EXSYS EX-61004 Serial Device Server Instruction Manual

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EXSYS EX-61004 Serial Device Server

Description

The EX-61004 is a multiprotocol RS-232/422/485 serial device server for integrating RS-232/422/485 serial devices, such as barcode scanners, weighing systems and payment terminals, into an IP-based Ethernet network. The serial devices are connected to the network and are available for sharing on the subnet and the Internet. Extensive network protocols such as TCP Server, TCP Client, UDP, VCOM, Remote Pair Master-Slave, Modbus Server, Modbus Client and SNMP are supported.

In addition, serial devices with remote pair master-slave mode can communicate with each other via peer-to-peer mode without the need for an intermediate PC or conversion software. With the Virtual COM (VCOM) software available for download, a perfectly migrated virtual serial port can be created on Windows computers for each serial device.

Features

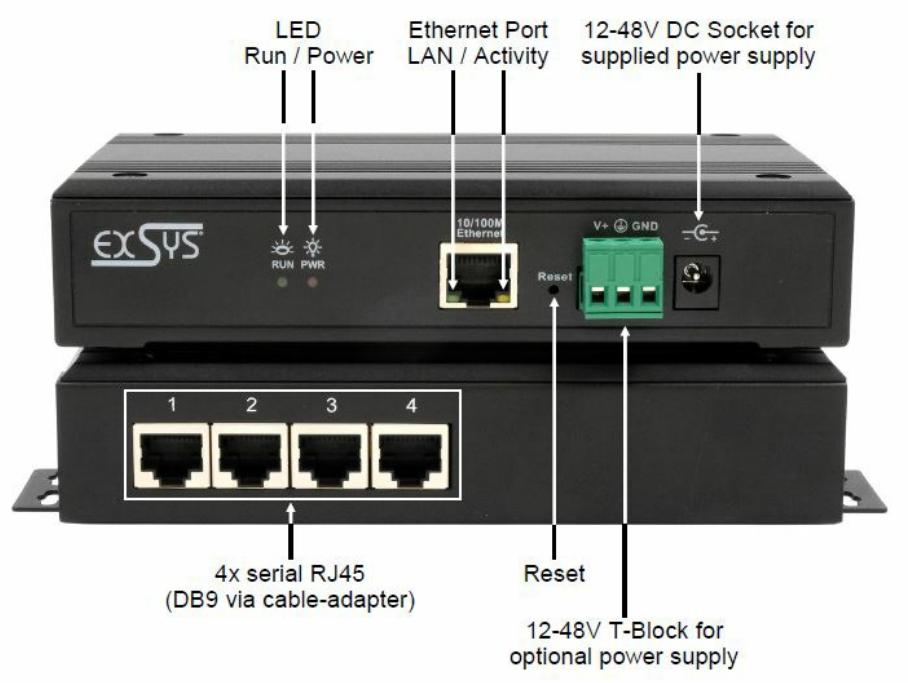
- 4x RS-232/422/485 port via RJ45 Ethernet 10/100Mbps
- Up to 921.6 Kbps baud rate
- Serial modes: RS-232, RS-422, RS-485 2-wire
- Ethernet protocols: ARP, IP, ICMP, UDP, TCP, HTTP, DHCP, SNMP, MQTT, MODBUS
- Operating modes: VCOM, MCP, TCP Server, TCP Client, UDP, Remote Pair mode, Modbus TCP Server, Modbus TCP Client
- Configuration: Windows-based VCOM administrator utility and web browser
- Certificate for

Extent of delivery

Before you integrate the EX-61004 into your network, you should first check the contents of the delivery:

- EX-61004
- 4x RJ45 to DB9 adapter cable 20 cm
- Power Supply (12V/1A)
- Wall mounting brackets
- Quick Start Guide

Layout, Connections & LED’s

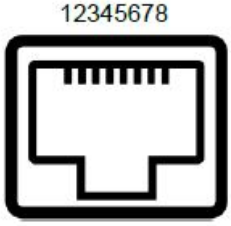


LED's

LED Name	Color	LED Function
Activity LED (RJ45)	**Yellow**	**Steady on:** Network is connected **Blinking:** Transferring data on the Network **Off:** No connection
LAN LED (RJ45)	**Green**	**Steady on:** Network ist connected **Off:** No connection
Power LED	**Red**	**Steady on:** Device is powered **Off:** No power connected
RUN LED	**Green**	**Steady on:** Device is booting **Blinking:** Server is ready for end devices **Off:** Server is not ready

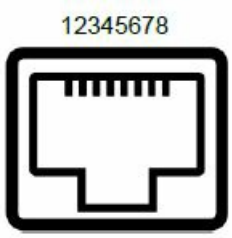
Connections

Serial



Serial RJ45 Port							
Pin	**RS232**	**RS422**	**RS485**	**Pin**	**RS232**	**RS422**	**RS485**
1	TxD	TxD+	Data+	5	DSR		
2	RxD	TxD-	Data-	6	GND	GND	GND
3	RTS	RxD+		7	DTR		
4	CTS	RxD-		8	DCD		

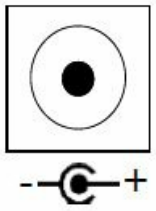
Ethernet



RJ45 Port					
Pin	**Signal**	**Pin**	**Signal**	**Pin**	**Signal**
1	BI_DA+	4	BI_DC+	7	BI_DD+
2	BI_DA-	5	BI_DC-	8	BI_DD-
3	BI_DB+	6	BI_DB-		

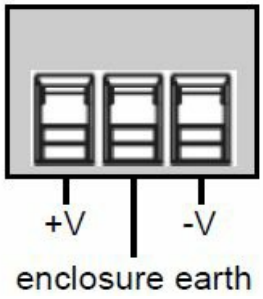
+12V to +48V DC socket

ATTENTION!
Only for use with the power supply unit included in the scope of delivery or another compliant power supply unit!



+12V to +48V T-Block

ATTENTION!
Never connect power to the enclosure earth, this can destroy your hardware!



Hardware Installation

Please observe the following installation instructions. Since there are major differences between PCs, we can only give you general instructions for connecting the EX-61004. If anything is unclear, please refer to the operating instructions of your computer system.

1. Install the EX-61004 on a wall or a device shelf.

2. Connect your serial devices to the device server. If necessary, use the adapter cables supplied.
3. Connect the EX-61004 to your network using an RJ45 Ethernet CAT.5/6 patch cable.
4. Now connect the 12V power supply included in the scope of delivery to the 12V socket provided for this purpose on the EX-61004.
5. Alternatively, you can connect the EX-61004 device server to an existing DIN-Rail power supply unit 12-48 VDC via the terminal block.
6. The LED display shows the status of the device server (see page 18).

Configuration of the Device Server
The EX-61004 is delivered with the following factory settings: By pressing and holding the “Reset” button for 5 seconds, the device will be reset to the factory settings.

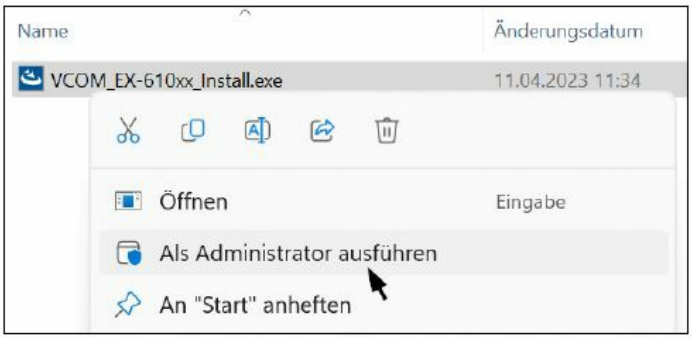
Login User Name:	admin
Password:	admin
IP Address:	DHCP
Network Operation Mode:	VCOM
Serial Interface:	RS232

Configuration

- Install the VCOM software (download, see below) as administrator (right-click, “run as administrator”). Then restart the computer.
- As soon as you have connected the server (details can be found on the next pages), you can access the unit via the button “Open in Browser”.
- If you know the IP address assigned by the DHCP server, you can also type it directly into your browser and log into the unit.

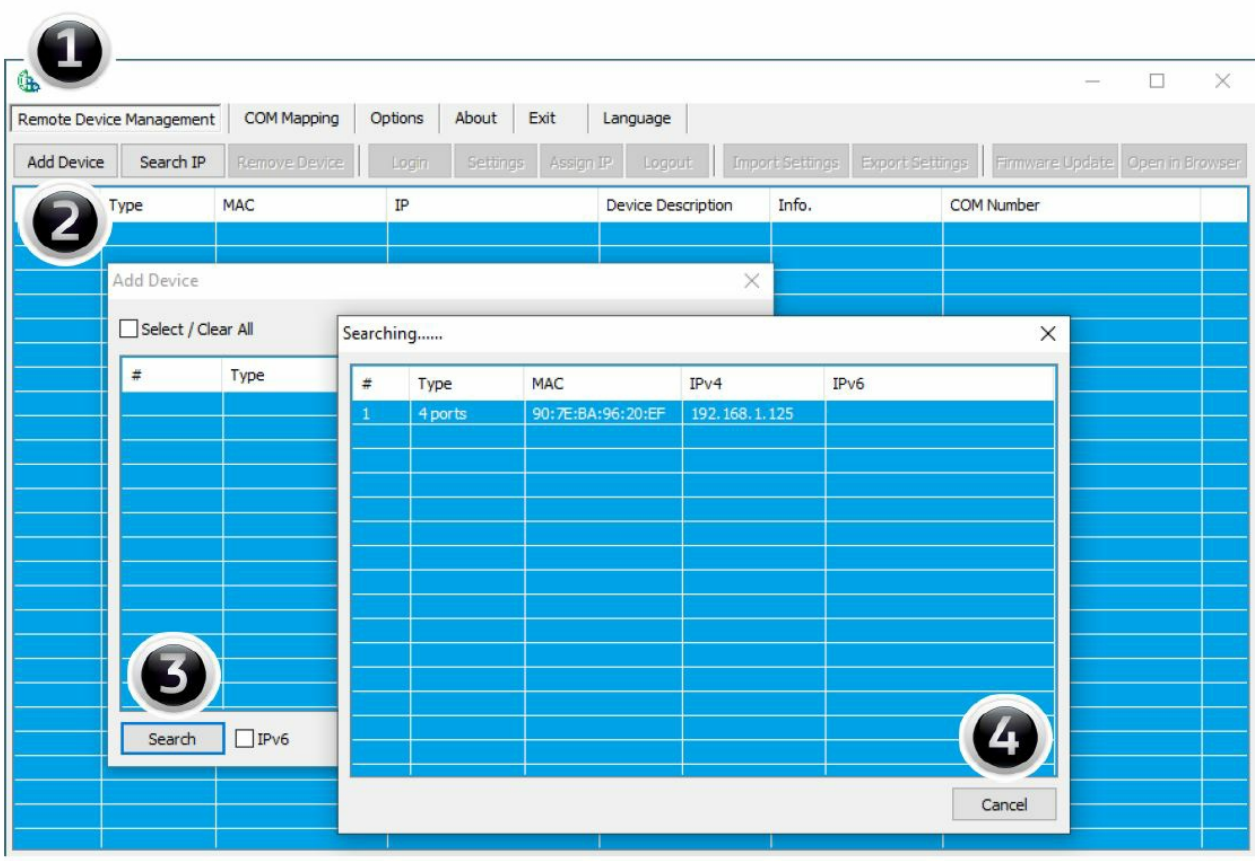
For the Virtual COM Utility go to
www.exsys.ch/en or www.exsys.de/en Search for: EX-61004 Alternatively, you can scan the QR Code on the right:

VCOM Utility
For virtual COM applications, a VCOM utility is provided on the EXSYS website (download see page 20).
Important! Please run the installation programme by right-clicking “Run as administrator”! After completing the installation, restart the computer.



Get the IP address

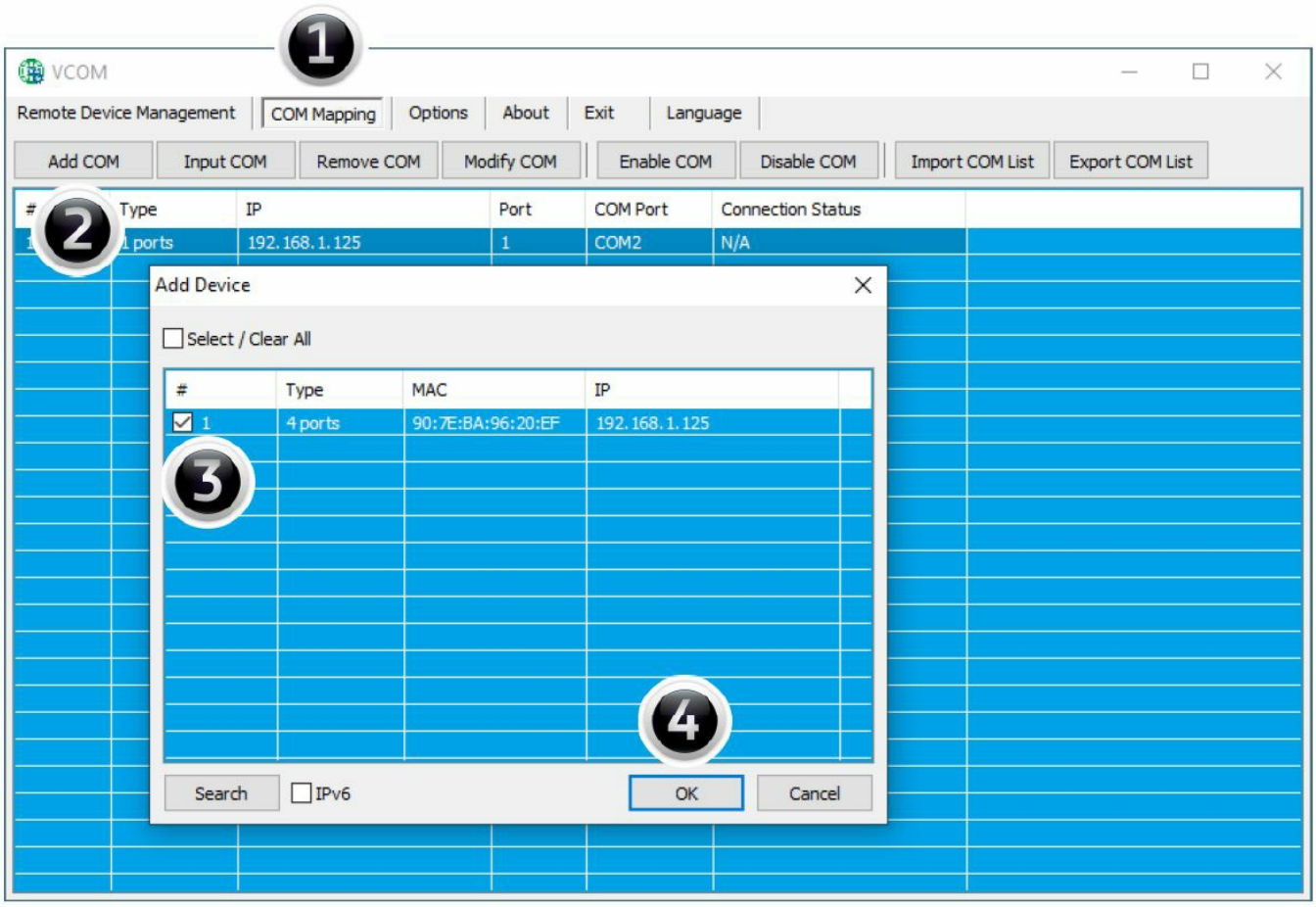
- Start the VCOM Utility (right-click on the VCOM Utility shortcut on the Windows desktop and start it with „Run as Administrator“).
- Click Remote Device Management > ADD Device > Search
- After the device is found, click Cancel to abort the search. Click OK, to add the EX-61004.



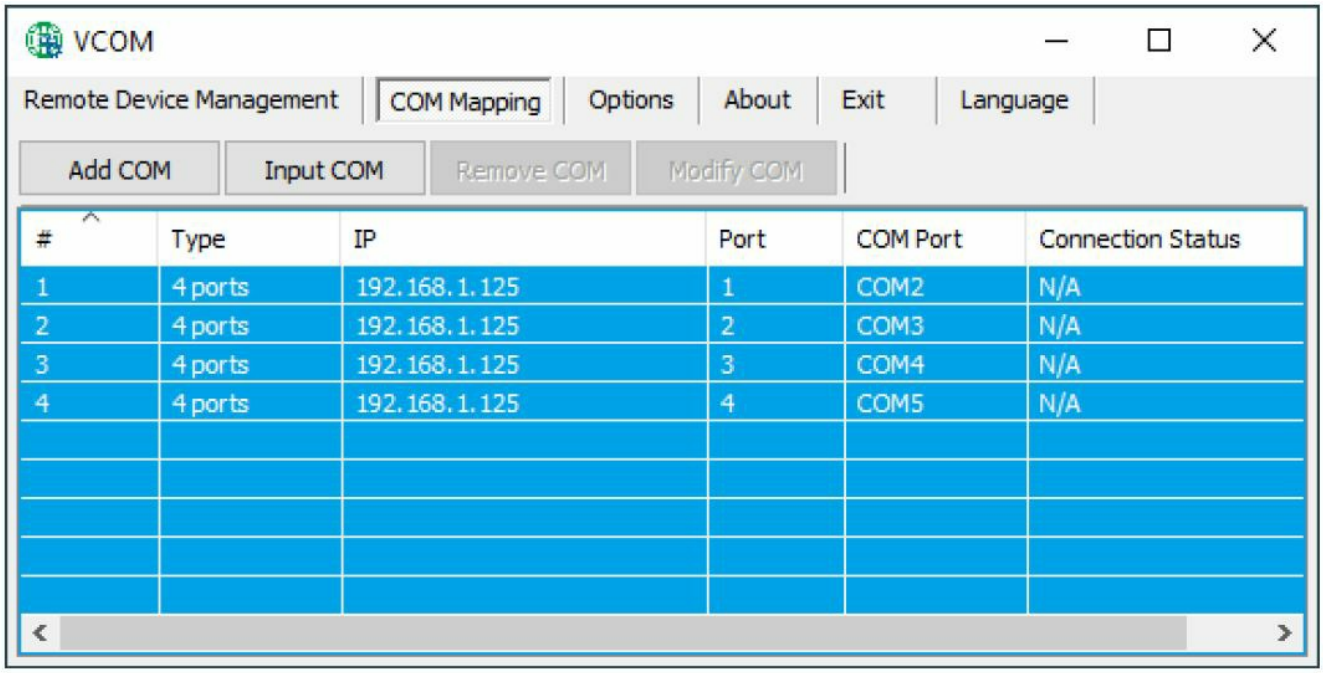
VCOM Utility

Assignment of COM-Ports

To create the virtual COM port and assign it to the serial device, click COM Mapping > Add COM > OK



COM2-COM5 have now been added



VCOM Utility
Check whether the COM ports have been added to the device manager! The following entries should now be visible in the device manager:

Server Settings
To change the settings of the serial device server, you must log into the web interface. To open the web configuration menu, click on Remote Device Management in the VCOM software, if you have connected several device servers, select the one you want to access from the list and then click on Open in Browser. Your Internet browser opens and the login window appears. The factory-set login data is:

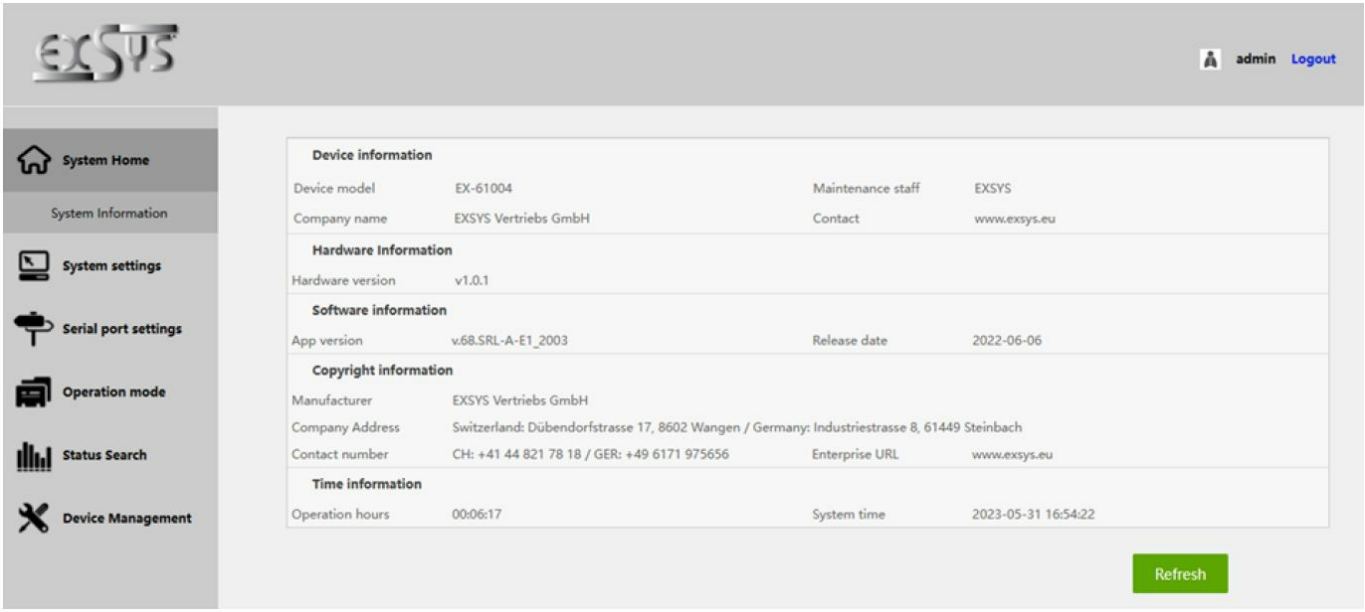
- User Name: admin
- Password: admin

If you know the IP address assigned by the DHCP server, you can also enter it directly into your browser and log in to the unit.

Server Settings

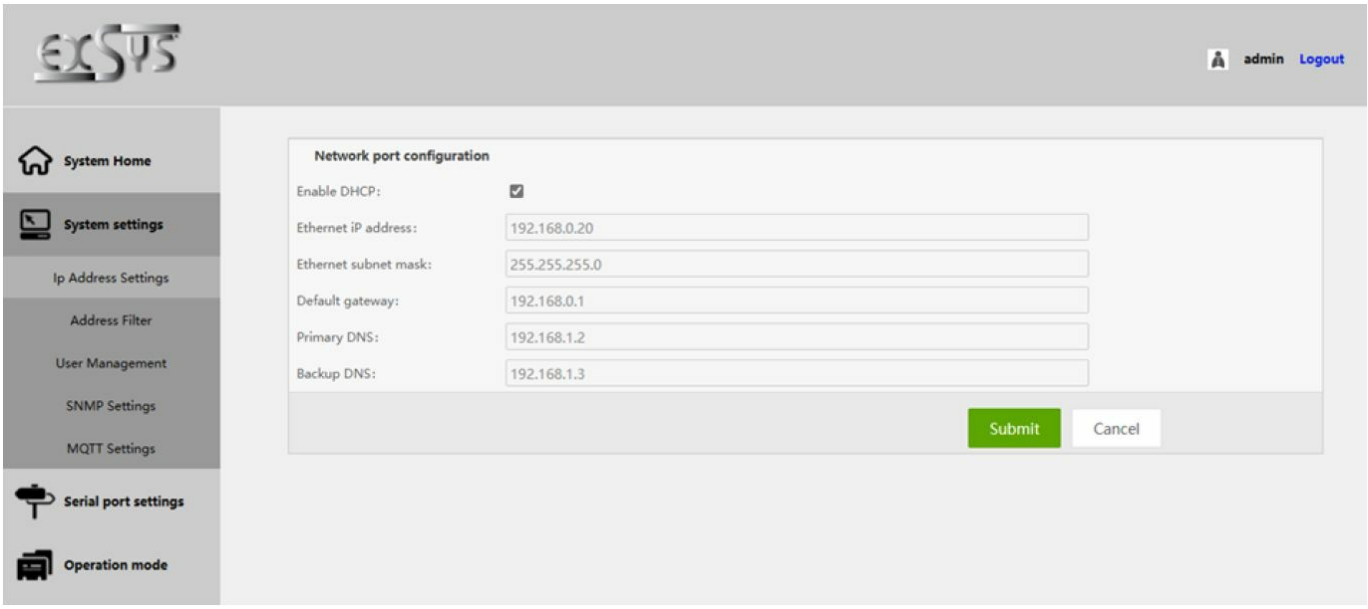
System Home – System Information

General information about the system

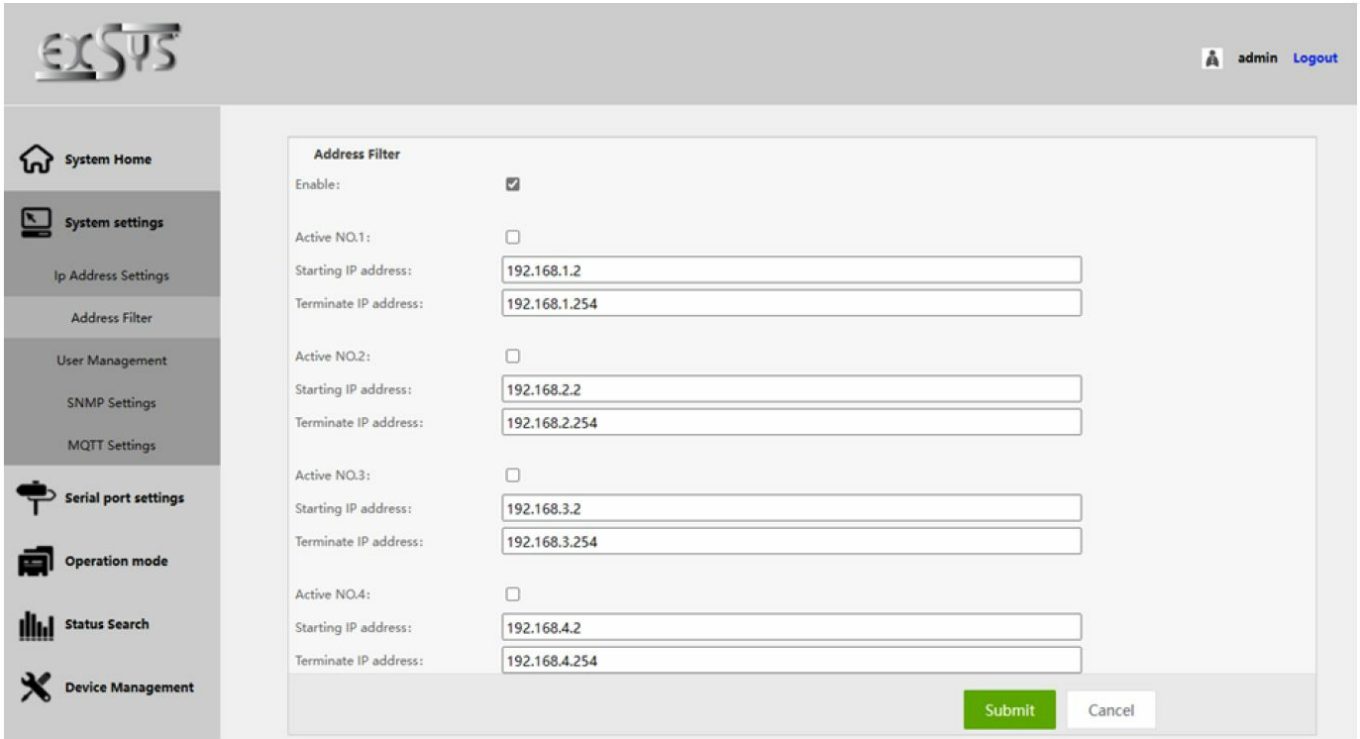


System Settings – IP Address Settings

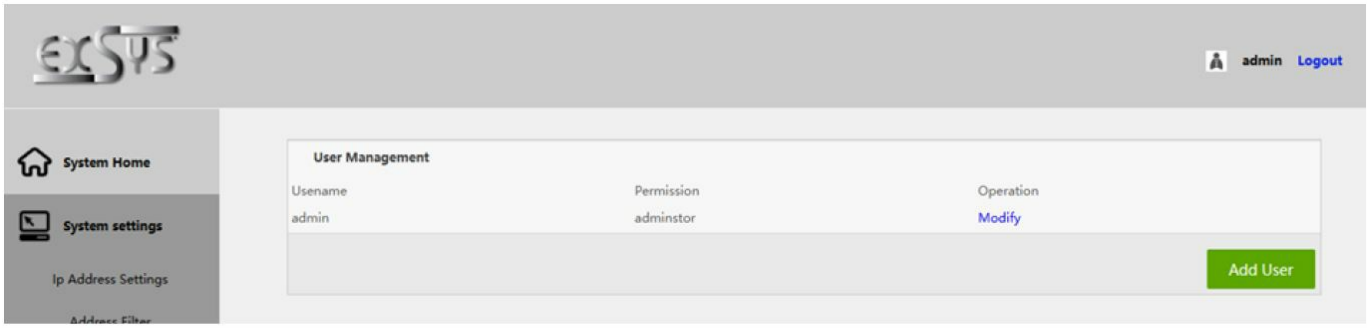
Choose between automatic IP assignment via DHCP or static IP.

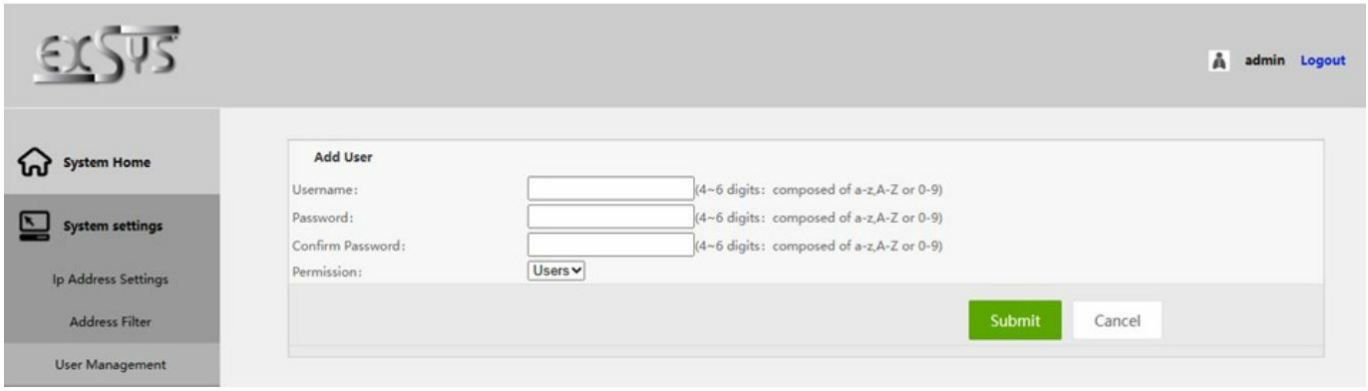


Server Settings
System Settings – Address Filter Limit access to the device server by setting authorised IP address ranges.



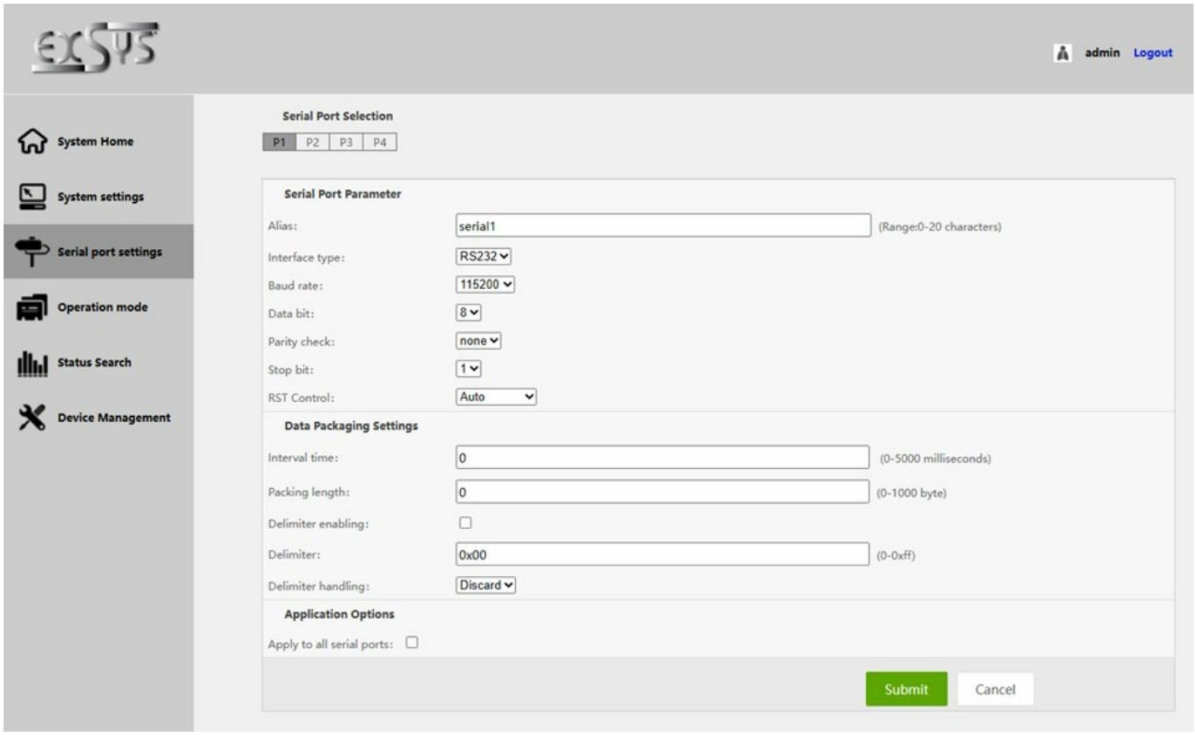
System Settings – User Management
Create new users and define their authorisation.





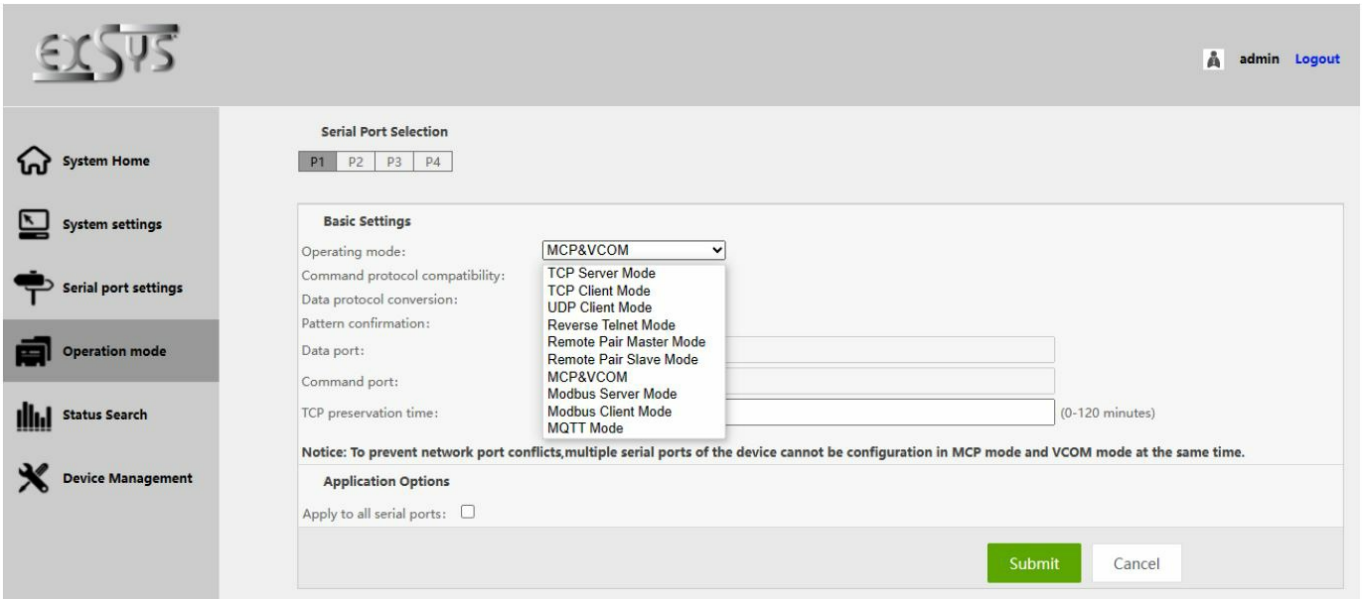
Server Settings
Serial Port Settings

Alias	Set the serial port alias
Interface type	Interface type (RS232/485/422)
Baud rate	Serial port baud rate (the value should be the same as the baud rate of the device connected)
Data bit	Data bits (the value should be the same as the baud rate of the device connected), default is 8
Parity check	Check bits (none, even, odd), (the value should be the same as the baud rate of the device connected), default is none
Stop bit	Stop bit (the value should be the same as the baud rate of the device connected), default is 8
RST Control	Auto, XON/XOFF, CTS/RTS can be selected
Interval time	Data packing interval (if required, default is 0)
Packing length	Length of data pack (if required, default is 0)
Delimiter enabling	Enable packet separation by delimiter if required
Delimiter	Set the encoding of the delimiter for the transmitted data (0-0xff)
Delimiter handling	Chose to keep und discard
Apply to all serial ports	Applies the settings for all serial ports of the device server



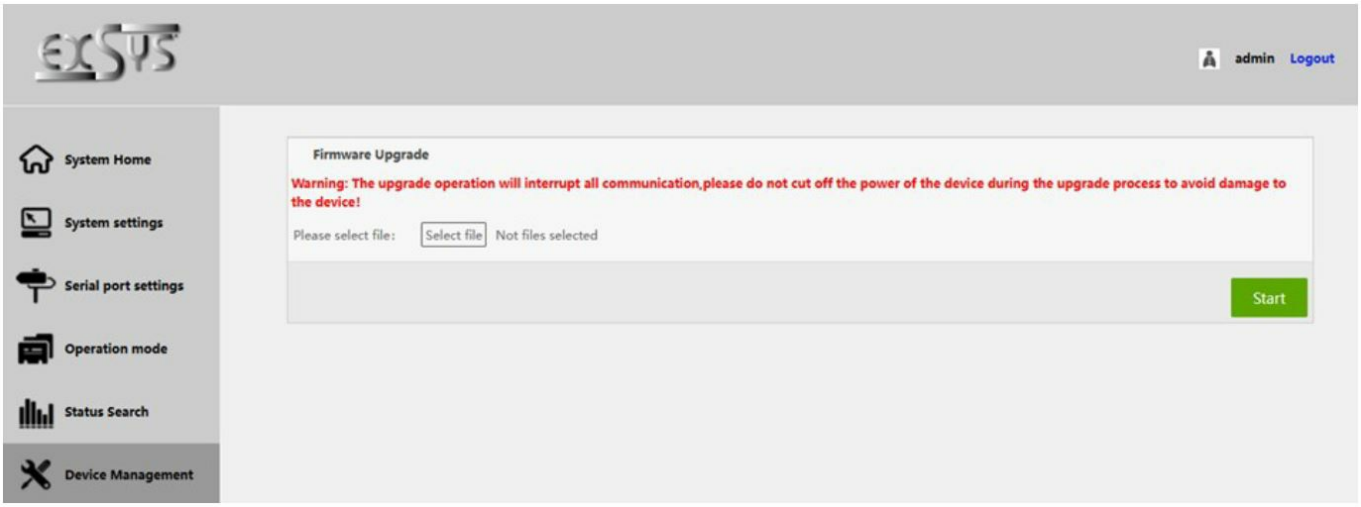
Operation mode

Set up the desired operating mode of the serial interfaces.



Device Management

Firmware Upgrade	Installing new device firmware. Select the locally stored installation package of the new firmware and click on “Start” to perform the upgrade. **Attention!** During the upgrade, the device server must always be connected to the net work and to the power supply, otherwise the device may be destroyed. We cannot accept any responsibility for incorrectly executed updates.
Restore Factory	Resetting the unit to factory defaults
Port Restart	Restarting individual ports (e.g. in case of a malfunction)
System Restart	Reboot the serial device server



Cleaning
To clean the device, please use only a dry, non-fibrous cloth and remove the dirt with light pressure. In the area of the connections, please make sure that no fibres of the cloth are left in the socket.

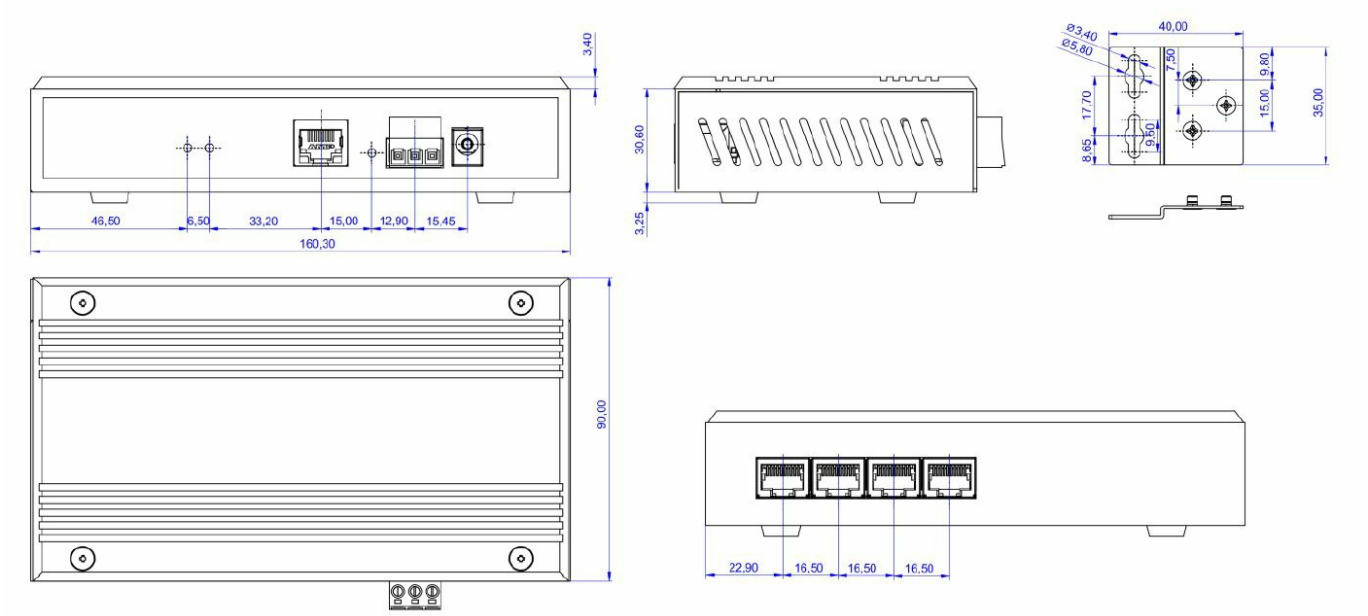
Attention!
Never use a moist or wet cloth for cleaning!

Technical Information

- Data Transfer Rate: 50 to 921.6 Kbps baud rate
- Connectors: 4x RJ45 serial ports (via adapter cables), 1x RJ45
- Ethernet port, 1x 12-48V DC Connector, 1x Terminal Block 12-48V
- Hardware System: Ethernet 10/100 Mbit/s
- VCOM Utility: Windows XP/Vista/7/8.x/10/11/Server 20xx
- Operating System: All via IP and Port Number (Direct Control Socket Port)
- Operating Temperature: -40° to 185° Fahrenheit
- Storage Temperature: -40° to 185° Fahrenheit
- Rel. Humidity: 5% to 95%, non-condensing
- Protection Class: IP30
- Power: +12-48V
- Size: 161 x 91 x 37 mm

- Weight: 530g

Technical Drawing



Documents / Resources

	EXSYS EX-61004 Serial Device Server [pdf] Instruction Manual EX-61004, EX-61004 Serial Device Server, Serial Device Server, Device Server, Server

References

- EXSYS Shop Schweiz
- EXSYS Shop Switzerland
- Exsys Online Shop DE
- Exsys Online Shop EN
- User Manual