# Tables

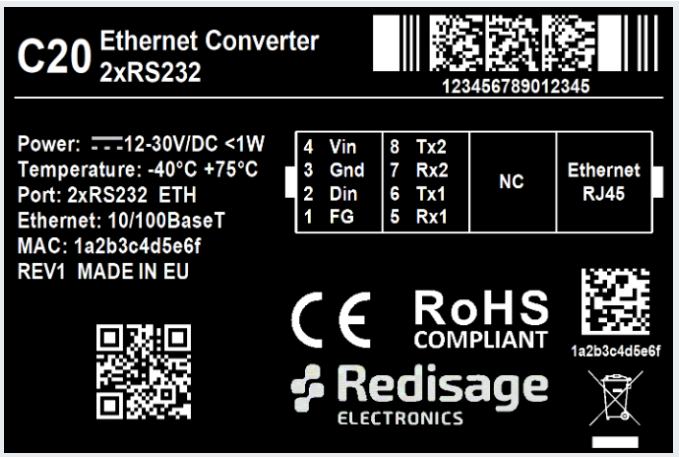
## Specifications

| 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 | | | | | |
| 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 | | | | | |

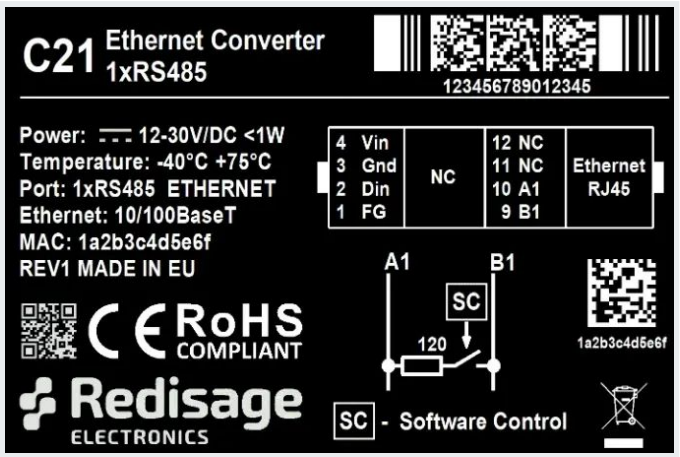
| Redisage PN | | C20 | C21 | C22 | C23 | C24 | C25 |
|---|---|---|---|---|---|---|---|
| Transmission distance | RS485 | max. 1,200 m at 9.6 kbps; max. 400 m at 115.2 kbps (Belden 9841 2P twisted-pair cable, if different cables are used, the transmission distance may change) | | | | | |
| | RS232 | 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, EMC, LVD | | | | | |
| Norms | | 61000-6-2 - Immunity standard for industrial environments<br>61000-6-4 - Emission standard for industrial environments | | | | | |

# Pin assignments

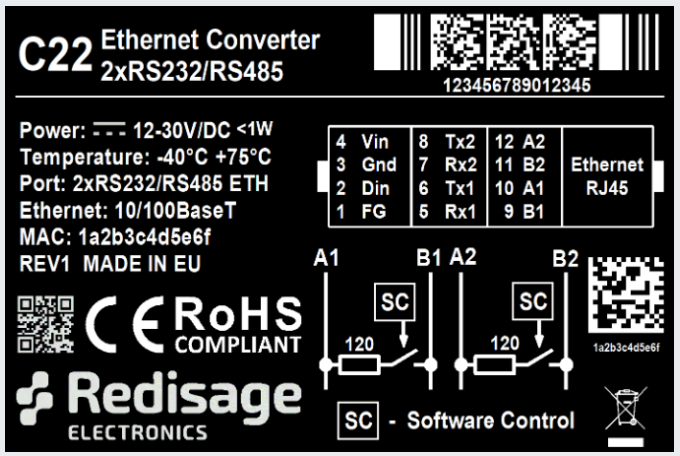
**C20**



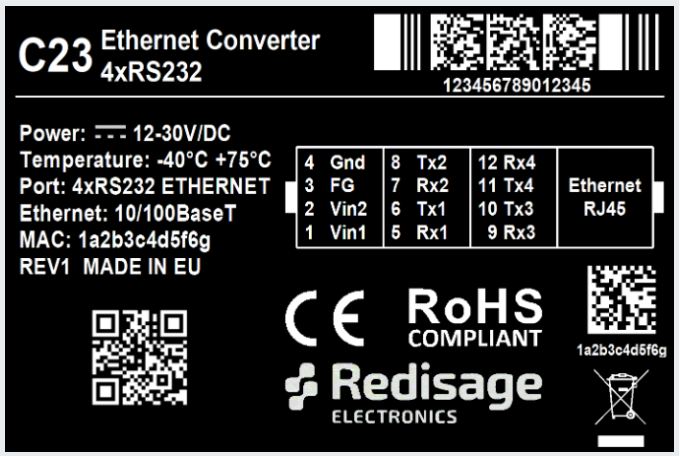

**C21**



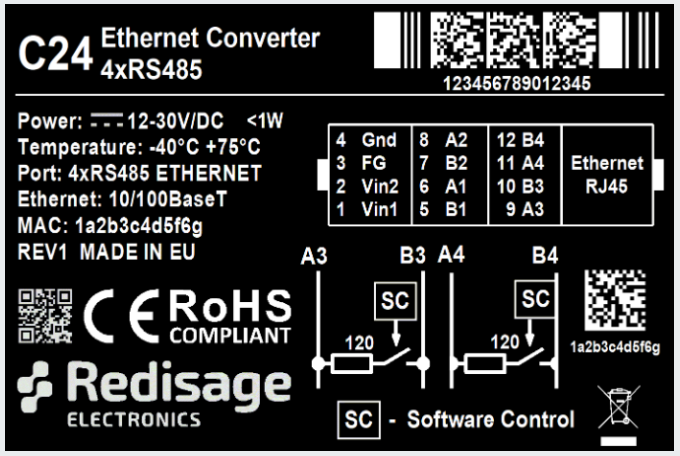
C22



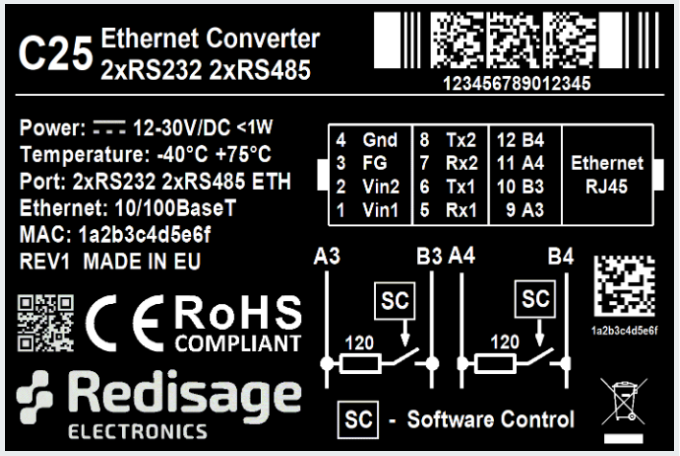

C23




C24




C25




# Configuration by the Web Page

## Ports page

| 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 | |

| Item | Description |
| --- | --- |
| 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. |
| 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. |

| Item | Description |
| --- | --- |
| 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. |

# Network page

| Item | Description |
| --- | --- |
| 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. |
| 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. |
| 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. |

# Device page

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

# Configuration by the Serial Console

## 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. |
| net_hostname | Print or change the hostname. |
| udp_broadcast | Print or turns the UDP broadcast on or off. |
| net_stat | Print lwIP statistics. |
| ping | Check internet connection with the desired host. |
| defaults | Reset application variables to defaults. |
| 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. |

## 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.

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