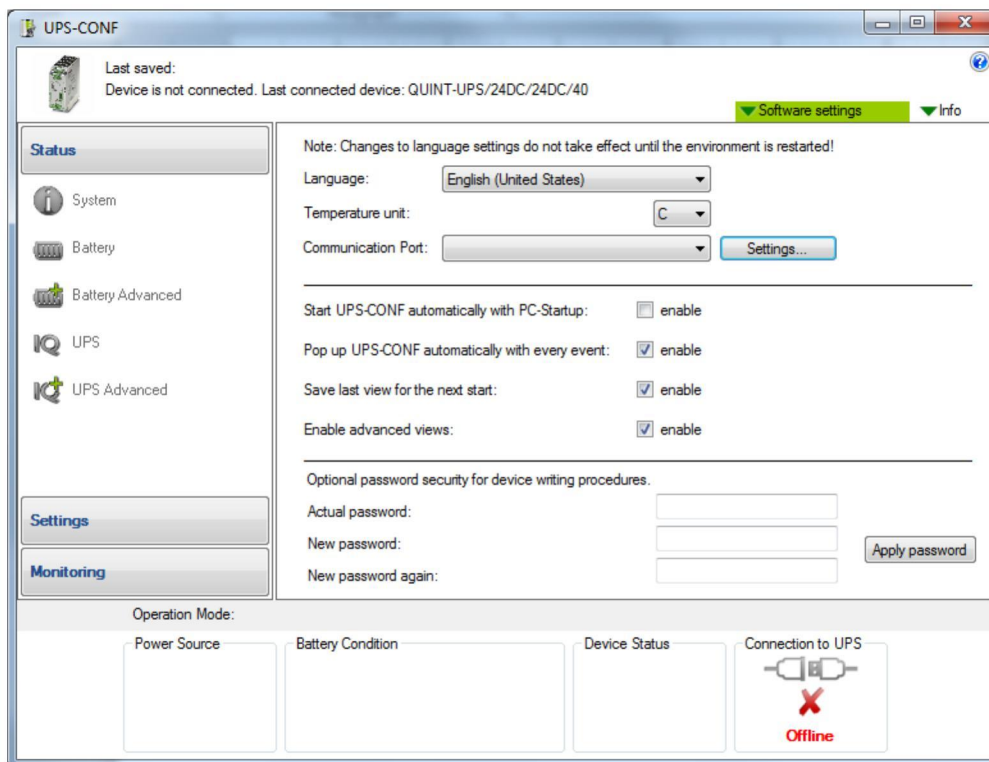

Figure 2   UPS-CONF software settings

2.   Click the "Settings" button to display the "Settings" dialog box.
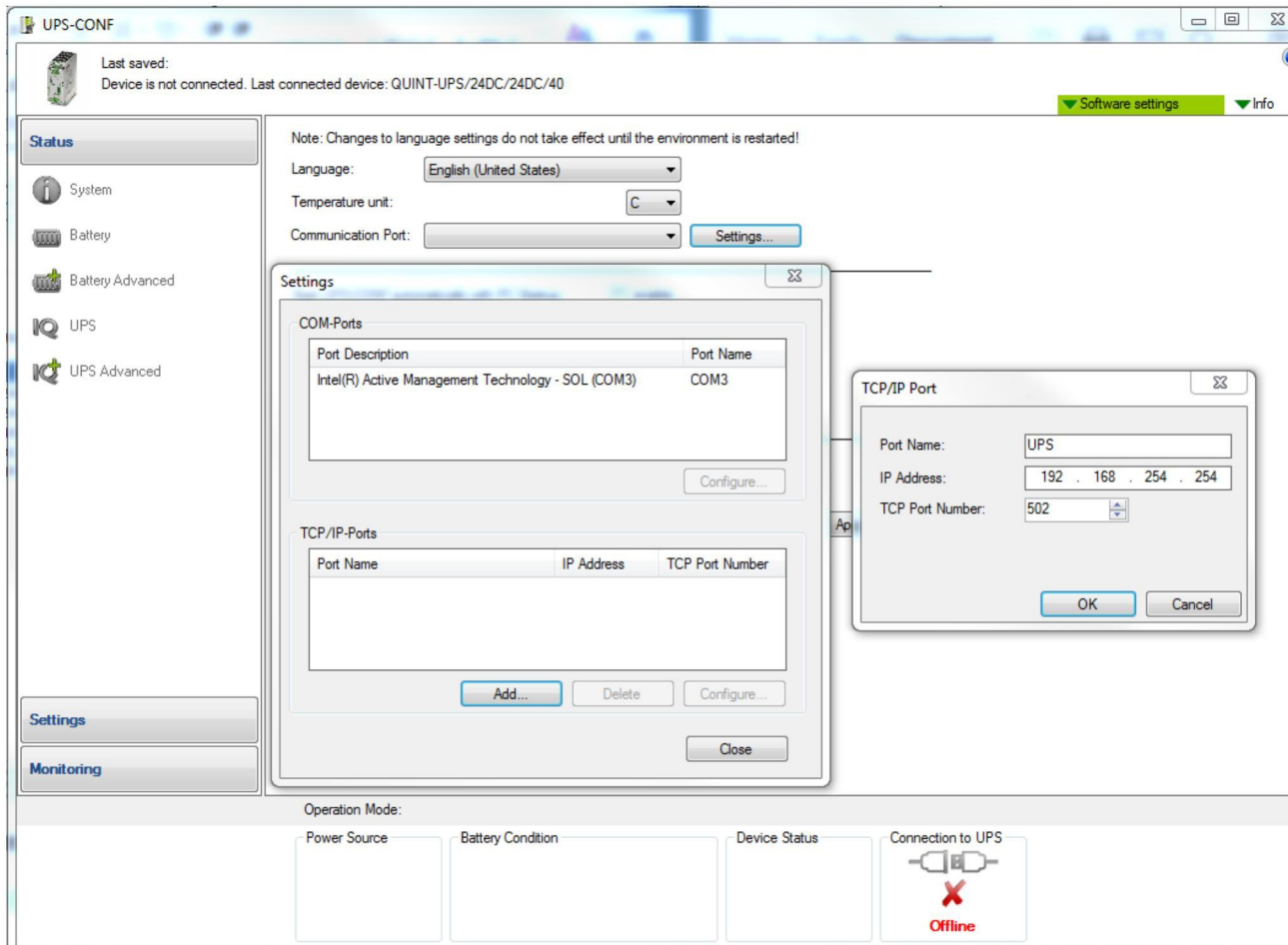3.   Click the "Add" button to launch the "TCP/IP Port" dialog box (see Figure 3).

Figure 3   TCP/IP port settings

4. Enter:
    a) a custom port name in the "Port Name" field.
    b) the IP address of the GW MODBUS TCP/RTU... DB9 in the "IP Address" field.
    c) **502** in the "TCP Port Number" field.
5. Click the "OK" button to close the "TCP/IP Port" dialog box and apply the settings.
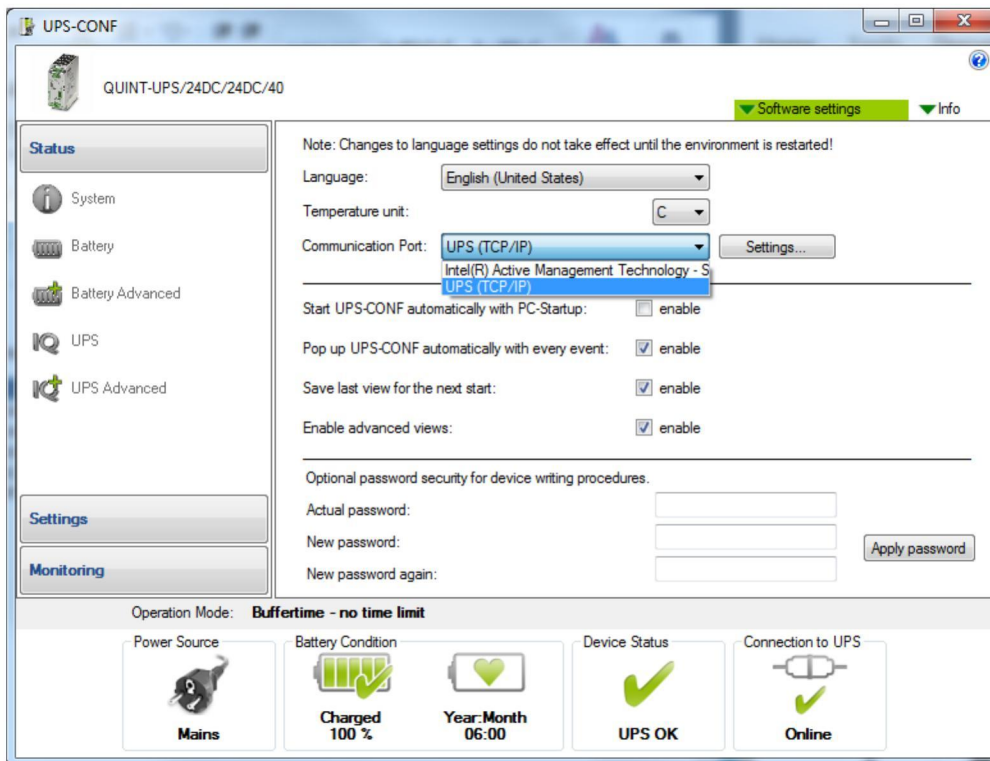6. Click the "Close" button to close the dialog box.

Figure 4   UPS-CONF "Communication Port" drop-down menu

7.   From the "Communication Port" drop-down menu (see Figure 4), click the newly created connection method (the custom port name).

If configured properly, The UPS will appear online after a few seconds. Once online, the user can use any of the monitoring, programming, and reporting features they would typically utilize when connected directly to the UPS.

4   Additional information on Ethernet access to the UPS

If the GW MODBUS TCP/RTU... DB9 is placed on a network, multiple PCs may access the UPS simultaneously. This is particularly useful for monitoring UPS systems where multi-party notifications are desired.

With the ability to access the UPS from any computer on the network equipped with UPS-CONF software, it may be desirable to restrict certain users to monitoring-only permissions. By entering an administrator-controlled password in the "Optional password security for device writing procedures" field, the local PC will only be able to monitor the UPS – programming becomes password-restricted. This step must be completed on each PC upon which write-access restriction is required.

Multiple UPS systems may be monitored from one PC by assigning a unique IP address to each GW MODBUS TCP/RTU... DB9 and subsequently creating multiple "Ports" in the UPS-CONF software. Select the port for the UPS the user desires to monitor to see relevant status information.