VS Vision Systems GmbH / Part Number 613

Model Information

## Main Features

- USB 2.0 to 8 x RS232/422/485
- High-Speed serial ports 921.6kbps
- Driver for Windows, Linux, Mac OS X
- LEDs for Power and TxD/RxD activity
- ESD protection on USB and serial ports
- 2.5kV electrical isolation (ISO version only)
- Self powered
- Wide range of power input 9 - 54V DC
- Metal housing
- 19-inch rack and wall mounts
- Wide range of operating temperatures

Contact Online...

# USB-8COM Plus ISO

## (USB-8COM-PRO, USB-8COMi-RM)

**Quick Link:** | Main Features | More Pictures | Overview | USB Interface | Serial Interface | Serial Port Expansion | Software | Power Requirement | Housing and Mounting | Environmental Data | Standards and Certifications | MTBF (Mean Time Between Failures) | Warranty | Ordering Information | Options | Packaging |

## More Pictures






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## Overview

The USB-8COM Plus provides easy serial port expansion over USB 2.0 connecting to high speed RS232 or RS422/485 devices. The device is fully ESD and surge protected, bus powered and accommodated in a ruggedized metal housing. Furthermore, it can operate across a large range of temperature levels to cope with harsh operating conditions. The ISO version is 2.5kV electrically isolated to withstand unbalanced ground loops that arise in hazardous industrial environment. Lastly, both DIN-Rail and wall-mounting options are available.

### Flexible Three-Way Serial Ports

The serial ports allow different operating modes — which are easily configured via a single DIP switch — to fully support RS232, RS422 and RS485 protocols. The operating mode of serial ports chosen via DIP switch is either same for all ports or individually for each port by "USBCOM Configuration Utility" software. The differential line termination for RS485 (120Ω) is automatically controlled by choosing the appropriate operating mode. High/Low biasing resistors are not needed; as such, hassle-free usage is guaranteed for the user.
Com Port drivers are available for Windows, Linux and Mac OS X. A configuration tool allows easy access to special Windows driver options.

### High Speed and Isolation

USB 2.0 High Speed connection allows serial data rates of up to 12Mbps for RS422/485 and 921.6kbps for RS232. Every non-standard bitrate (e.g. 500kbps) can easily be set up in the range of up to 3.5Mbps.
USB-xCOM Plus adapters are 16kV ESD and surge protected at USB and serial ports interfaces. Additionally, the serial ports are 2.5kV electrically isolated (ISO version only), making them ideal for deployment in harsh industrial environments.

**Power and Port Expansion**

Multiple USB-xCOM Plus devices can be concatenated via the USB Type A at the rear side, creating up to 32 serial ports. In concatenated configuration, the local power input of each expansion module must be used.
USB-xCOM Plus 4 and 8 ports adapters can also be used to expand the serial ports for NetCom Plus Servers (4 and 8 ports).

## USB Interface

| | |
|---|---|
| **USB-Input** | USB 2.0 High Speed, USB 1.1 compliant |
| **Connector** | USB type B |
| **Circuits** | FTDI FT4232H<br>Genesys GL850G |

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## Serial Interface

| | |
|---|---|
| **No. of Ports/Type** | 8 x RS232/422/485 configurable by DIP switch and software |
| **Connector** | DB-9 male |
| **Protection** | • 16kV ESD surge protection<br>• 2.5kV Electrical isolation on ISO version |
| **Operating Modes** | • RS232<br>• RS422 full duplex (120Ω on/off)<br>• RS485 4 wire, full duplex (120Ω on/off)<br>• RS485 2 wire, half duplex (120Ω on/off) |
| **Configuration** | The single DIP switch at rear side configures all ports in the same operating mode or individually via software:<br>• Windows: using "VScom USB Configurator" Utility<br>• All OS: using Terminal emulation<br>The operating mode controls termination.<br>No High/Low biasing resistors needed |
| **Signals non-ISO** | • RS232: TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND<br>• RS422: Tx+/-, Rx+/-, GND<br>• RS485 4-wire: Tx+/-, Rx+/-, GND<br>• RS485 2-wire: Data+/-, GND |
| **Signals ISO** | • RS232: TxD, RxD, RTS, CTS, GND<br>• RS422: Tx+/-, Rx+/-, GND<br>• RS485 4-wire: Tx+/-, Rx+/-, GND<br>• RS485 2-wire: Data+/-, GND<br>All signals isolated for 2.5kV |
| **RS485 Data Direction Control** | ARTc (Automatic Receive Transmit control) |
| **Data Bits** | 7, 8 |
| **Stop Bits** | 1, 2 |
| **Parity** | None, Even, Odd, Mark, Space |
| **Flow Control** | RTS/CTS, XON/XOFF |
| **Baudrate** | • RS232: 180bps - 921.6/1000kbps<br>• RS422: up to 12Mbps<br>• RS485: up to 12Mbps |
| **LEDs** | TxD/RxD for each port |

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## Serial Port Expansion

| | |
|---|---|
| **Connector** | USB 2.0 High Speed type A, 500mA @5V at rear side |
| **Expansion Ports** | connect USB-xCOM Plus to add more serial ports, also electrically isolated |

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## Software

| | |
|---|---|
| **Drivers** | • Windows 2000 to Windows 10 (x86 and x64)<br>• Windows Server 2000 to 2016 (x86 and x64)<br>• Linux (Kernel 3.4 and later built-in)<br>• Mac OS X |
| **Installation** | The driver is already installed (Linux), or installs by automatic Download after Device connection (Windows). |

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## Power Requirement

| | |
|---|---|
| **Input Voltage** | • 5V (USB)<br>• 9-54V Dcin |
| **Power consumption USB-8COM Plus** | • Bus powered: 5V 600mA via USB<br>• Self powered: DCin 9 - 54V, 5W + 3W for Port Expansion |
| **Power consumption USB-8COM Plus ISO** | • Bus powered: not available<br>• Self powered: DCin 9 - 54V, 6W + 3W for Port Expansion |
| **Port Expansion** | DCin supply is compulsory to support Port Expansion. |
| **Connector** | • Bus powered: USB Type B, no external supply<br>• Self powered: 3-Pin Terminal Block |

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## Housing and Mounting

| | |
|---|---|
| **Case** | 0.8mm sheet metal |
| **Weight** | 0.9kg, w/h box 1.5kg |
| **Dimensions** | 196×147×44 mm³ (W×L×H) |
| **Packaged** | 310×192×60 mm³ |
| **Mounting** | • 19-inch Rack<br>• Wall mount |

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## Environmental Data

| | |
|---|---|
| **Operating Temp** | −25°C - 75°C |
| **Storage Temp** | −30°C – 85°C |
| **Ambient Humidity** | 5-95% non condensing |

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## Standards and Certifications

| | |
|---|---|
| **Declarations** | CE, FCC |
| **EMI** | • EN 55022 Class B<br>• EN 61000-3-2: Limits of harmonic current emissions<br>• EN 61000-3-3: Limitation of voltage changes<br>• 47 CFR FCC Part 15 Subpart B |
| **EMS (EN 55024)** | • EN 61000-4-3: Radiated RFI<br>• EN 61000-4-4: Electrical Fast Transient<br>• EN 61000-4-5: Surge<br>• EN 61000-4-6: Induced RFI<br>• EN 61000-4-8: Power Frequency Magnetic Field<br>• EN 61000-4-11: Power supply dips |
| **ESD** | EN 61000-4-2 4kV contact 8kV air for<br>• Serial Ports<br>• USB<br>• DCin Power connector |

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## MTBF (Mean Time Between Failures)

| | |
|---|---|
| **MTBF non-ISO** | 28.1 Years @ 25°C<br>16.2 Years @ 45°C |
| **MTBF ISO** | 18.7 Years @ 25°C<br>8.4 Years @ 45°C |
| **Standard** | Telcordia (Bellcore) Standard; RelCalc. 5.0 BELL-7 |

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## Warranty

| | |
|---|---|
| **Warranty Period** | 2 years |

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## Ordering Information

| | |
|---|---|
| **612** | USB-8COM Plus (8x RS232/422/485, non-isolated, expandable) |
| **613** | USB-8COM Plus ISO (8x RS232/422/485, isolated, expandable) |

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## Options

| | |
|---|---|
| **6031** | Power adapter 110-230V AC to 12V @1A, DC, EU plug |
| **6034** | Power adapter 110-230V AC to 12V @1A, DC, US plug |
| **663** | DB9F-to-TB/5Pins for free wiring option |
| **6061** | DB9F-to-RJ45 for changing from DB9 to CAT5 wiring<br>(Optimised for RS422/485 operating modes) |
| **6062** | RJ45-to-DB9M for changing back from CAT5 to DB9 wiring<br>(Required to match the DB9 pinout at USB-xCOM Plus) |
| **661** | Serial Null-Modem adapter 9PF-9PF, change male to female |

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## Packaging

| | |
|---|---|
| **Packing list** | • USB-8COM Plus device<br>• USB 2.0 High-Speed cable<br>• Mounting brackets for 19-inch rack<br>• Wallmount plates<br>• Terminal block for Power Supply<br>• 4 rubber feet for table mode |

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* Specifications are subject to change without notice.
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## USB-xCOM Plus back side

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## USB-COM Plus Configurator

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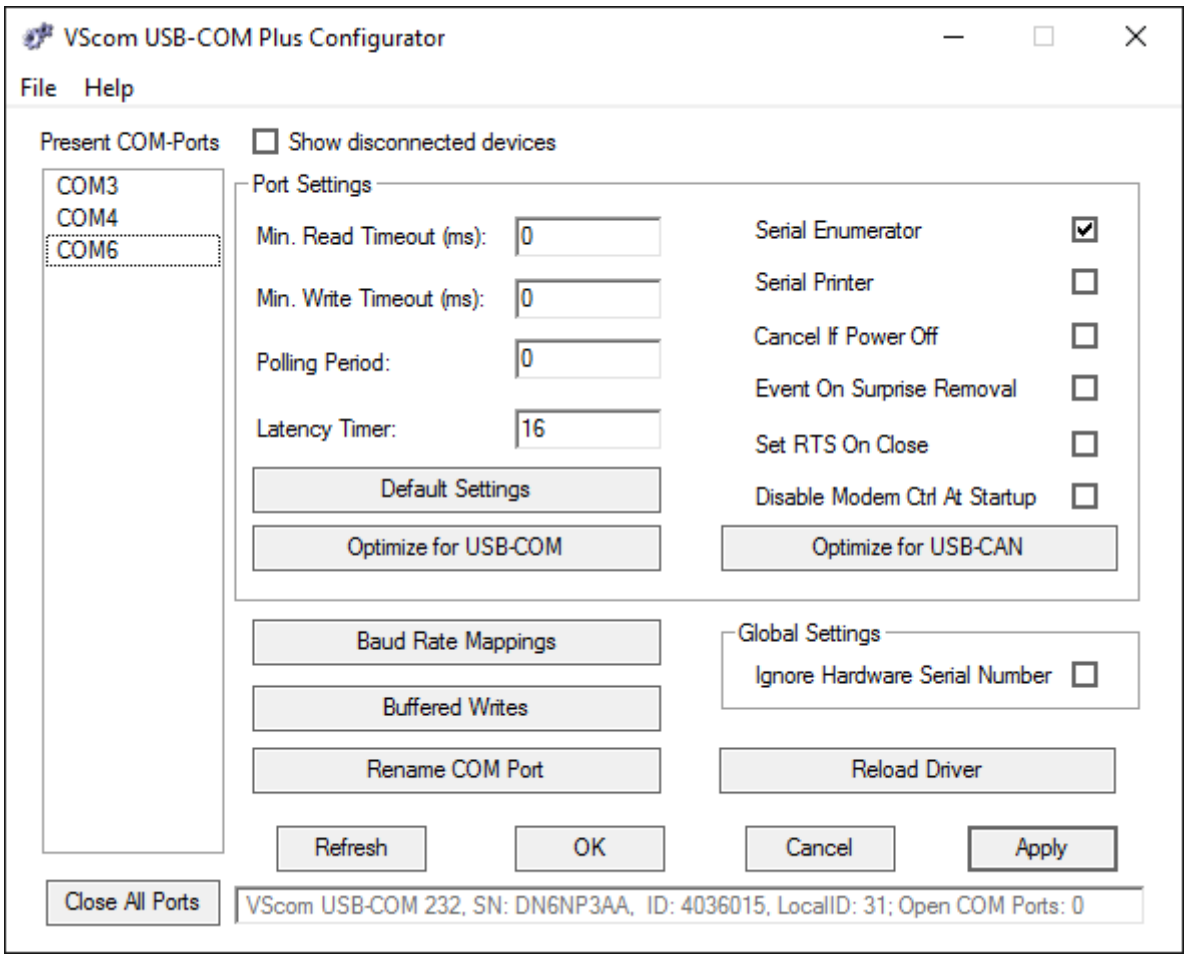


## Rackmount Kit

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## Wall Mounting Kit

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## Terminal Block Adapter

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