ED-008  Ethernet to Digital I/O

8 Digital I/O Lines

- 8 Digital Ports independently can be In or Out
- 1 Ethernet Port
- User friendly software interface
  Simple web based configuration, monitoring and control
- Software APIs for VB, C# and more

Easy to set up with LED status lights for Digital I/O lines that correspond to simple to read webpage

+5 to +30 Volt Power Input enables the device to be run from USB, a vehicle battery or the factory floor

Integral wall mount option can be used with MK-048 clips to allow DIN rail mounting
ED-008  Ethernet to Digital I/O

Integrate with popular software packages or use with our free APIs

Easy Wire Removable screw terminal blocks
Wide Range Input Power: +5VDC to +30VDC

Wall mount holes compatible with MK-048 DIN mount clips

IP30 Non-conducting polyamide case

-10°C to +60°C/+14°F to +140°F temperature range

Supports Modbus TCP or ASCII commands

8 Digital I/O Lines

Connectors
Screw Terminals 3 way x 0.2inch/5.08mm and 10 way x 0.2inch/5.08mm pitch
Wire Thickness 0.150 inch, 3.81mm, 20 pins, 12+8 screw terminals, #26 - #16 AWG, 0.14mm²-1.3mm²

Power Supply
Power Supply input Unregulated +5V to +30Volts DC, reverse polarity protection
Isolation 1500VRMS Magnetic isolation from Ethernet

Environmental
Operating Temperature -10°C to +60°C / +14°F to +140°F
Storage Temperature -10°C to +70°C / +14°F to +158°F
Ambient Relative Humidity 5 to 95% (non-condensing)

Magjack LED Information
Link/Activity LED Solid green Connection established
Flash Green Data communication
Speed LED Green 100Base-Tx
Unlit 10Base-T

Ethernet
Ethernet Port RJ45 jack, 10/100Mhz autosensing, crossover auto sensing (Auto MDIX)
Protection 1,500 Volts magnetic isolation between ports
Housing IP-30 rated non-conducting polyamide case

View from webpage - no software required

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Ethernet to Digital I/O

Lifetime Warranty and Support:
We can help with every aspect of your project, from getting you up and running to custom application.
## ED-008  Ethernet to Digital I/O

### Digital Channels - 8 Ports individually selectable as Inputs or Outputs

#### Inputs

- **NPN/PNP**: Individually jumper selectable pull up for NPN, active low, type sensors and pull down for PNP, active high, type sensors
- **Logic Level 0**: 0V to +1V
- **Logic Level 1**: +2V to +30V
- **Latched Inputs**: Triggered by user programmable positive or negative edges, stays true until acknowledged
- **Counter Inputs**: User programmable- counts positive or negative transitions 0-65335

#### Outputs

- **Maximum output current**: Sinks up to 0.85 Amp per pin, 30V max load
- **Max combined load 3.4 Amps per ED device**
- **Characteristic**: Open drain output, protected MosFET intelligent short circuit protection up to 36V
- **Over temperature shutdown**: 175°C typical, 150°C min
- **Maximum output load Voltage**: 30V
- **ESD Production**: 16kV
- **Quick-Stop function**: When a user programmable input transitions to a preconfigured high or low state then all outputs go to a user programmable known good state

### Serial Port - No Serial Port on this device, see ED-004 or ED-204

### Power Supply

- **Power Supply input**: Unregulated +5V to +30Volts DC, reverse polarity protection
- **Isolation**: 1500VRMS Magnetic isolation from Ethernet
- **Power Consumption**: 2.5 Watts Max : 220 mAmps@+5VDC/36mAmps@+30VDC
Software

### OS Compatibility
Brainboxes’ software provides a TCP or Serial COM port interface. All software versions and updates available to download from our website.

**Microsoft**
Legacy COM port drivers for Microsoft OS up to latest Windows 10

**Other**
TCP and web browser interface for other OSs & Linux, e.g. Android, Raspberry Pi

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Boost.IO Manager
Let's you find, install and upgrade devices

### Industry Standard Packages
The COM port based driver means devices are compatible with popular packages such as: LabView, MATLAB, Agilent VEE. So you can continue to get value from your existing development and process control system.

### Software Platforms
APIs and sample program code for: Microsoft .NET, C#, Visual Basic, C++, JavaScript, PHP, Java, Objective-C, Python and more - www.brainboxes.com

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Modbus
Device works as a Modbus TCP server. Modbus TCP can be used on the input and output lines.

<table>
<thead>
<tr>
<th>Modbus access type</th>
<th>Supported Modbus function codes</th>
<th>Logical address</th>
<th>984 style address</th>
<th>IEC 61131 address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Read DI counter values</td>
<td>Holding register</td>
<td>3</td>
<td>0x0000...</td>
<td>40001...</td>
</tr>
<tr>
<td>Clear DI counters</td>
<td>Coil</td>
<td>5, 15</td>
<td>0x0200...</td>
<td>00513</td>
</tr>
<tr>
<td>Set/read digital outputs</td>
<td>Coil</td>
<td>1, 5, 15</td>
<td>0x0000...</td>
<td>00001...</td>
</tr>
</tbody>
</table>

### ASCII
The ED device’s webpage has an interactive ASCII console where any command can be entered and it is immediately executed showing the device’s response.

- $01M  
  read the name of device address 01

- !01ED-588  
  device 01 replies that its name is ED-588

- $01F  
  read firmware version number of device address 01

- !012.54  
  firmware version of device 01 is 2.54

Full command tables can be found in the device manual.
## ED-008 Ethernet to Digital I/O

### Packaging Information

<table>
<thead>
<tr>
<th>Packaging</th>
<th>Installation CD including manual, Microsoft signed drivers &amp; utilities, Quick Start Guide, Device</th>
</tr>
</thead>
<tbody>
<tr>
<td>Packaged Weight</td>
<td>0.223 kg, 7.87 ounces</td>
</tr>
<tr>
<td>Packaged Dims</td>
<td>160x135x49 mm, 6.3x5.3x1.9 inches</td>
</tr>
<tr>
<td>GTIN Universal Code</td>
<td>837324009811</td>
</tr>
</tbody>
</table>

### Approvals

**Industry Approvals**
- Microsoft Certified Gold Partner, WEEE, RoHS, AEO (C-TPAT), CE

### 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

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### Packaging Information

**PW-600**
Power supply with connectors for UK, USA, EU and AUS mains socket. 'Tails' are suitable for connecting to screw terminal blocks.

**MK-048**
DIN Rail Mounting Kit Enables device to be clipped onto a DIN rail.

**ED Range**
Remote I/O products available in a range of formats and specifications. [www.brainboxes.com](http://www.brainboxes.com)