brainboxes
www.brainboxes.com

EST 1984

Microsoft GOLD CERTIFIED *Partner*

nqa. ISO 14001 Registered

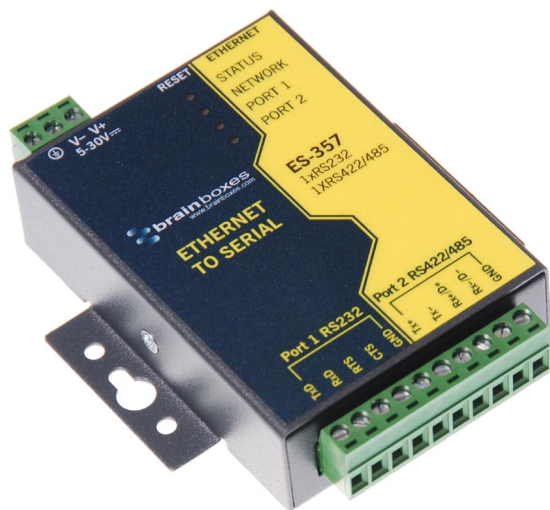nqa. ISO 9001 Registered

25th 1984~2009 Anniversary

NEW

ES-357 ETHERNET TO SERIAL DEVICE SERVER
1 PORT RS232 + 1 PORT RS422/485 - Block terminal connector
CONNECT, CONFIGURE, CONTROL YOUR SERIAL DEVICES

Description

Ethernet to Serial device server providing access to one RS232 and one RS422/485 serial port. Up to 230,400 data transfer rates, coupled with 1Mbit/s line drivers deliver uncompromising performance. Our ES range provides a simple, instant cable replacement providing network integration. RS485 - 2 wire half duplex configuration with autogating provides trouble free data transmission due to automatic control of data direction.

Windows Users - Our Boost.LAN driver gives you local COM ports, retaining existing software applications on your network and allowing you to connect over larger distances. Our ES products are simple, instant cable replacement providing network integration on Windows XP and Vista. Can install on any COM Port from COM1 to COM255 and remembers your COM Port assignment on reboots.

Web Interface Users (Linux/Apple OS/Android) - Alternatively access the device via TCP/IP socket from any networked device. Configure options via web interface.
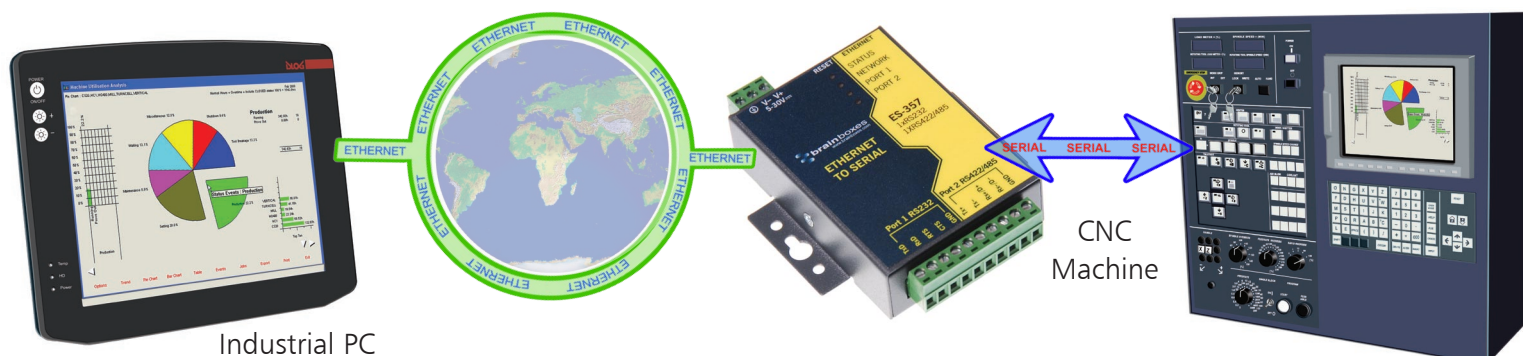
Extend your reach! Remote serial devices with local control.

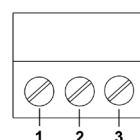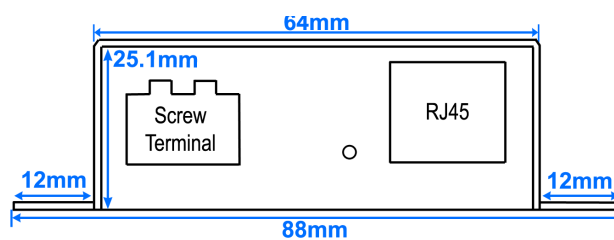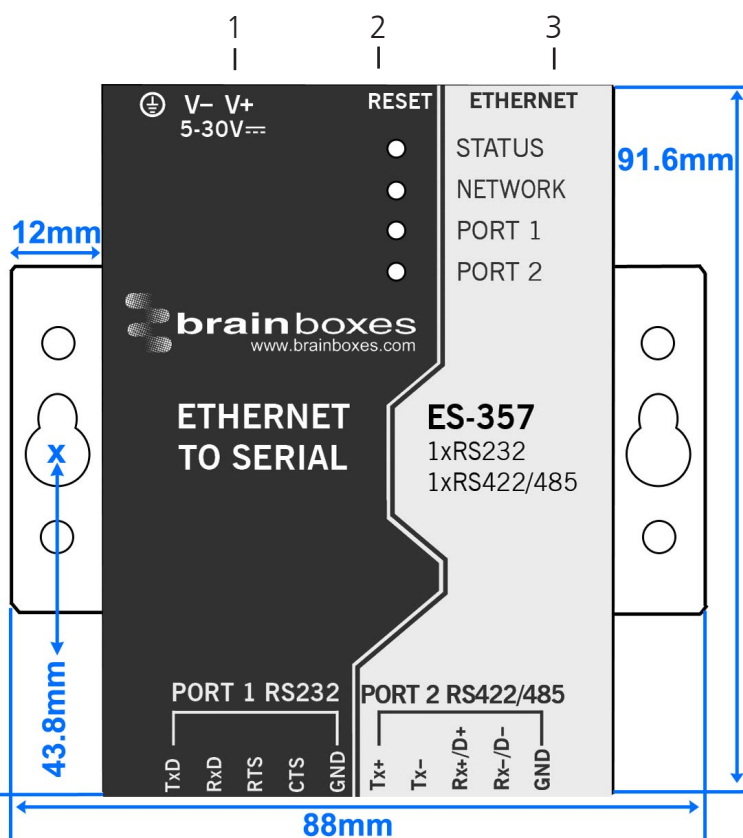With Brainboxes industry renowned Lifetime Warranty* and Lifetime Support!

Features

- Max baud rate 230,400
- 10/100Base TX Ethernet port
- User friendly interface, simple to use, powerful in operation
- Web configuration and RFC2217 compliant interface for non-Windows users
- Rugged metal enclosure
- NPort 5230 Compatible
- LED status indication
- Autogating for automatic turn around of transmit enable in RS485 half duplex mode - hassle free operation
- Optional DIN rail mounting kit
- Optional Power Supply
- Power input 5-30V DC
- Simple operation for each and every operating system!
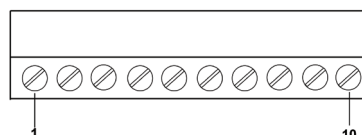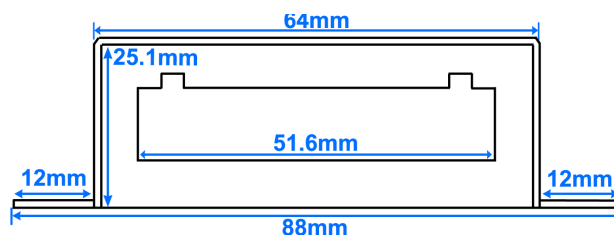
Example Application

Industrial PC

CNC Machine

Box Information

Power Connector — **Range**

Pin 1	V+	Power Supply +	5-30VDC
Pin 2	V-	Power Supply -	
Pin 3		Earth/Chassis Ground	

RS232 Port	RS422/485 Port
Pin 1 TxD	Pin 6 TxD+
Pin 2 RxD	Pin 7 TxD-
Pin 3 RTS	Pin 8 RxD+/D+
Pin 4 CTS	Pin 9 RxD-/D-
Pin 5 GND	Pin 10 GND

Key
1 - Power Input
2 - Reset button for device
3 - Ethernet port - 10/100 Mega bits/second

Box Dimensions
Size - 90x62x25 mm (not including mounting ears or connectors)
Size - 120x80x25 mm (including mounting ears or connectors)

LED Information

Status LED	Flashing Green	Device Ready
	Flashing Yellow	Changing Settings
	Flashing between Red & Green	Querying IP
	Flashing Green/Red	User performing Hard Reset
	Flashing between Green & Red/Yellow	Problem obtaining IP address
	Flashing between Green & Yellow	Problem during initialization (e.g. Firmware Problem)
Serial Port LEDs	Green light on	Port Open
	Flashing Green	Data RX / TX
Ethernet LED	Green light on	Link Established
	Flashing Green	Data RX / TX

Port

Ports	1 Port RS232 + 1 Port RS244/485
Connector	Screw terminal block connector - 0.1 inch pitch
Power Input	5 - 30V DC input, reverse polarity protected

Port Settings - RS232

Baud Rate	From 110 - 230,400
Data Bits	5, 6, 7 or 8
Parity	Odd, Even, None, Mark or Space
Stop Bits	1, 2
Flow Control	RTS/CTS, XON/XOFF

Port Settings - RS422/485

Baud Rate	From 110 - 230,400
Data Bits	5, 6, 7 or 8
Parity	Odd, Even, None, Mark or Space
Stop Bits	1, 2
Flow Control	XON/XOFF
Tx/Rx Modes	RS422 Full duplex. RS485 4 wire full duplex or 2 wire half duplex with Autogating, automatic control of data direction. They have 128 byte FIFOs, 1 MegaBoard data transfer, with on board Hardware and Software flow control.

RS422 Standard: RS422 allows one transmitter and up to 10 receivers with data transmitter rates up to 10 megabits per second for distances up to 40 feet and up to 100 Kilobits per second for distances up to 4,000 feet (1219 metres).

To achieve good long distance noise immunity, 2 wires are used to carry each signal, configured as a twisted pair of cables. The TXD pair and RXD pair are used to carry the data whilst the RTS pair and CTS pair lines are used for handshaking. Thus 2 twisted pairs are used without handshaking and 4 twisted pair cable is used with handshaking both these schemes allow full duplex data communications.

RS485 Standard: RS485, based on the RS422 standard allows up to 32 driver/receivers pairs on a standard load or 128 low load devices per port can be connected. Whilst only one of these should be transmitting data at any time, the rest can all simultaneously listen to the data. Handshaking is performed by software protocol. Two twisted pairs form a full duplex system.

Often only one twisted pair cable is used as the TXD and RXD lines are tied together; this is known as half duplex mode. Brainboxes RS422/485 products implement a state of the art hardware autogating circuit ensuring error free communications in half duplex configurations.

Port Settings - Ethernet

Data Rate	10/100 Mega bits/second
Cabling	Normal / Crossover auto-sensing (Auto-MDIX)

Product Information

Power Consumption	1.8W Max / 1.0W Typical
Product Weight	0.205kg

Environmental

Operating Temperature	0 to 55°c
Storage Temperature	-20 to 85°c
Ambient Relative Humidity	5 to 95% (non-condensing)

Software

Network Protocols	ICMP, IP, TCP, UDP, DHCP, BOOTP, Telnet, HTTP, RFC2297
Configuration Options	Windows Utility, Web Interface
OS Compatibility	Windows XP 32 & 64 bit Editions / Windows Server 2003 / Windows 2000 / Fully RFC2217 compliant Interface for other OS's & Linux
Connection to Network	Ethernet 10BaseT / 100BaseTX

Approvals

Industry Approvals	EMC: CE/FCC ROHS WEEE
Microsoft Approvals	Microsoft Certified Gold Partner
Microsoft Signed Drivers	Windows XP 32 & 64 bit Editions
	Windows Vista 32 & 64 bit Editions
	Windows 2000

Packing Information

Packaging	Installation CD including manual, Microsoft signed drivers & utilities
Device	Ethernet to Serial 1xRS232 + 1xRS422/485
Optional Extras	Power Supply - PW-644
	DIN Rail Kit - MK-048
Packaged Weight	0.305Kg
Packaged Dims	140mm x 150mm x 4mm

Product Support

Warranty	Lifetime - online registration required
Support	Lifetime Web, Email and Phone Support from fully qualified, friendly staff who work in and alongside the Product Development Team

Additional Information

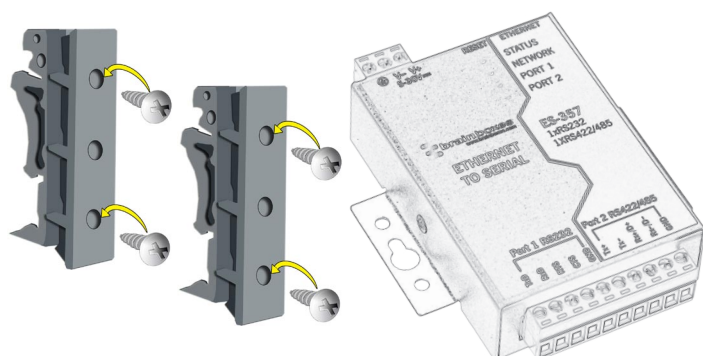|	
OEM option	Available for bulk buy OEM
Made In	Manufactured in the UK by Brainboxes Winner 2005 European Electronics Industry Awards 'Manufacturer of the Year'
Customisable	Brainboxes operate a 'Perfect Fit Custom Design' policy for volume users. More info: sales@brainboxes.com

Optional Extras

ORDER CODE - Din-Rail Mounting Kit - MK-048

ORDER CODE - Power Supply (UK) - PW-644
Power Supply (EU) - PW-611