I-7520

**Isolated
RS-232 to RS-422/485
Converters**

Description

The I-7520 Series RS-232 to RS-422/RS-485 Converters provide a unique mix of RS-485 protocol conversion and isolation. All three models provide RS-232 to RS-485 protocol conversion at rates up to 115,200 baud. A proprietary auto tuner circuit detects the baud rate and data format automatically and controls the direction of the RS-485 circuit. This eliminates the need to control the module with the Request-to-send line as is done with some other devices. The three models give the user a choice of which side is isolated. The 7520 and 7520R drive RS-485 2-wire half-duplex lines. The Model 7520A has a RS-422/RS-485 port which can drive a full-duplex 4-wire circuit or a 2-wire half-duplex circuit.

I-7520

- Converts RS-232 to RS-485 or RS-422 signals.
  Drive long lines to RS-485 or RS-422 devices.

- Auto tuner circuit for baud rates from 300-115200 baud.
  Handles multiple data rates.

- 3000 V Isolation
  Prevents ground loops and electrical damage.

- Converts serial devices to Ethernet network
  Overcomes the two COM port limit.

- Mounts on standard DIN rail.
  Easy mounting and replacement.

- Available in 3 versions.
  Isolate either port.

CE Approved

7520 Model Selection

The primary difference between the three models is the isolated side. For the I-7520, power and ground are applied on the RS-485 side. The RS-232 side is powered by an internal DC-to-DC converter. The RS-232 transceivers are isolated from ground by 3000 Vdc.

The I-7520R is powered on the RS-232 side. The RS-485 side is powered by an internal DC-to-DC converter. The RS-485 transceivers are isolated from ground by 3000 Vdc.

The I-7520A like the I-7520 has power and ground applied on the RS-422/RS-485 side. The RS-232 side is powered by an internal DC-to-DC converter. The RS-232 transceivers are isolated from ground by 3000 Vdc.

DIN Rail Mounting

The I-7520 series Controllers mount on the industry standard DIN rail. This makes them easy to mount and to remove and replace if servicing is ever required. DIN rails are available for single units as well as for multiple modules. Each I-7520 Controller includes a single unit DIN rail.

Typical Connections

All connections are made on the plug-in screw terminal strip. The RS-232 connection requires just TxD, RxD and Ground. The RS-485 port uses just two wires for data. The RS-422/RS-485 port full-duplex connections use 4 wires. Half-duplex connections use 2 wires and jumper the TX and RX signal pairs together. The included Power Supply is connected to the powered port.

I-7520 Configurations

Model	RS-232 Port	RS-485 Port	RS-422/485 Port	Isolated Side	Display
I-7520	1	1	-	RS-232	None
I-7520R	1	1	-	RS-485	None
I-7520A	1	-	1	RS-232	None

ICSDataCom

7034 Commerce Circle
Pleasanton, CA 94588
Phone: +925.416.1000
Fax: +925.416.0105
www.icsdatacom.com

I-7520 SPECIFICATIONS

Serial Interfaces

RS-232 Interfaces are full-duplex and require just data signals

Signals	TX, RX
Baud Rates	Std Windows rates up to 115.2 kbaud
Data Bits	7 or 8 bits
Parity	None, odd or even
Stop bits	1 or 2
Flow Cntl	None

RS-485 Interface is half-duplex and includes self tuner and network protection

Signals	TX/RX pair
Baud Rates	Std Windows rates up to 115.2 kbaud.
Data Bits	7 or 8 bits
Parity	None, odd, or even
Stop bits	1 or 2
Distance	1200 M

RS-422/RS-485 Interface is full-duplex and includes self tuner and network protection

Signals	TX pair, RX pair
Baud Rates	Std Windows rates up to 115.2 kbaud.
Data Bits	7 or 8 bits
Parity	None, odd, or even
Stop bits	1 or 2
Distance	1200 M

Physical

Size
123mm x 72mm x 33 mm
(without mounting bracket)

Display
Single LED standard
5 digit LED display optional

Connectors

RS-232	DE-9 Female
RS-485 & Power	Screw terminals for 16 to 26 AWG wires. I-7520 has 2 terminals for R-485 signals, 2 terminals for power.

Temperature
Operating -25 °C to 75 °C
Storage -40 °C to 85 °C

Relative humidity
0 to 90% (not condensing)

Power consumption
2.2 W @ 10 to 30 Vdc

CE Certification

EMC Directive 89/336/EMC
Emission EN 55022
Noise immunity EN 50082-2C

Included Items

Single unit DIN rail
Manual on CD-ROM
UL/CSA/VDE approved AC power
Adapters provided for:
US - 115 ± 10% Vac, 60 Hz (std)
Europe - 230 ± 10% Vac, 50/60 Hz
UK - 230 ± 10% Vac, 60 Hz

ORDERING INFORMATION

	Part Number
Converter Module with Isolated RS-232 port	I-7520
Converter Module with Isolated RS-485 port	I-7520R
Converter Module with Isolated RS-422/RS-485 port	I-7520A
For 230 VAC adapter, add suffix to specify country/plug style) -E(Europe), -B(UK), -A(Australia) i.e. I-7520-B	