

brainboxes



# Quick Start Guide

for Brainboxes Ethernet to Serial Range



# Contents

1. Box Contents Check List	2
2. Hardware	3
3. Network IP Addressing	4
4. Connecting your ES Device	5
5. Installing your ES Device on Windows	6
6. Configuring your ES Device	11
6.1. Finding your COM port.	11
6.2. Advanced Configuration: Changing the IP address	11
6.3. Advanced Configuration: Changing the COM label	13
7. Default Settings	14
8. Pin outs	15
8.1. Serial DB9 Pin outs	15
8.2. Serial Terminal Block Pin outs	15
8.3. Power Terminal Block Pin outs	
9. LED information	16

For more information, please refer to Product Manual on CD

# 1. Box Contents Check List

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.

NB: Images below show an ES-357 1x RS232, 1x422/485 as an example. The same steps can be applied to all other products in the ES Ethernet to Serial range



Ethernet to Serial Box



Quick Start Guide



Product CD

## Optional Additional Items



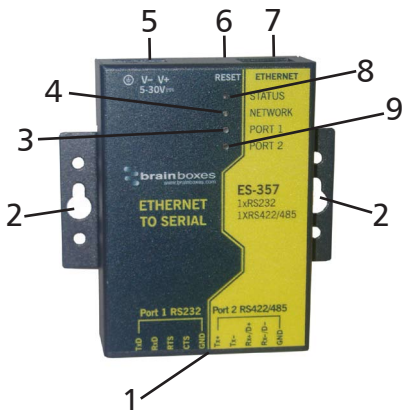
Power Supply - UK  
Code - PW-644

Power Supply - EU  
Code - PW-611



Din Rail  
Mounting Kit  
Code - MK-048

## 2. Hardware



Key			
1.	Port 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 #1 LED	8.	Status LED
4.	Ethernet LED	9.	Serial Port #2 LED
5.	Power Input 5-30V DC, 1.8W Max / 1.0W Typical		

### 3. 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.

## 4. 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. Connect the power adapter or a DC power line (5-30V) to the ES power terminal block  
If using the Brainboxes PW-644 power supply ensure:
  - a. The wire marked “-” is connected to V-
  - b. The wire marked “+” is connected to V+
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 rear panel, 00-0a-4f-XX-XX-XX) as you will need it to identify the device on your network later.**

## 5. Installing your ES Device on Windows

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

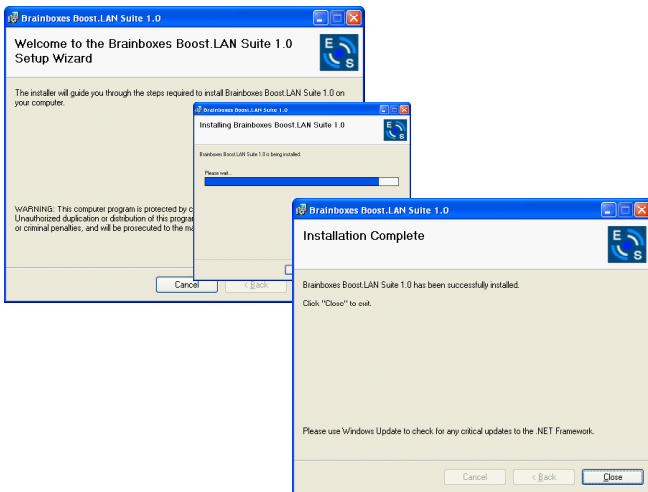


Note: If the navigation page does not auto load, go to Start → My Computer → Right Click the CD and select Explore. This will open the CD in Windows Explorer for browsing the contents of the CD. Locate the "Setup.exe" program on the CD and double click to launch. Proceed to Step 3.

2. Click "Install" to launch the Boost.LAN Setup.exe

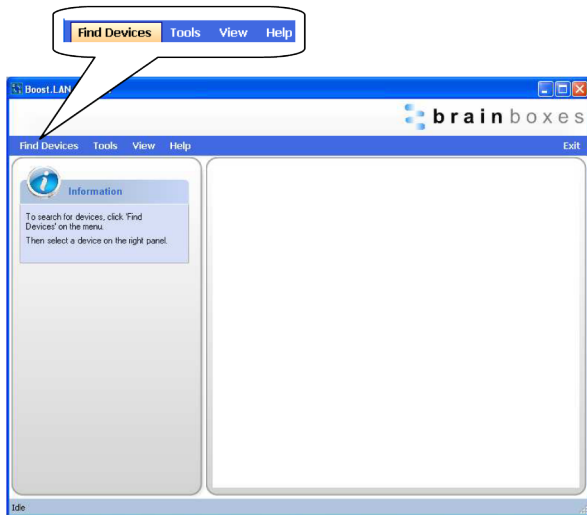
## 5. Installing your ES Device Continued...

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.

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



## 5. Installing your ES Device Continued...

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."





### Device Info

Name: Brainboxes ES-357  
Ethernet to Serial

[Click here to change device name](#)

Model: ES-357  
IP Address: 192.168.127.254 [Change](#)  
MAC Addr: 00-0A-4F-05-00-36  
Firmware: 2.07



### Tasks

[Locate Device](#)  
[Install Device](#)

The screenshot shows the Boost LAN Manager application window. The title bar reads "Boost LAN Manager" and the Brainboxes logo is in the top right. The main interface is divided into several sections:

- Find Devices**: A list of discovered devices. One device is shown with a "Device Info" popup:

Device Info
Brainboxes ES-357 Ethernet to Serial
<a href="#">Click here to change device name</a>
IP Address: 192.168.127.254 <a href="#">Change</a>
MAC Addr: 00-0A-4F-05-00-36
Firmware: 2.07

- Tasks**: A section with two buttons: "Locate Device" and "Install Device".
- Other Tasks**: A list of tasks including "Device Settings", "Device Settings", "Device", "Factory Settings", and "Upgrade".
- Online - Device Not Installed**: A section showing a device that is not installed, with a "Name Not Installed" message.

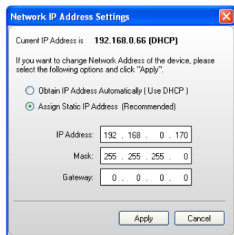
# 6. Configuring your ES Device

## 6.1 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.

## 6.2 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 opposite page).
3. Change the IP Addresses to your desired address.

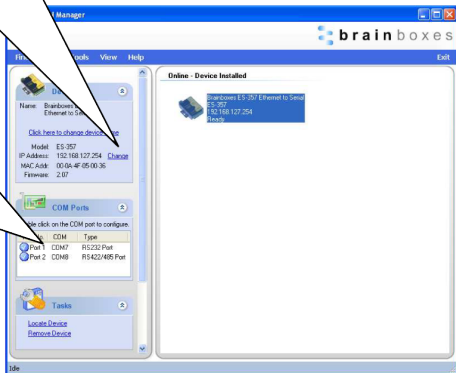


IP Address: 192.168.127.254 [Change](#)  
MAC Addr: 00-0A-4F-05-00-36

### COM Ports

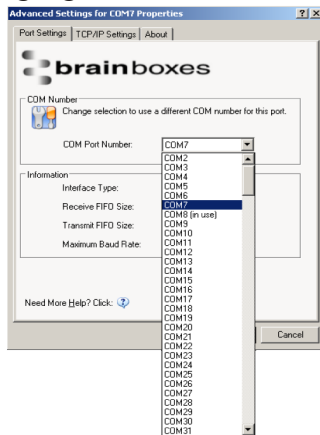
Double click on the COM port to configure.

Port No.	COM	Type
Port 1	COM7	RS232 Port
Port 2	COM8	RS422/485 Port



## 6.3. 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.

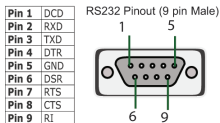
## 7. Default Settings

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)

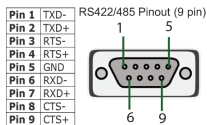
# 8. Pin Outs

## 8.1. Serial DB9 Pin outs

RS232



RS422/485



## 8.2. Serial Terminal Block Pin outs (e.g. ES-357)



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

## 8.3. Power Terminal Block Pin outs



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

## 9. LED Information

LED Information		
<b>Status LED</b>	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
	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

For further configuration details, or technical information on the ES product, please refer to Product Manual on CD

# Ethernet To Serial Range

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 range provides a simple, instant cable replacement providing network integration.

Extend your reach, control your serial ports from the edge of your network!



## Features common across the range

- Max Baud rate 230,400
- 10/100Base TX Ethernet port
- User friendly software
- Power input 5-30V DC
- Web-page configuration and RFC2217 compliant interface for non-Windows users
- Rugged metal enclosure
- Optional DIN rail mounting kit
- LED status indication
- Autogating for automatic turn around of transmit enable in RS485 half duplex mode - hassle free operation

ETHERNET TO SERIAL DEVICES	PORTS	CODE
E2S 1xRS232 + 1xRS422/485	2 (one terminal block)	ES-357
ES-357 Power Supply UK	N/A	PW-644
DIN-Rail Mounting Kit	N/A	MK-048

# USB To Serial Range

With over a billion devices being shipped every year, USB is a widely accepted PC user interface standard.

Being hot-pluggable, plug & play devices makes USB a very attractive way to add serial connectivity to your PC. Using our industrial design skills we have made this new range an industrial standard, robust and reliable solution. Instantly add an extra serial port wherever you go!



## Features common across the range

- Includes 25cm USB cable
- Extra secure USB connection
- Max baud rate: 921,600
- Plug & Play
- Powered by USB port - no external power supply required (only on multiport versions)
- High retention USB connector for added security
- Fantastic, proven, robust Boost software for excellent application compatibility
- Fit any USB port
- Screw fit retainer on input cable power supply
- **Best in class form factor and software**

USB TO SERIAL DEVICES	PORTS	CODE
USB to Serial 1xRS232	1 x 9 pin	US-101
USB to Serial 1xRS422/485	1 x 9 pin	US-324
USB to Serial 4xRS232	4 x 9 pin	US-701
USB to Serial 8xRS232	8 x 9 pin	US-279



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 - t. +1 (727) 538 7710  
Brainboxes USA. 13575 58th Street North,  
Suite 136, Clearwater, FL 33760-3746, USA.

Japan - t. +81-3-3833-2500  
Brainboxes Japan. 1-2-8 Shinjyuku,  
Shinjyuku-ku, Tokyo, 160-0022 Japan,

or visit [www.brainboxes.com](http://www.brainboxes.com)