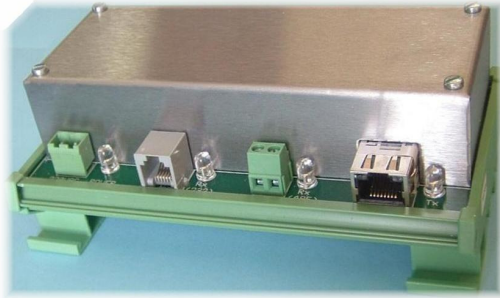


# Metering system hardware

## epad3 Ethernet / RS232 / RS485 converter

- RS232 and RS485 outputs simultaneously enabled.
- Can multi-drop a RS232 device (like an A1140) and 485 devices (like A220s) without the need for a 232/485 converter.
- RJ12 RS232 socket compatible with the A1140 RS232 port using a simple 1 to 1 flat cable.
- Can be set up to connect actively to a server at a specific port. This is especially useful because it means that the Epad3 can work from behind a firewall.
- Can be set up with static IP, or to get its IP from a DHCP server automatically.



## Specifications

### Serial interface

Data Rates:..... Software selectable: 300bps to 230,400bps  
Characters:..... 7 or 8 data bits  
Parity..... odd, even, none  
Stop Bits..... 1 or 2  
Note: Combining the epad3 with an ehub multiplies the RS232 port yielding 12 multi-dropped RS232 ports

### RS485 output

Maximum number of RS485 devices.....32  
Maximum RS485 network size.....300nF at 9600 (6km of CAT5) / 25nF at 115200 (500m of CAT5)  
Network bias and termination resistors..... Built into the epad3

### Network

Protocols.....TCP/IP, UDP/IP, ARP, ICMP, TFTP, Telnet, Auto IP, DHCP  
Interface..... Auto-selectable Ethernet 10Base-T or 100Base-TX

### Indicators

Link and activity indicator..... On the JR45 connector  
Power (green).....220VAC connected to epad3  
Tx (Red)..... epad3 is talking to the RS232 and RS485 devices  
Rx (232)..... The RS232 slave device(s) are talking back  
Rx(485)..... The RS485 slave device(s) are talking back

### Power supply

Voltage input.....230VAC nominal: 120-250VAC  
Consumption..... <6VA  
Note: 110VAC nominal also available on request

### Physical Characteristics

DIN rail length needed to mount epad3 (length in same direction as DIN rail)..... 150mm  
Panel depth needed (height above DIN rail)..... 55mm  
Width (minimum distance between trunking)..... 90mm

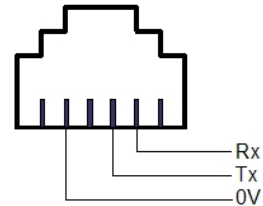


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## Pin-out of RS232 connector

The epad3 RS232 connector is a RJ12 connector. The pin-out is such that a simple 1 to 1 flat cable can be constructed to connect the epad3 RS232 port to the RS232 port of the Elster A1140 meter. The pin-out of the RJ12 connector is as follows:

Pin no	epad	A1140
1	Not connected	Rx, connected to pin 3
2	Rx, receive data	Tx, transmit data
3	Tx, transmit data	Rx, receive data
4	NC (Not connected)	NC (Not connected)
5	0V	0V
6	NC (Not connected)	Power out (6V 500mA)



## Software

A User Guide is available at [http://www.lantronix.com/pdf/XPort\\_UG.pdf](http://www.lantronix.com/pdf/XPort_UG.pdf)

The DeviceInstaller program and two port-redirector programs are available from:

<http://www.lantronix.com/device-networking/utilities-tools/device-installer.html>

<http://www.lantronix.com/device-networking/utilities-tools/com-port-redirector.html>

<http://www.lantronix.com/device-networking/utilities-tools/scpr.html>

1. Connect the epad3 to 220VAC and to the local LAN. The epad3 is factory configured for DHCP, which means it will get an IP compatible with the local LAN automatically from the DHCP server. (Typically, an ADSL router will function as a DHCP server on a small LAN, else the IT department may have configured another DHCP server on the LAN.)
2. Run the DeviceInstaller program downloaded from above location. (Or use a utility like NetworkScanner, from [www.softperfect.com/products/networkscanner/](http://www.softperfect.com/products/networkscanner/)).
3. Click on the Search button. DeviceInstaller will find the epad3 automatically, indicating the IP address that has been assigned to the epad3 by the DHCP server.
4. Run a browser, for example Internet Explorer, and type in the IP address of the epad3 in the URL field (instead of the normal [www.whatever.com](http://www.whatever.com)).
5. All the settings of the epad3 are now available in a browser interface. Warning: If you really must change the user name and password, please do not forget it!
6. Typically, only the serial settings (like baudrate) need be changed. These are found under "Serial Settings" menu.
7. If you want the epad3 to connect to a server, you need to select "Active Connect:" to "Auto Start" under the "Connection" menu and give the server's IP and destination port.
8. When changing settings, you have to click the "OK" button on the specific settings screen, BUT ALSO you need to click "Apply Settings" menu item. You will then get a message that the device is rebooting and you will have to wait for a few seconds. To make sure you have set everything correctly, please double check your settings after the boot is completed.
9. It is recommended that the epad3 work with a fixed IP address on site. Once you are sure your settings are correct, you may now change the IP address to a fixed IP address under the "Network" menu setting, or you may change it also from DeviceInstaller. You may then not be able to communicate to it anymore from your local LAN, as the IP address may be incompatible to the local LAN. Remember to do this before you leave for site, as there may not be a LAN with a DHCP server on site.
10. Settings may also be changed via RS232, from a terminal emulator. Connect the pc to the epad3 RJ12 RS232 port on the epad3, keep sending xxxx at 9600 8N1 while powering up the epad3, and the epad3 will start up in a special serial setting mode.



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