

# ES-420 PoE ETHERNET TO SERIAL DEVICE SERVER

## Ethernet 1 Port RS422/485 Power Over Ethernet PoE

### CONNECT, CONFIGURE, CONTROL YOUR SERIAL DEVICES



#### Features

- 1 Port RS-422/485 with Power over Ethernet IEEE802.3af
- Ethernet to Serial Device Server
- Data rate from 110 to 1,000,000 baud
- User friendly interface, simple to use, powerful in operation
- Serial Port Tunnelling allows serial cable replacement over any distance, no software required
- Optional DIN rail mounting kit and stand alone power supply



#### Description

Ethernet to Serial device server with Power over Ethernet providing access to one RS422/485 serial port. Data transfer rates up to 1,000,000 baud, coupled with 1Mbit/s line drivers deliver uncompromising performance. Power over Ethernet PoE uses IEEE 802.3af standard, compatible with any PoE switch. Our ES range provides simple instant networked serial ports. RS485 - 1 twisted pair - half duplex configuration with autogating provides trouble free data transmission due to automatic control of data direction. A web interface allows secure configuration and control of the serial ports over a local network or the internet using any browser. For Windows our in-house designed 32 bit and 64 bit driver gives you local COM ports, retaining existing software applications and allowing you to connect across your network to remote devices just as if they were attached locally. Serial Port Tunnelling individually configurable allows serial cable replacement over any distance, no software required. You can access the device via TCP/IP sockets from any networked device like an Android tablet, PC or phone. On Windows OS TCP/IP sockets are handled by the Winsock API, this will differ on other OSs.

Extend your reach! Remote serial devices with local control. With Brainboxes industry renowned Lifetime Warranty and Lifetime Support!

#### Example Application

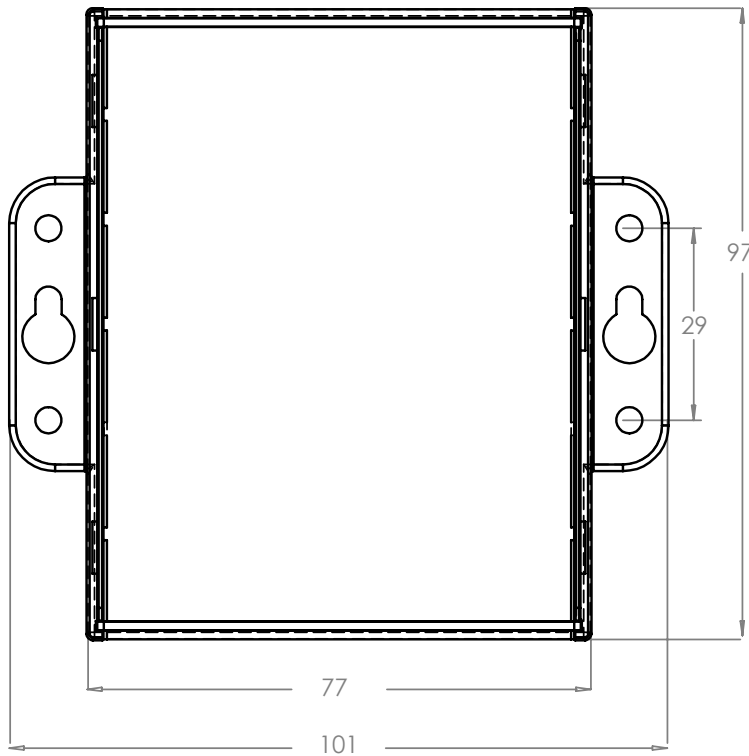


**Connect. Configure. Control**

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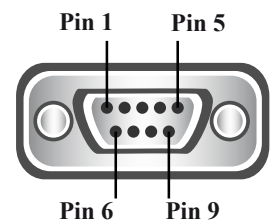
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## Box Information



|       |      |
|-------|------|
| Pin 1 | TXD- |
| Pin 2 | TXD+ |
| Pin 3 | RTS- |
| Pin 4 | RTS+ |
| Pin 5 | GND  |
| Pin 6 | RXD- |
| Pin 7 | RXD+ |
| Pin 8 | CTS  |
| Pin 9 | CTS+ |

## RS422/485 Pinout (9 Pin)



## LED Information

|                         |                                     |                            |
|-------------------------|-------------------------------------|----------------------------|
| <b>Status LED</b>       | 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 | IP address diagnostic      |
| <b>Serial Port LEDs</b> | Flashing between Green & Yellow     | Initialization diagnostic  |
|                         | Green light on                      | Port Open                  |
|                         | Flashing Green                      | Data RX / TX               |
| <b>Network LED</b>      | Green light on                      | Link Established           |
|                         | Flashing Green                      | Data RX / TX               |

## Port

|                          |                                                                     |
|--------------------------|---------------------------------------------------------------------|
| <b>Ports</b>             | 1 port RS422/485                                                    |
| <b>Connector</b>         | DB9 Connector - 9 Pin Male                                          |
| <b>Power Input</b>       | Power Over Ethernet OR 5 - 30V DC input, reverse polarity protected |
| <b>Power Consumption</b> | 1.74W                                                               |

+44(0) 151 220 2500 sales@brainboxes.com www.brainboxes.com

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## Port Settings - RS422/485

|                     |                                                           |
|---------------------|-----------------------------------------------------------|
| <b>Baud Rate</b>    | From 110 - 1,000,000 1 MegaBaud                           |
| <b>Data Bits</b>    | 5,6,7 or 8                                                |
| <b>Parity</b>       | Odd, Even, None, Mark or Space                            |
| <b>Stop Bits</b>    | 1 or 2                                                    |
| <b>Flow Control</b> | RTS/CTS, XON/XOFF                                         |
| <b>Tx/Rx Modes</b>  | Full Duplex, Half Duplex Autogating - Hardware Autogating |

## Port Settings - Ethernet

|                            |                                                                                  |
|----------------------------|----------------------------------------------------------------------------------|
| <b>Data Rate</b>           | 10/100 Mega bits/second                                                          |
| <b>Cabling</b>             | Normal / Crossover auto-sensing (Auto-MDIX)                                      |
| <b>Power over Ethernet</b> | Power Over Ethernet OR 5 - 30V DC input, reverse polarity protected IEEE 802.3af |

## Environmental

|                                  |                                       |
|----------------------------------|---------------------------------------|
| <b>Operating Temperature</b>     | 0 Â°C to +60 Â°C / 32 Â°F to +140 Â°F |
| <b>Ambient Relative Humidity</b> | 5 to 95% (non-condensing)             |
| <b>Housing</b>                   | IP-30 rated case                      |

## Software

|                               |                                                                                                                                                                                                                                                                                                                                                                       |
|-------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Network Protocols</b>      | ICMP, IP, TCP, UDP, DHCP, BOOTP, Telnet, HTTP, RFC2217                                                                                                                                                                                                                                                                                                                |
| <b>Data Transfer Protocol</b> | TCP                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Configuration Options</b>  | Windows Utility, Web Interface                                                                                                                                                                                                                                                                                                                                        |
| <b>OS Compatibility</b>       | Communicate with Device over TCP from any OS / Microsoft Windows 10 32 bit & 64 bit Editions / Microsoft Windows 8 32 bit & 64 bit Editions / Windows Server 2012 / Microsoft Windows 7 32 bit & 64 bit Editions / Windows Server 2008 32 bit & 64 bit Editions / Windows Vista 32 bit & 64 bit Editions / Fully RFC2217 compliant / Interface for other OS's & Linux |

## Approvals

|                                 |                                                                                                                                                                                  |
|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Industry Approvals</b>       | AEO C-TPAT Microsoft Certified Gold Partner WEEE RoHS EMC: CE TAA                                                                                                                |
| <b>Microsoft Approvals</b>      | Microsoft Certified Gold Partner                                                                                                                                                 |
| <b>Microsoft Signed Drivers</b> | Windows 10 32 bit & 64 bit Editions<br>Windows 8 32 bit & 64 bit Editions<br>Windows 7 32 bit & 64 bit Editions<br>Windows Server 2008<br>Windows Vista 32 bit & 64 bit Editions |



## Packing Information

|                        |                                                                                                   |
|------------------------|---------------------------------------------------------------------------------------------------|
| <b>Packaging</b>       | Quick Start Guide, Installation CD including manual, Microsoft signed drivers & utilities         |
| <b>Device</b>          | Ethernet 1 Port RS422/485 Power Over Ethernet PoE                                                 |
| <b>Accessory Items</b> | Available from Brainboxes : Optional Global Power Supply - PW-800, DIN-Rail Mounting Kit - MK-048 |
| <b>Packaged Weight</b> | 0.234 kg, 8.25 ounces                                                                             |
| <b>Packaged Dims</b>   | 160x135x45 mm, 6.3x5.3x1.8 inches                                                                 |
| <b>UPC number</b>      | 837324003734                                                                                      |

**+1 855 958 2502 sales@brainboxes.com www.brainboxes.com**

# ES-420 Ethernet 1 Port RS422/485 Power Over Ethernet PoE

## Product Support

### Warranty Support

Lifetime - online registration required

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

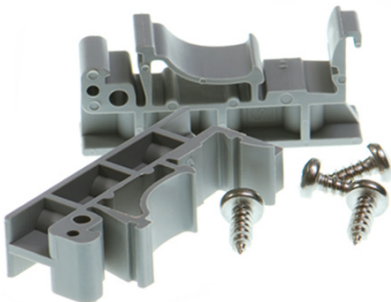
Manufactured in the UK by Brainboxes Winner 2005 European Electronics Industry Awards 'Manufacturer of the Year'

### Customisable

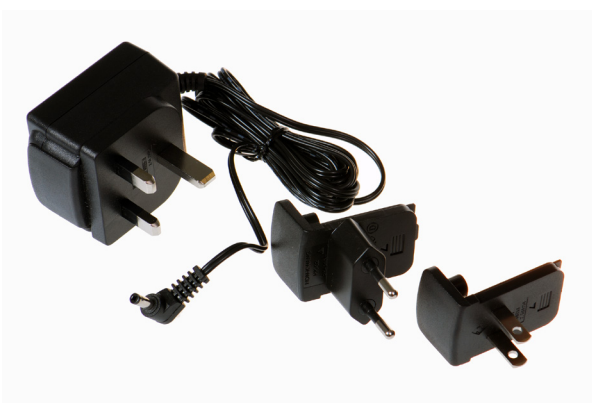
Brainboxes operate a 'Perfect Fit Custom Design' policy for volume users. More info: [sales@brainboxes.com](mailto:sales@brainboxes.com)

## Accessory Items

### ORDER CODE - DIN-Rail Mounting Kit - MK-048



### ORDER CODE - Optional Global Power Supply - PW-800



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ES France - Département Modules & Systèmes Informatiques - 127 rue de Buzenval BP 26 - 92380 Garches  
Tél. 01 47 95 99 80 - Fax. 01 47 01 16 22 - e-mail: [msi@es-france.com](mailto:msi@es-france.com) - Site Web: [www.es-france.com](http://www.es-france.com)