User Manual

RemoteCOM (C20 - C25)

Introduction

RemoteCOM (C20 - C25)

RemoteCOM is a complete hardware and software solution for creating remote communication ports. The software part can be uploaded to any of the Redisage C20 - C25 Ethernet Converters. It provides a communication between a LAN host and a device equipped with RS232/RS485 serial interfaces. A dedicated app makes it easy and fast to configure and deploy. There is a possibility to create virtual COM ports with the Redisage Configurator to minimize number of cables.

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Hardware

RemoteCOM (C20 - C25)

RemoteCOM can be installed on any device from the Redisage C20 - C25 Ethernet Converters family.

Features

Features	c5368820-41b3-4934-ae6d-774d7208eae7.png
Ethernet converter to RS232/RS485	
ESD protection for the RS485 data line	
Power supply: +12 to +30 VDC	
Transmission speed up to 115200 bps	
Tx, Rx and power LED indicators	
RS485 embedded termination 120 ohm	
Operating temperatures: -40°C to +75°C	
DIN rail mounting	
Dimensions: 90x56.4x22.5 mm	
3 years warranty	
Customization of OEM is welcomed	

Frame ground FG

Electronic circuits are constantly prone to electrostatic discharge ESD. Redisage Electronics modules feature a design for the frame ground terminal block FG. The frame ground provides a path for bypassing ESD, which provides enhanced static protection ESD abilities and ensures the module is more reliable. Connecting FG terminal block to the earth ground will bypass the ESD disturbances outside the device so will provide a better level of protection against ESD.

Frame Ground FG connection reference drawing is provided below.

Image not found or type unknown

If earth ground is not available FG can be left floating or it can be connected with the power supply GND.

Specifications

Redisage PN		C20	C21	C22	C23	C24	C25
Ports	RS232	2x	-	-	4x	-	2x
	RS485	-	1x	-	-	4x	2x
	RS232/RS485	-	-	2x	-	-	-
Microcontroller		ESP32			STM32F4		
WiFi		N/A					
Power	Voltage	12-30 VDC					
	Power	< 1 W					
Frame ground connection		yes					
Baud rate		up to 115200 bps					
LED indicators		communication Tx, Rx and power					

Redisage PN		C20	C21	C22	C23	C24	C25
RS485 termination		120 ohm manually enabled					
Connector	RS232/RS485	8-pin terminal block max. 2.5 mm^2 wire					
	Power	3-pin terminal block max. 2.5 mm^2 wire					
	Ethernet	RJ45					
Transmission distance	RS485	max. 1,200 m at 9.6 kbps; max. 400 m at 115.2 kbps (Belden 9841 2P twisted-pair cable, if different cables are used, the transmission distance may change)					
	RS232	max. 15 m at 115.2 kbps					
Mounting and enclosure		DIN rail, plastic PA - UL 94 V0, black/green					
Temperatures		-40°C to +75°C operating and storage					
Humidity		10 - 90% RH, non-condensing					
ESD protection		±4 kV contact discharge / ±8 kV air discharge					
Certification		CE, RoHS					

LED indicators

Converters C20 - C22	Converters C23 - C25

LED indicator	Color	Function	LED indicator	Color	Function
PW	Blue	Power	PW	Blue	Power
ETH	Green	Network activity	ETH	Green	Network activity
ST	Orange	Console mode	CN	Yellow	Console mode
	Red	Service mode	COM	Green	RS232/RS485 activity
			SR	Red	Service mode
			ER	Yellow	Error

Pin assignments

C20	C21
cb11de82-9b9d-441b-a5ec-a154b2974af1.png	9ea3edd8-81fa-43f3-b5d6-321d3e380273.jpg

C22	C23
b256a7e1-4bcb-44a8-8d61-d9973cc82d4e.png	c0d89b16-0d72-4553-aacd-745659a94c87.png

C24	C25
939889bb-f557-4d08-b093-d2ac790a3bce.png	46bb1368-b158-4f8d-8114-304a359a9685.png

In the C22 converter user should use only RS232 or only RS485 interface of one port as they occupy the same internal bus of the device.

Configuration by the Web Page

RemoteCOM (C20 - C25)

This page presents capabilities of the Ethernet Converters configuration. First of all, make sure that converter is connected to power supply and to the LAN using a patch cord. If the device has no static IP set up, it will be necessary to obtain its IP address in the local network. User interface is mostly similar for all converters but some subpages might be different for several models depending on amount of interfaces. In order to avoid issues, click on a "Help" button in the top right corner on every page.

Login

To access the web page open the browser, type device's IP address of the converter (default is **192.168.100.100**). Then log in using user's personal credentials. If it is a first configuration or the converter had a factory reset, use default login details (login: **admin**, password: **admin123**).

0ebd9613-722b-4a01-8258-91252cc88f74.png

> The configuration is available only if devices are connected to the same Local Area Network as the computer used for it.

Status page

After a successful login, there should be an insight to important information such as: port status, service and ports which are in use and other details about the connection.

621a9445-3b44-42ec-b18b-2dd9f1ff95ef.png

Changing username or password

After clicking "Edit User" under the user icon, it is possible to change the username or the password.

60a6ddcb-65d2-48f6-a471-9eaebc1f75bf.png

[08cea4a8-e1e1-4241-a0ea-bf987363d2b7.png](08cea4a8-e1e1-4241-a0ea-bf987363d2b7.png)

> If login details were forgotten, it would be necessary to do a factory reset via a USB/UART converter and a serial console.

Ports page

This page allows to configure the device's ports. There is a toggle switch next to the "Port" label by which it is possible to turn ON/OFF any particular ports.

[99bb0679-5937-4fb6-b6f5-59e8d0b89d74.png](99bb0679-5937-4fb6-b6f5-59e8d0b89d74.png)

[762f162a-1c33-4674-8f6f-827edb003235.png](762f162a-1c33-4674-8f6f-827edb003235.png)

Item		Description
Service	RemoteCOM	The RemoteCOM option lets to attach the port to a computer running the Redisage Configurator as if it would be physically present in the computer.
	TCP Socket	TCP/UDP Socket exposes this port as a regular network socket - connect to this socket with own software and write/read data to send/receive data over the serial port without any additional software or serial port handling.
	UDP Socket	
Port		The service number - the device has an "IP Address" by which it is identified and a couple of services running on it. It's required to tell the device which service should be in use by entering this device's IP address and the port number in the RemoteCOM client or user's software.
Connection Timeout [s]		The time specifying how often (every how many seconds) the "keep alive" packet will be sent to check if the client is still connected. Value 0 means that the connection is kept permanently without any timeout.

Item	Description
Inactivity Time [ms]	The maximum allowed time in milliseconds during which there is no data transfer. When connection is inactive for the time longer or equal to the entered value, then it will be closed. Value 0 means there is no measure of the inactivity time at all.
Encryption	Determine how the data is protected 'in flight' over a network. It is available only with the RemoteCOM service. Once enabled, it is necessary to set the password.
Password	Protect the communication between the device and various clients - keep it secret! Same settings have to appear in clients - without the correct passwords, a client will not be able to connect at all.
Termination	Enable/disable termination on the RS line.
Baud Rate	Determine the port's transmission speed over the data channel.
Data Bits	Determine the number of data bits in the port's message frame.
Parity	Enable/disable parity check in the port's message frame.
Stop Bits	Determine the number of stop bits in the port's message frame.
Notes	These notes are for information only - feel free to write down anything related to this port (device it connects to, etc.). They're also shown in the Configurator during the device discovery - in the other words, they're public.

> Changing port's service closes all sockets connected to the ports.

> In the UDP mode, port number 15051 is reserved for UDP broadcast service.

Network page

In this section, network settings can be changed according to target LAN parameters.

Item	Description
Configuration Method	Enable/disable the DHCP server. If the DHCP server is disabled, the IP address of the device has to be set manually.
IP Address	IP address of the device.
Netmask	Netmask associated with the IP address.
Gateway	Gateway address currently used by the device.
MAC Settings	Allow setting the default MAC address or typing it manually.
MAC Address	Allow changing the physical address of the device.

Item	Description
HTTP Port	Determine the port of the control panel.
Telnet Port	Allow connection with the device via Telnet.
Broadcasts	Notify RemoteCOM clients in the same network about this device's existence. With this enabled, the Configurator will automatically set most of the settings correctly after picking the correct port.
Hostname	Label that is assigned to the device.
DNS Address 1 (Primary)	Primary Domain Name System used by the device.
DNS Address 2	Domain Name System used by the device.

It is possible to obtain a dynamic IP address. Just switch configuration method from static IP to DHCP (automatic). This process may cause some issues with identifying converters in LAN unless there is an access to the device which is responsible for allocating IP addresses.

Keep in mind that in case of changed IP address user needs to type a new IP in the address bar and log in again.

Device page

On the device page there are tools used to a firmware update, a factory reset and a device reboot.

744e0c74-d7cf-43f3-a024-fa06e1bd9fc2.png

Item	Description
Firmware Update	Update firmware.
Factory Reset	Restore default ports settings and default network configuration.
Reboot	Reboot the device.

Firmware update

The device firmware update must not be interrupted. Update the device only if experiencing issues, being instructed to do so by our support or requiring the latest features/bugfixes. Failure during the update may 'brick' the device and make it unusable.

71859a06-2f70-4920-be81-0d60bb5e451e.png

> Use the **wire-city-esp32.fir** file for a firmware update.

Factory reset

To restore default settings, press the "Factory Reset" button. After that, user will be asked to type "RESET". Then it will take a few seconds to reload the web page and restart the device.

c9d4ee5e-9727-4033-9a9f-12538328efb2.png

Info page

This page contains basic information about the device.

1a9460c1-8535-4837-9f71-c1b91c86eece.png

Configuration by the Telnet Console

RemoteCOM (C20 - C25)

The device can be also configured via the Telnet Console. Firstly, make sure that converter is connected to the power supply and to the LAN using a patch cord. Knowledge of the device's IP address (default is **192.168.100.100**) and Telnet port number (default is **23**) is necessary to establish a connection.

Use command below in a terminal window to connect to the device:

```
telnet <ip_address> <port_number>
```

If the connection is successful there will be a login prompt visible. Log in using user's personal credentials or the default login details (login: **admin**, password: **admin123**). If login is successful, it will be possible to start typing configuration commands.

0e6873d5-31dd-4050-9c0b-e87fcaa271e4.png

> The configuration is available only if devices are connected to the same Local Area Network as the computer used for it.

List of all commands

Command	Description
help	Print the help.
conn	Print active TCP connections.
eth_mac	Print or change MAC address.
exit	Close current CLI session.
http_port	Print or change default http port.
ipconfig	Print or change the network configuration.

Command	Description
net_stat	Print lwIP statistics.
ping	Check internet connection with the desired host.
restart	Restart the system.
reboot	Same as restart.
sys_heap_usage	Print current heap usage.
telnet_port	Print or change default telnet port.
uart	Print or change uart configuration.
uart_service	Print or change uart_service configuration.
user	Print or change user configuration.

Ports configuration commands

In terms of ports configuration it is possible to change parameters like: service, baud rate, data bits, parity, stop bits and so on. UART commands are provided below.

- **uart**
  - **uart help**
    Print the help message.

  - **uart list**
    List available uarts in the system.

    Example:
    uart list
    0: baud: 9600 bits: 8 stop_bits: 1 parity: none (service console)
    1: baud: 115200 bits: 8 stop_bits: 2 parity: odd (covered by cons.)
    2: baud: 9600 bits: 8 stop_bits: 1 parity: none
    3: baud: 1200 bits: 8 stop_bits: 2 parity: even termination: ON (R-COM)
    3: baud: 38400 bits: 8 stop_bits: 2 parity: none termination: OFF

  - **uart PORT_NUMBER baud BAUD**
    Set PORT_NUMBER baudrate to BAUD. BAUD value can be one of the following:
    2400, 4800, 9600, 14400, 19200, 38400, 57600, 115200.

    Example:
    uart 1 baud 9600

    WARNING: UART covered by console. Changes will take place after the reset.

  - **uart PORT_NUMBER bits BITS**
    Set bit length to BITS. BITS value can be one only 8.

Example:
uart 2 bits 8

- **uart PORT_NUMBER stop_bits STOP_BITS**
  Set stop_bits length to STOP_BITS. STOP_BITS value can be only 1 or 2.

  Example:
  uart 2 stop_bits 1

- **uart PORT_NUMBER parity PARITY**
  Set uart parity to PARITY. PARITY value can be one of the following: none, odd, even.

  Example:
  uart 3 parity even

- **uart PORT_NUMBER termination STATE**
  Set uart termination to new STATE. STATE can be only ON or OFF.

  Example:
  uart 3 termination ON

- **uart_service**
  - **uart_service help**
    Print the help message.

  - **uart_service list**
    List of uarts services status.

    Example:
    uart_service list
    1 state: ON service: Remote COM port: 1504 enc: YES
    2 state: OFF service: TCP Socket port: 1510
    3 state: OFF service: UDP Socket port: 1510

  - **uart_service UART_NUMBER state STATE**
    Set UART_NUMBER state to STATE. STATE value can be only ON or OFF.

    Example:
    uart_service 1 state ON

- **uart_service UART_NUMBER service SERVICE**
  Set UART_NUMBER service to SERVICE. SERVICE value can be one of the
  following: Remote COM, TCP Socket, UDP Socket.

  Example:
  uart_service 1 service TCP Socket

- **uart_service UART_NUMBER port PORT_NUMBER**
  Set UART_NUMBER port to PORT_NUMBER. PORT_NUMBER value can be any in
  the range: 1-65535.

  Example:
  uart_service 1 port 1501

- **uart_service UART_NUMBER enc ENC_STATE**
  Set UART_NUMBER encryption to ENC_STATE. ENC_STATE can be only YES or
  NO.

  Example:
  uart_service 1 enc YES

  If ENC_STATE is YES then it will ask for a new password for encryption.

Network settings

The following commands might be helpful to change network settings according to target LAN
parameters.

- **ipconfig**
  - **ipconfig addr ADDRESS**
    Set IP address to ADDRESS.

    Example:
    ipconfig addr 192.168.0.10

  - **ipconfig mask NETMASK**
    Set subnet mask to NETMASK (in dot-decimal format).

    Example:
    ipconfig mask 255.255.255.0

  - **ipconfig mask BIT_COUNT**
    Set subnet mask to BIT_COUNT bits.

    Example:

ipconfig mask 24

- **ipconfig gateway GATEWAY_IP**
  Set network gateway to GATEWAY_IP.

  Example:
  ipconfig gateway 192.168.0.1

- **ipconfig dhcp enable/disable**
  Enable or disable DHCP client.

  Example:
  ipconfig dhcp enable

- **ipconfig dns1 ADDRESS**
  Set primary DNS to ADDRESS, disable getting DNS from DHCP if enabled.

  Example:
  ipconfig dns1 192.168.100.1

- **ipconfig dns2 ADDRESS**
  Set secondary DNS to ADDRESS, disable getting DNS from DHCP if enabled.

  Example:
  ipconfig dns2 1.1.1.1

- **eth_mac**
  - **eth_mac help**
    Print the help message.

  - **eth_mac default**
    Set device's MAC address to factory-default one.

  - **eth_mac set MAC_ADDR**
    Set device's MAC address to MAC_ADDR. Accepts both dash and colon-separated formats.

    Example:
    eth_mac set 01-02-03-04-05-06

    Example:
    eth_mac set 01:02:03:04:05:06

- **http_port**
  - **http_port help**

Print the help message.

- ○ **http_port PORT_NUMBER**
  Set http port to PORT_NUMBER. A PORT_NUMBER value must be in range: 1-65535.

  Example:
  http_port 80

- ○ **http_port status**
  Print current http port.

  Example:
  http_port status
  A current http port is 80

- **telnet_port**
  - ○ **telnet_port help**
    Print the help message.

  - ○ **telnet_port PORT_NUMBER**
    Set Telnet port to PORT_NUMBER. A PORT_NUMBER value must be in range: 1-65535.

    Example:
    telnet_port 23

  - ○ **telnet_port status**
    Print current Telnet port.

    Example:
    telnet_port status
    A current telnet port is 23

Changing username or password

To change username or password, use user command. Available commands:

- **user help**
  Print the help message.

- **user mod_name USER_NAME NEW_NAME**
  Change the user name to NEW_NAME. It fails if the name is used by another user.

  Example:
  user mod_name admin john

- **user passwd USER_NAME**
  Change USER_NAME's password.

  Example:
  user passwd admin
  ****** <- here is entered password, but '*' appears instead

  Note: Everyone can change the password for themselves.

Additional notes

After some time of inactivity, session will be disconnected automatically.

In order to avoid issues like connecting to the host, type "help" to get more information.

To get more details about every particular command, append "help" after each commands (example: "ipconfig help").

Factory reset is not available from the Telnet Console level.

Configuration by the Serial Console

RemoteCOM (C20 - C25)

Another way to configure the device is via a serial console. In case of the C20 - C22 Ethernet Converters an additional USB/UART converter is needed.

Procedure to enter serial console mode on C20 - C22

- Turn off the power of the device.
- Connect the PC to the C1 micro-USB port of Ethernet converter using the dedicated USB/UART converter.
- Open the serial console (default baud rate is 115200 bps).
- Press and hold the S1 button (or connect Din pin to GND pin if the button is not mounted).
- Turn on the power and wait a few seconds until the orange LED lights up.
- Release the button (or disconnect Din pin from GND pin).

Procedure to enter serial console mode on C23 - C25

- Install STM32 Virtual COM Port Driver.
- Turn off the power of the device.
- Connect the PC to the C1 micro-USB port using the USB cable (or use the dedicated USB/UART converter).
- Open the serial console (default baud rate is 115200 bps).
- Press and hold the S1 button.
- Turn on the power and wait a few seconds until the yellow CN LED lights up.
- Release the button (or disconnect Din pin from GND pin).

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image not found or type unknown

List of all commands

Command	Description
help	Print the help.

Command	Description
conn	Print active TCP connections.
eth_mac	Print or change MAC address.
exit	Close current CLI session.
http_port	Print or change default http port.
ipconfig	Print or change the network configuration.
net_stat	Print lwIP statistics.
ping	Check internet connection with the desired host.
restart	Restart the system.
reboot	Same as restart.
sys_heap_usage	Print current heap usage.
telnet_port	Print or change default telnet port.
uart	Print or change uart configuration.
uart_service	Print or change uart_service configuration.
user	Print or change user configuration.

Ports configuration commands

In terms of ports configuration it is possible to change parameters like: service, baud rate, data bits, parity, stop bits and so on. UART commands are provided below.

- **uart**
  - **uart help**
    Print the help message.

  - **uart list**
    List available uarts in the system.

    Example:
    uart list
    0: baud: 9600 bits: 8 stop_bits: 1 parity: none (service console)
    1: baud: 115200 bits: 8 stop_bits: 2 parity: odd (covered by cons.)
    2: baud: 9600 bits: 8 stop_bits: 1 parity: none
    3: baud: 1200 bits: 8 stop_bits: 2 parity: even termination: ON (R-COM)
    3: baud: 38400 bits: 8 stop_bits: 2 parity: none termination: OFF

  - **uart PORT_NUMBER baud BAUD**
    Set PORT_NUMBER baudrate to BAUD. BAUD value can be one of the following:
    2400, 4800, 9600, 14400, 19200, 38400, 57600, 115200.

Example:
uart 1 baud 9600

WARNING: UART covered by console. Changes will take place after the reset.

○ **uart PORT_NUMBER bits BITS**
Set bit length to BITS. BITS value can be one only 8.

Example:
uart 2 bits 8

○ **uart PORT_NUMBER stop_bits STOP_BITS**
Set stop_bits length to STOP_BITS. STOP_BITS value can be only 1 or 2.

Example:
uart 2 stop_bits 1

○ **uart PORT_NUMBER parity PARITY**
Set uart parity to PARITY. PARITY value can be one of the following: none, odd, even.

Example:
uart 3 parity even

○ **uart PORT_NUMBER termination STATE**
Set uart termination to new STATE. STATE can be only ON or OFF.

Example:
uart 3 termination ON

- **uart_service**
    ○ **uart_service help**
    Print the help message.

    ○ **uart_service list**
    List of uarts services status.

    Example:
    uart_service list
    1 state: ON service: Remote COM port: 1504 enc: YES
    2 state: OFF service: TCP Socket port: 1510
    3 state: OFF service: UDP Socket port: 1510

    ○ **uart_service UART_NUMBER state STATE**
    Set UART_NUMBER state to STATE. STATE value can be only ON or OFF.

    Example:

uart_service 1 state ON

- **uart_service UART_NUMBER service SERVICE**
  Set UART_NUMBER service to SERVICE. SERVICE value can be one of the following: Remote COM, TCP Socket, UDP Socket.

  Example:
  uart_service 1 service TCP Socket

- **uart_service UART_NUMBER port PORT_NUMBER**
  Set UART_NUMBER port to PORT_NUMBER. PORT_NUMBER value can be any in the range: 1-65535.

  Example:
  uart_service 1 port 1501

- **uart_service UART_NUMBER enc ENC_STATE**
  Set UART_NUMBER encryption to ENC_STATE. ENC_STATE can be only YES or NO.

  Example:
  uart_service 1 enc YES

  If ENC_STATE is YES then it will ask for a new password for encryption.

Network settings

The following commands might be helpful to change network settings according to target LAN parameters.

- **ipconfig**
  - **ipconfig addr ADDRESS**
    Set IP address to ADDRESS.

    Example:
    ipconfig addr 192.168.0.10

  - **ipconfig mask NETMASK**
    Set subnet mask to NETMASK (in dot-decimal format).

    Example:
    ipconfig mask 255.255.255.0

  - **ipconfig mask BIT_COUNT**
    Set subnet mask to BIT_COUNT bits.

Example:
ipconfig mask 24

- **ipconfig gateway GATEWAY_IP**
  Set network gateway to GATEWAY_IP.

  Example:
  ipconfig gateway 192.168.0.1

- **ipconfig dhcp enable/disable**
  Enable or disable DHCP client.

  Example:
  ipconfig dhcp enable

- **ipconfig dns1 ADDRESS**
  Set primary DNS to ADDRESS, disable getting DNS from DHCP if enabled.

  Example:
  ipconfig dns1 192.168.100.1

- **ipconfig dns2 ADDRESS**
  Set secondary DNS to ADDRESS, disable getting DNS from DHCP if enabled.

  Example:
  ipconfig dns2 1.1.1.1

- **eth_mac**
  - **eth_mac help**
    Print the help message.

  - **eth_mac default**
    Set device's MAC address to factory-default one.

  - **eth_mac set MAC_ADDR**
    Set device's MAC address to MAC_ADDR. Accepts both dash and colon-separated formats.

    Example:
    eth_mac set 01-02-03-04-05-06

    Example:
    eth_mac set 01:02:03:04:05:06

- **http_port**

- **http_port help**
  Print the help message.

- **http_port PORT_NUMBER**
  Set http port to PORT_NUMBER. A PORT_NUMBER value must be in range: 1-65535.

  Example:
  http_port 80

- **http_port status**
  Print current http port.

  Example:
  http_port status
  A current http port is 80

- **telnet_port**
  - **telnet_port help**
    Print the help message.

  - **telnet_port PORT_NUMBER**
    Set Telnet port to PORT_NUMBER. A PORT_NUMBER value must be in range: 1-65535.

    Example:
    telnet_port 23

  - **telnet_port status**
    Print current Telnet port.

    Example:
    telnet_port status
    A current telnet port is 23

Changing username or password

To change username or password, use user command. Available commands:

- **user help**
  Print the help message.

- **user mod_name USER_NAME NEW_NAME**
  Change the user name to NEW_NAME. It fails if the name is used by another user.

  Example:
  user mod_name admin john

- **user passwd USER_NAME**
  Change USER_NAME's password.

  Example:
  user passwd admin
  ****** <- here is entered password, but '*' appears instead

  Note: Everyone can change the password for themselves.

Service mode

Procedure to enter service mode for C20 - C22 converters

- Turn off the power of the device.
- Connect Ethernet converter to the dedicated USB/UART converter via the microUSB port.
- Connect the USB/UART converter to the PC.
- Open the serial console (default baud rate is 115200 bps).
- Press and hold the S1 button.
- Turn on the power.
- Wait until the ST indicator (red LED) lights up.
- Release the S1 button.
- If the process is successful, service commands can be typed into the terminal.

Procedure to enter service mode for C23 - C25 converters

- Install STM32 Virtual COM Port Driver (if it was not done before).
- Turn off the power of the device.
- Connect Ethernet converter directly to the PC (the dedicated USB/UART converter is not obligatory).
- Open the serial console (default baud rate is 115200 bps).
- Press and hold the S1 button.
- Turn on the power.
- Wait until the ST indicator (red LED) lights up.
- Release the S1 button.
- If the process is successful, service commands can be typed into the terminal.

List of commands in the service mode

Command	Description
help	Print the help.
credits	Print current credits value for this device.
dev_ident	Print the device identification value.
restart	Restart the system.
serial_num	Print the serial number of this device.
version	Display the bootloader version.
xmodem	Download image to the internal flash using xmodem.
defaults	Reset application variables to defaults.
ipconfig	Print or change the network configuration.
flash_read	Read bytes from flash memory.
md	Read bytes from memory address.

In the service mode, the "ipconfig" command can only show a last static IP address.

Factory reset

To restore default settings, type "defaults". After that, user will be asked to type "default network" to reset the network settings as well. Then user will be informed if the process is successful.

Additional notes

In order to avoid issues like connecting to host, type "help" to get more information.

To get more details about every particular command, append "help" after each commands (example: "ipconfig help").

Redisage Configurator

RemoteCOM (C20 - C25)

Redisage Configurator is an app used to emulate connection between converter and a PC as if its RS232/RS485 ports would be connected directly to the COM port. The advantage of that functionality is lack of additional cables. Transmission can be tested over Ethernet. First connect the device to a local network using the Ethernet port and power it up. During the configuration process set "Service" to the RemoteCOM option on the "Ports" page.

> While changing port service from RemoteCOM to TCP/UDP Socket make sure to disable RemoteCOM virtual port in the Redisage Configurator first.

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Redisage VSP Driver

In order for Redisage Configurator to work properly, it is necessary to install the Redisage VSP Driver. It can be done with RedisageVSPDriver.Installer available for Windows.

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Redisage Configurator

When the device is configured open the Redisage Configurator app.

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Use the "Add Device" button to set up a new connection with a device. On the right side there should be a list of available devices visible. Choose one of them or specify a custom COM port number, an IP address and a service port number.

> While specifying a custom virtual COM make sure to use the same IP address and service port as set earlier in the port configuration.

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In order to establish a connection with a desired device use the "Enable" button. To end the connection use the "Disable" button. Service IP/hostname, service port and password can be modified at any time. There are also available 2 options of the encryption methods (none (disabled) or strong (AES-GCM 128-bit, Argon2)) and 5 options of the connection timeout (brief, short, fair, modest or lengthy). Changes have to be saved with "Save Changes" button.

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There is also the "Settings" tab at the top of the window from where the Logging Directory or the Device Manager can be opened.

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If everything is connected properly there should be a new COM port available in the Device Manager. It is also possible to check it, for example, on the web page.

> If any change is made to the port configuration, make sure to apply it with the "Save Changes" button.

Troubleshooting

If a discovered device cannot be added, check if it hadn't been added before with a different COM port / service port. In that case, delete previous configuration from the Redisage Configurator.

If that won't work, check if the port service was configured correctly for the RemoteCOM Service.

FAQ

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How to obtain an IP address of the device?

The default static IP address of the device is **192.168.100.100**. However, if the DHCP option is set, it will be necessary to obtain the IP address from a local network. First of all, connect the device to the local network (for example via a network switch). The easiest way to find the IP address of the device is via the Serial Console. After a successful login use "ipconfig" command to print all the information about the Ethernet connection. The IP address should be shown there.

How to recover an access to the device after the password was lost?

The only option to reset the user's password is to do a hard reset via the service mode in the Service Console. To restore default settings, including login and password, type "defaults" in the terminal. Now the default credentials are:

- login: **admin**
- password: **admin123**

I cannot set up the virtual COM through the Redisage Configurator app. What should I do?

If in the Redisage Configurator a discovered device cannot be added, check if it hadn't been added before with a different COM port / service port. In that case, delete previous configuration from the Redisage Configurator. If that won't work, check if the port service was configured correctly for the RemoteCOM Service.

How to check if the device is configured correctly?

The device's status can be checked on the "Status" page of the configuration website. If a connection with the device is established, there should be a corresponded label visible ("Server is starting…", "Waiting for connection" or "Client connected!").