

Brainboxes ES-246 Ethernet to Serial Range



# Brainboxes ES-246 Ethernet to Serial Range User Guide

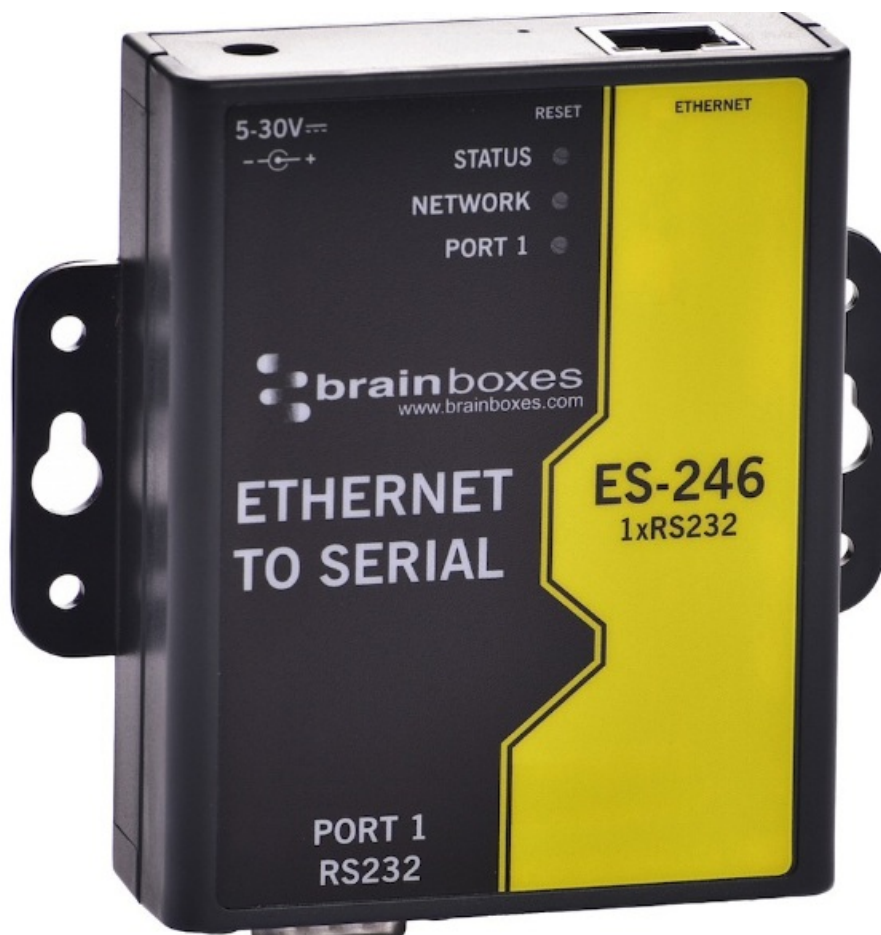
[Home](#) » [Brainboxes](#) » Brainboxes ES-246 Ethernet to Serial Range User Guide 

## Contents

- [1 Brainboxes ES-246 Ethernet to Serial Range](#)
- [2 Quick Start Guide](#)
- [3 Box Contents Check List – ES-357](#)
- [4 Hardware](#)
- [5 Network IP Addressing](#)
- [6 Connecting your ES Device](#)
- [7 Installing your ES Device on Windows](#)
- [8 Configuring your ES Device](#)
- [9 Default Settings](#)
- [10 Pin Outs](#)
- [11 LED Information](#)
- [12 Documents / Resources](#)
  - [12.1 References](#)



**Brainboxes ES-246 Ethernet to Serial Range**



## Specifications

- Product Name: Brainboxes Ethernet to Serial Range
- Model Numbers: ES-246, ES-257, ES-313, ES-320, ES-357, ES-701, ES-279, ES-346, ES-842
- Power Input: 5-30V DC
- Power Consumption: ES-357/ES-246/ES-257/ES-320 – 1.8W Max / 1.0W Typical, ES-313 – 2.6W Max / 1.2W Typical
- Network Connection: Ethernet 10BaseT / 100BaseTX

## Box Contents Check List

Make sure you have the following items in the box:

- Brainboxes Ethernet to Serial Device
- Quick Start Guide
- Product CD
- Optional Accessory Items (e.g., Power Supply, DIN Rail Kits)

## Hardware Overview

The hardware features of the Brainboxes Ethernet to Serial Device include:

- Serial Ports for connectivity
- Wall mount screw hole for easy installation
- Ethernet port for network connection (10BaseT / 100BaseTX)
- Status LEDs for monitoring

- Reset button for device reset

## Network IP Addressing

Configure the IP address settings on your ES device based on your network requirements.

## Connecting your ES Device

Connect the device to your network using an Ethernet cable and apply power to the device.

## Installing your ES Device on Windows

Install the necessary drivers and software on your Windows system to communicate with the ES device.

## Quick Start Guide

For more information, please refer to Product Manual on CD

Information on Product Accreditations, Safety, and correct disposal of this product can be found on the Product CD

Windows is a mark of Microsoft, the other marks belong to their respective owners. Brainboxes Limited. ES-QSG V2

## Box Contents Check List – ES-357



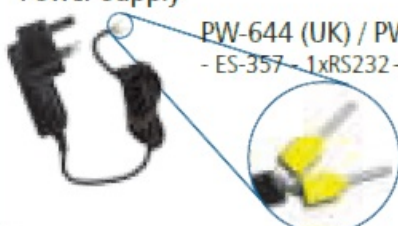
Ethernet to Serial  
Device



Quick Start Guide



Product CD

Optional Accessory Items	
<p><b>Power Supply</b></p>  <p>PW-644 (UK) / PW-611 (EU) - ES-357 - 1xRS232 + 1xRS422/485</p>	<p><b>DIN Rail Kits</b></p>  <p>MK-048            - ES-246 - 1xRS232            - ES-257 - 2xRS232            - ES-320 - 1xRS422/485            - ES-313 - 2xRS422/485            - ES-357 - 1xRS232 + 1xRS422/485</p>

Thank you for purchasing Brainboxes Ethernet to Serial product. This quick start guide will help you set up your ES device so that you can begin experiencing the benefits of Ethernet to Serial technology.



Ethernet to Serial  
Device



Quick Start Guide



Product CD



Power Supply  
PW-844 (UK) / PW-811 (EU)  
- Output: 5V CD 1.0A (5W)  
PW-544 (UK) / PW-511 (EU)  
- Output: 5V DC 3.0A (15W)

### DIN Rail Kit Optional Accessory Items



#### MK-048

- ES-246 - 1xRS232
- ES-257 - 2xRS232
- ES-320 - 1xRS422/485
- ES-313 - 2xRS422/485
- ES-357 - 1xRS232 + 1xRS422/485



#### MK-059

- ES-701 - 4xRS232
- ES-279 - 8xRS232
- ES-346 - 4xRS422/485
- ES-842 - 8xRS422/485



#### MK-070

- ES-701 - 4xRS232
- ES-279 - 8xRS232
- ES-346 - 4xRS422/485
- ES-842 - 8xRS422/485

### Optional Accessory Items

#### Power Supply



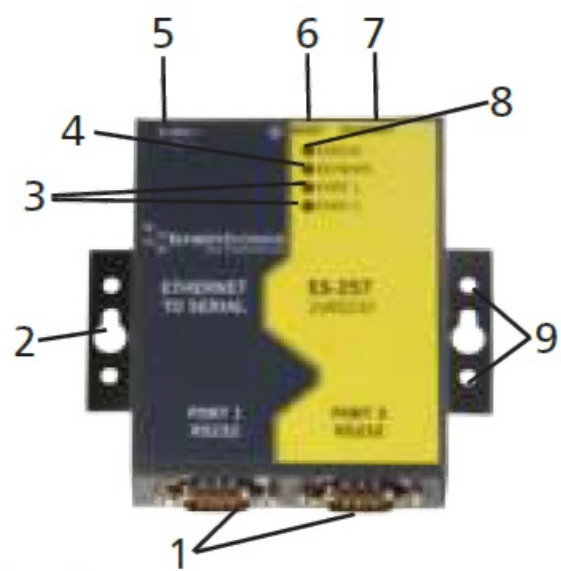
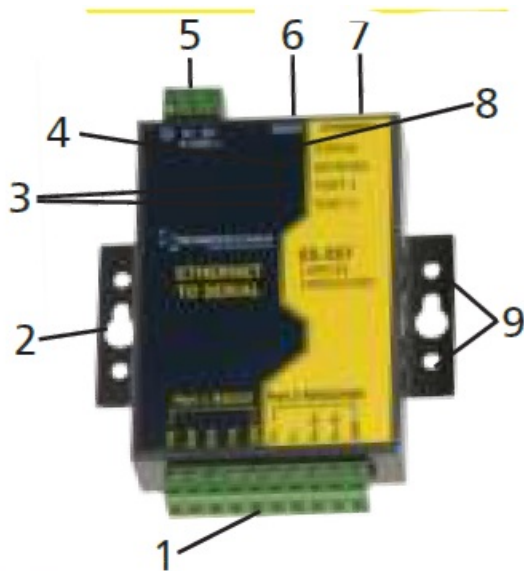
#### PW-844 (UK) / PW-811 (EU)

- ES-246 - 1xRS232
- ES-257 - 2xRS232
- ES-320 - 1xRS422/485
- ES-313 - 2xRS422/485
- ES-701 - 4xRS232
- ES-279 - 8xRS232

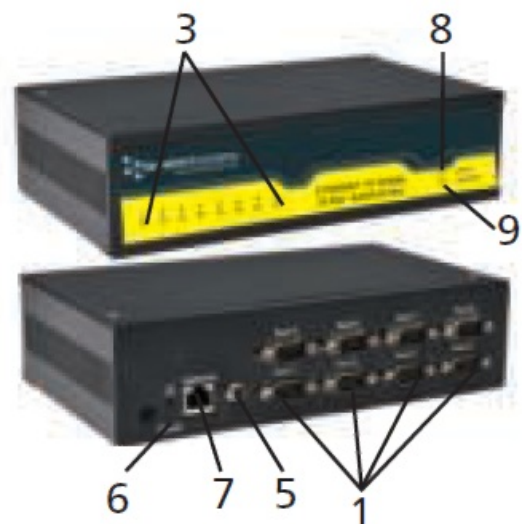
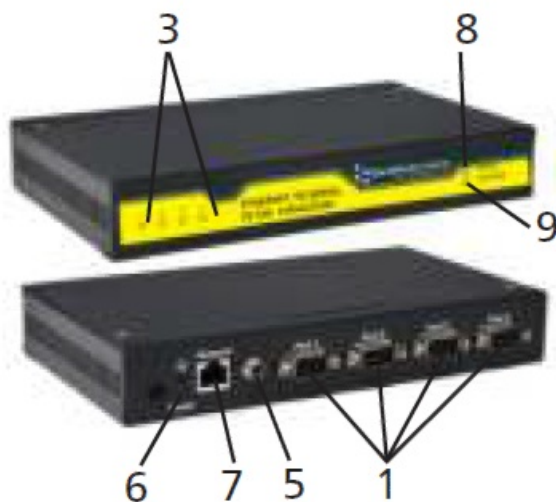
#### PW-544 (UK) / PW-511 (EU)

- ES-346 - 4xRS422/485
- ES-842 - 8xRS422/485





1.	9 Pin D Serial Port or only on ES-357 screw terminal block connection	6.	Reset button (use unfolded paperclip to press)
2.	Wall mount screw hole	7.	Ethernet port connection - 10BaseT / 100BaseTX
3.	Serial Port(s) LED	8.	Status LED
4.	Ethernet LED	9.	DIN Rail kit holes
5.	ES-357/ES-246/ES-257/ES-320 - Power Input 5-30V DC, 1.8W Max / 1.0W Typical ES-313 - Power Input 5-30V DC, 2.6W Max / 1.2W Typical		



1.	Serial Ports	6.	Reset button (use unfolded paperclip to press)
2.	Wall mount screw hole (on underneath of box)	7.	Ethernet port connection - 10BaseT / 100BaseTX
3.	Serial Port(s) LED	8.	Status LED
4.	Ethernet LED	9.	DIN Rail kit holes (on underneath of box)
5.	ES-357/ES-246/ES-257/ES-320 - Power Input 5-30V DC, 1.8W Max / 1.0W Typical ES-313 - Power Input 5-30V DC, 2.6W Max / 1.2W Typical		

## Network IP Addressing

The ES device is shipped in “DHCP Mode”.

- On connecting to the network, the device automatically checks if it is connected to a DHCP Server. If this is the case, the DHCP server will allocate an IP address automatically to the ES device.
- If no DHCP Server is detected (e.g. you are connecting to a Private network), the ES device will default to an IP address of 192.168.127.254 within 60 seconds. Please ensure the PC you’re using for configuration can communicate with the 192.168.127.xxx IP range.

## Connecting your ES Device

1. Connect the ES device to your local network or a private network by using a standard straight-through or crossover Ethernet cable and plugging into the Ethernet port connection.
2. Connecting to Power Connect the power adapter or a DC power line (5-30V) to the ES power terminal block or jack connection
  - If using the Brainboxes PW-644 power supply ensure:
    - The wire marked “-“ is connected to V-
    - The wire marked “+” is connected to V+
  - If using your own power supply please check input requirements on page 4 – Hardware
3. Confirm the device beeps as it is turned on.
4. When the Status LED starts blinking green (after 5-60 seconds), the device is ready to use.
5. Connect the serial cable from your serial device to the serial port on the ES device. Refer to Section 8 of this Quick Start Guide for pin outs.

Make a note of device MAC address (on side panel, 00-0a-4f-XX-XX-XX) as you will need it to identify the device on your network later.

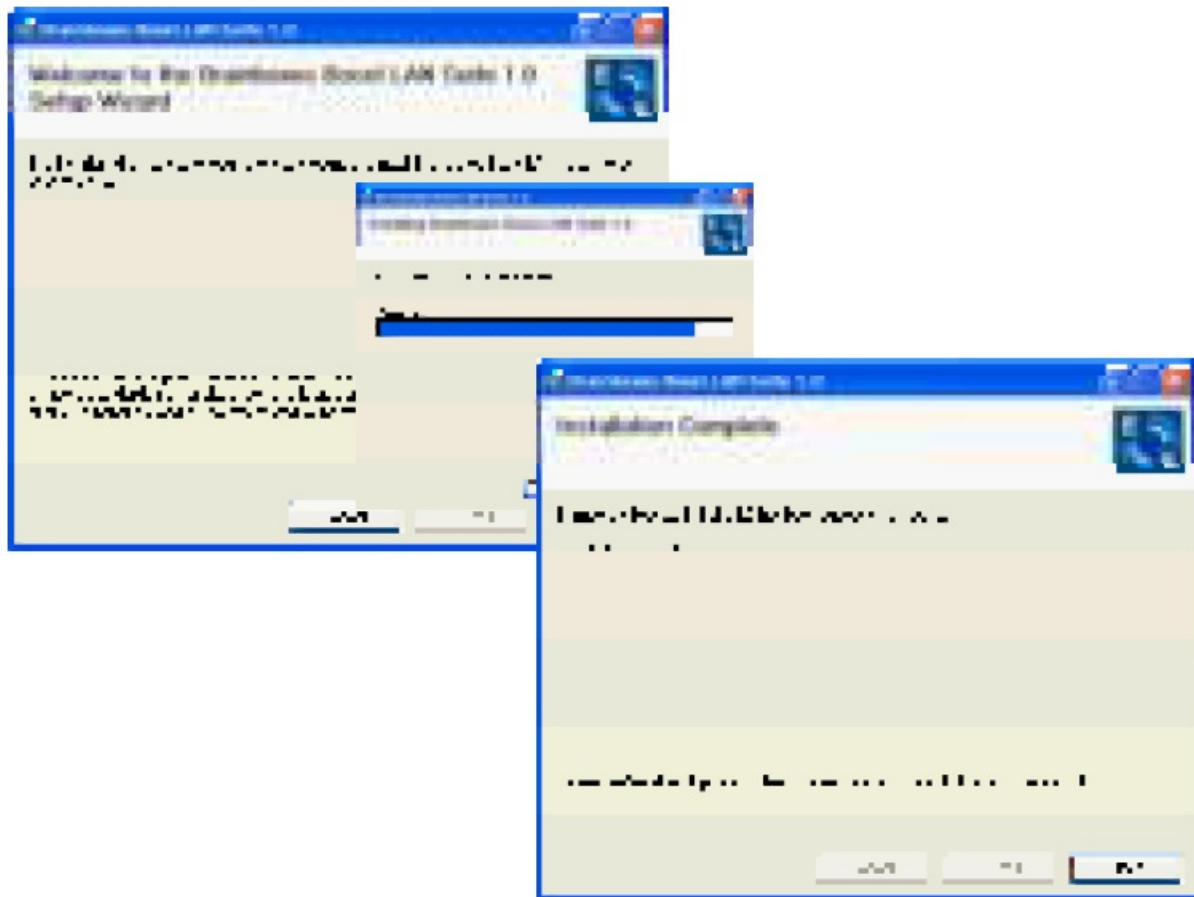
## Installing your ES Device on Windows

1. Insert the CD into your PC. This should launch the Boost.LAN Navigation Page automatically.



Note: If the navigation page does not auto load, go to Start > My Computer > Right Click the CD and select Explore. This will open the CD in Windows Explorer for browsing the contents of the CD. Locate the “Setup.exe” program on the CD and double click to launch. Proceed to Step 3.

2. Click “Install” to launch the Boost.LAN Setup.exe



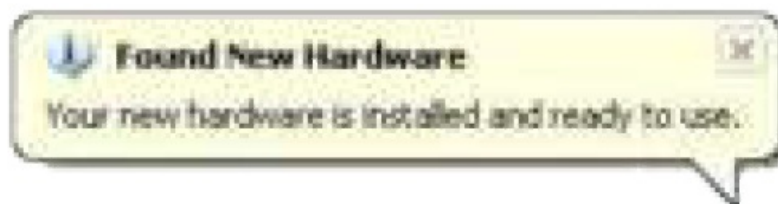
3. Follow the on screen instructions to install the Boost.LAN software

Note: Boost.LAN software requires the Microsoft .NET framework to be installed on your machine. If it is not already installed, the Setup.exe will install it automatically. Please follow on screen instructions and reboot if prompted to continue installation.

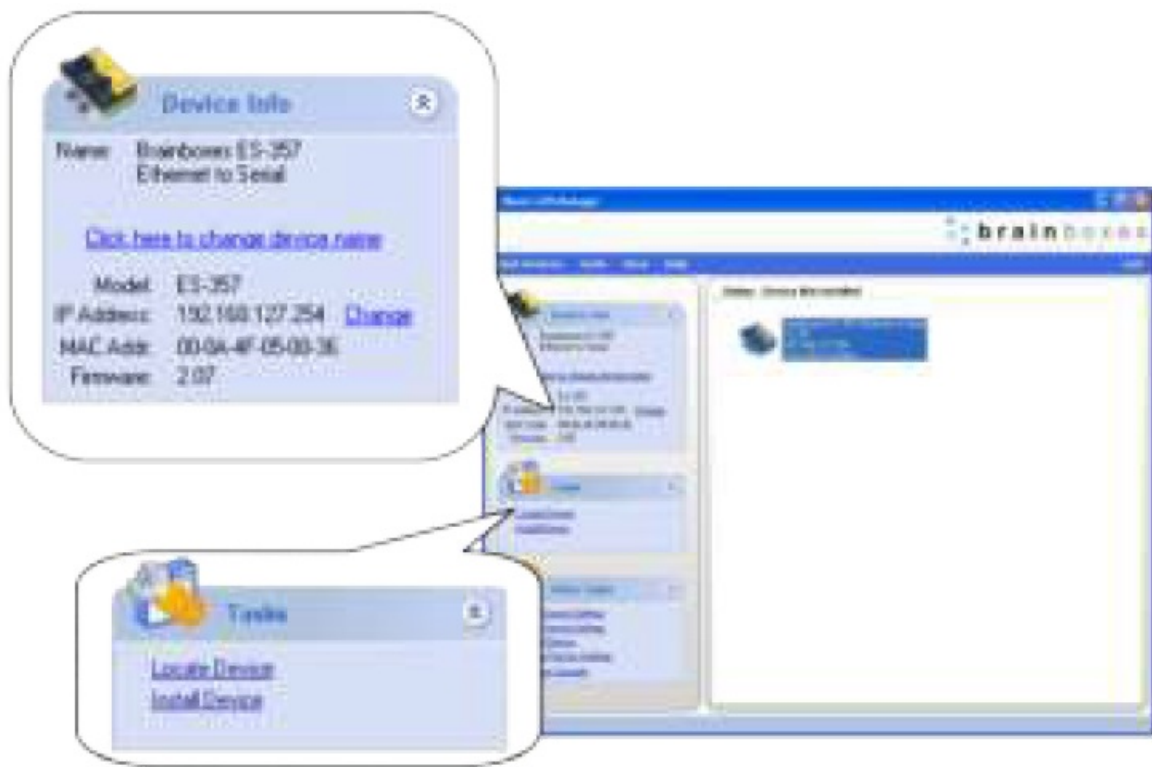
4. When installation is complete, you should see an icon labelled Boost.LAN Manager on the desktop. Double click the link to open the application
5. Click on the "Find Devices" link in the top left hand side of the window..



6. You can find your Brainboxes ES device by selecting a device and matching it with the corresponding MAC address available on the left hand panel (see opposite page).
7. Once found, select the device and scroll to the "Tasks" section on the left hand panel
8. Click Install Device.
9. When the device is installed a pop up box will appear saying "Your new hardware is installed and ready to use."







## Configuring your ES Device

### Finding your COM port

1. Open the Boost.LAN Manager and select your device
2. Under the COM ports section, make a note of the COM port installed and which COM port you will use to communicate to your serial device (e.g. RS-232 or RS422/485 port)
3. Open your application and select the Brainboxes COM port.
4. Your ES device is now ready to be used with your application.

### Advanced Configuration: Changing the IP address

1. Open the Boost.LAN Manager and select your device
2. Click the "Change" link in the Device Info panel (see next page).
3. Change the IP Addresses to your desired address.



IP Address: 192.168.127.254 [Change](#)  
 MAC Addr: 00-0A-4F-05-00-36



### Advanced Configuration: Changing the COM label

1. Double click on the Port entry in the Boost.LAN Manager.
2. Click on the 'Port Settings' tab
3. Click Advanced



4. A new COM Port label can be selected from the dropdown menu.

**Click OK to set the new COM Label.**

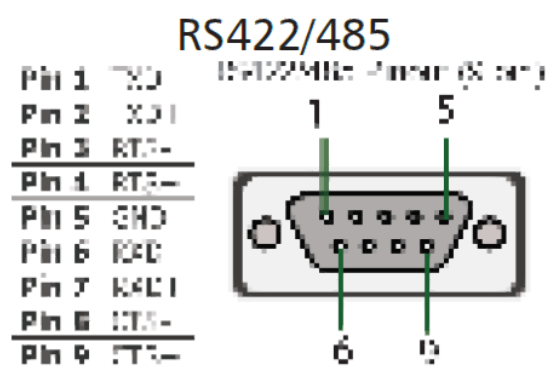
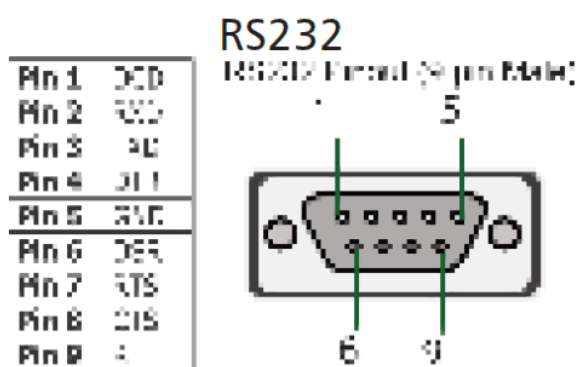
If the COM Port number is labelled “in use”, it is either currently used by a COM Port present on the system, or is reserved for a device which is not currently present. It is still possible to select this COM number and force the change, if you are sure it is not required by any other device.

## Default Settings

Network Settings		
Device Network Address	DHCP mode	
Web Server Port	80	
Port Settings	RS232	RS422/485
Baudrate	115200	115200
Databits	8	8
Stop Bits	n	n
Parity	1	1
Flow Control	None	None
Duplex Mode	N/A	Full Duplex
Protocol Settings	Telnet + COM port control Mode (Server)	Telnet + COM port control Mode (Server)
TCP/UDP Port Numbers		
Device Web Server	80 (TCP) / 9000 (TCP)	
Serial Ports 1-8	9001-9008 (TCP)	
Firmware Upgrade	67 (UDP) – BOOTP Server 68 (UDP) – BOOTP Client 69 (UDP) – TFTP Port	

## Pin Outs

### Serial DB9 Pin outs



### Serial Terminal Block Pin outs / Power Terminal Block Pin outs



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



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

## Jack Plug



- All power jacks are centre=positive, outer=ground
- Devices that use PW-5xx PSUs: 5.5mm cylindrical jack plug
- Devices that use PW-8xx PSUs: 4mm cylindrical jack plug

## LED Information

LED Information		
<b>Status LED</b>	Green Light on	Device Ready
	Flashing Green	Device Ready
	Flashing Yellow	Changing Settings
	Flashing between Red & Green	Querying IP
	Flashing between Green & Red/Yellow	IP Problem
	Flashing Green/Red	Performing Hard Reset
<b>Serial Port LED</b>	Flashing between Green & Yellow	Problem during initialization (e.g. Firmware Problem)
<b>Serial Port LED</b>	Green light on	Port Open
	Flashing light on	Data RX/TX
<b>Ethernet LED</b>	Green light on	Link established
	Flashing Green	Data RX / TX

There's so much more to Brainboxes



- To enjoy the full benefits of Brainboxes, contact
- UK – t. +44 (0)151 220 2500 f. +44 (0)151 252 0446
- e. [sales@brainboxes.com](mailto:sales@brainboxes.com) w. [www.brainboxes.com](http://www.brainboxes.com)
- Brainboxes Ltd. Unit 3c Wavertree Boulevard South,
- Wavertree Technology Park, Liverpool, L7 9PF, UK
- USA – TollFree. +1 (888) 958 5538
- Japan – t. +81-3-3833-2500
- Brainboxes Japan. 1-2-8 Shinjyuku, Shinjyku-ku, Tokyo, 160-0022 Japan,
- or visit [www.brainboxes.com](http://www.brainboxes.com)

## Documents / Resources

## References

**Manuals+, Privacy Policy**