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ISI *sa-nv Instrumentation for Science and Industry* (INTERCONTINENTAL SERVICES INC)

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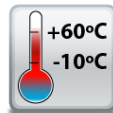
ED-204 Ethernet to Digital I/O +RS232 +Switch

4 Digital I/O Lines with RS232 Serial Port

- · 4 Digital Ports independently can be In or Out
- · 1 RS232 Serial Port
- · 2 Ethernet Port
- · User friendly software interface Simple web based configuration, monitoring and control
- · Software APIs for VB, C# and more

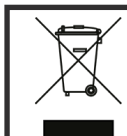|					
IP30	+60ºC / -10ºC	2	I⊓O	4 Line	RS232

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

GLOBAL ACCREDITATIONS

LIFETIME SUPPORT

LIFETIME WARRANTY

RoHS 2002/95/EC

GB AEOF 00031/11

MADE IN BRITAIN

ISO 9001:2015 Registered Quality Management

ISO 14001:2015 Registered Environment Management

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ED-204
Ethernet to Digital I/O +RS232 +Switch

Integrate with popular software packages or use with our free APIs

Ethernet Switch

Easy Wire Removable screw terminal blocks

LED status lights

Wide Range Input Power: +5VDC to +30VDC

Wall mount holes compatible with MK-048 DIN mount clips

IP30 Non-conducting polyamide case

View from webpage - no software required

-10ºC to +60ºC/+14ºF to +140ºF temperature range

Supports Modbus TCP or ASCII commands

RS232 Serial Port

4 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, 0.14mm^2-1.3mm^2

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

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

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

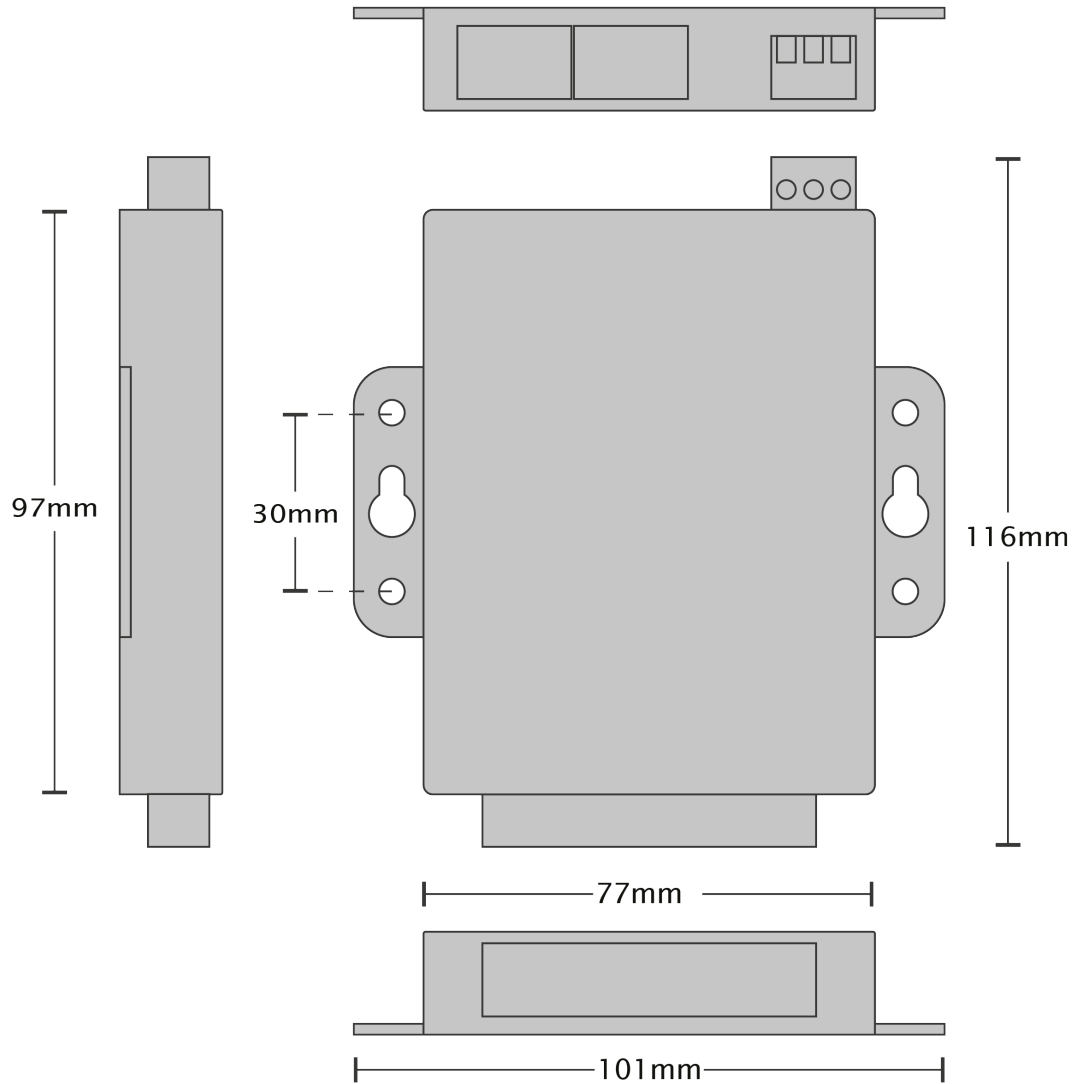| Ethernet	
Ethernet Port	RJ45 jack, 10/100Mhz autosensing, crossover auto sensing (Auto MDIX)
Protection	1,500 Volts magnetic isolation between ports
Housing	IP-30 rated non-conducting polyamide case

ED-204   Ethernet to Digital I/O +RS232 +Switch

97mm

30mm

116mm

77mm

101mm

Terminal Block Pin Outs

PIN	FUNCTION
1	TxD
2	RxD
3	RTS
4	CTS
5	GND
6	DIO 3
7	DIO 2
8	DIO 1
9	DIO 0
10	GND

Ethernet Port Pin Outs

PIN	FUNCTION
1	RD+ / TD+
2	RD- / TD-
3	TD+ / RD+
4	NC
5	NC
6	TD- / RD-
7	NC
8	NC

Power Terminal Pin Outs

PIN	FUNCTION
1	+V
2	-V
3	Functional Earth

Lifetime Warranty and Support:
We can help with every aspect of your project, from getting you up and running to custom application.

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ED-204

Ethernet to Digital I/O +RS232 +Switch

Digital Channels - 4 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^{0}C typical 150^{0}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 - RS232

Baud Rate	From 110 - 1 MegaBaud - Any custom Baud rate accepted
Data Bits	5,6,7 or 8
Parity	Odd, Even, None, Mark or Space
Stop Bits	1 or 2
Flow Control	RTS/CTS, XON/XOFF
Tx/Rx Modes	Point to Point

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
Ethernet Switch	Additional Ethernet Port allowing Daisy chaining

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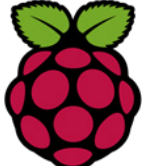
Software

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 11
Other	TCP and web browser interface for other OSs & Linux, e.g. Android, Raspberry Pi

Boost.IO Manager	Lets 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
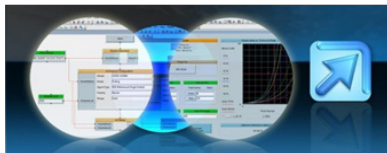
Modbus

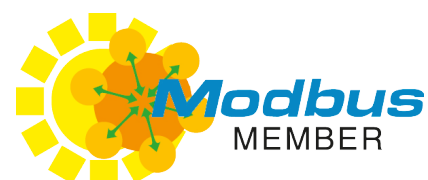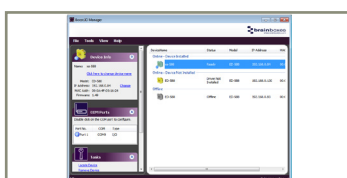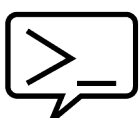Device works as a Modbus TCP server. Modbus TCP can be used on the input and output lines.

	Modbus access type	Supported Modbus function codes	Logical address	984 style address	IEC 61131 address
Read DI counter values	Holding register	3	0x0000…	40001…	%MW0…
Clear DI counters	Coil	5, 15	0x0200…	00513	%M512…
Set/read digital outputs	Coil	1, 5, 15	0x0000…	00001…	%M0…

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

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ED-204

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Packaging Information

Packaging	Microsoft signed drivers & utilities, Quick Start Guide, Device
Packaged Weight	0.230 kg, 8.11 ounces
Packaged Dims	160x135x49 mm, 6.3x5.3x1.9 inches
GTIN Universal Code	837324009842

Approvals

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

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

PW-600
Power supply with connectors for UK, USA, EU and AUS mains socket. 'Tails' are suitable for connecting to screw terminal blocks.
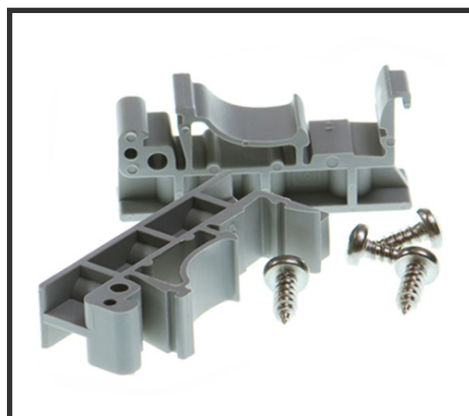
MK-048
DIN Rail Mounting Kit Enables device to be clipped onto a DIN rail.

ED Range
Remote I/O products available in a range of formats and specifications.
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