

Ethernet UART and Ethernet +3 Port UART

P/N: 995090 and 995091

Concept 4000 10BaseT & SERIAL COMMUNICATIONS INTERFACE

INSTALLATION GUIDE

Overview:

An Ethernet UART adds the following features to a Concept 4000 Type 2 Control Module:

- **Ethernet connection.** A 10BaseT Ethernet connection to allow System management and/or Reporting via the IP protocol. e.g. Insight software.
- **RS232 Ports.** Ethernet UART (995090) = 1 Port. Ethernet +3 Port UART (995091) = 3 Ports. Up to three high speed, software configurable, serial ports allow connection of peripheral serial devices. Specific cables are available for the connection of Printers, Personal Computers, PSTN Dialup modems and other serial devices including the GSM modem and Multipath IP STU.
- **“Automation” Comms Task format.** The Ethernet +3 Port UART (P/N: 995091) enables use of the new “Automation” Comms Task format available in Control Module firmware V7.0 or later.
NOTE. For this feature, the Ethernet +3 Port UART firmware must be V4.01 or later. Without this version of the UART board fitted, the Automation Comms Task format cannot be set to “Active”.

IMPORTANT NOTES:

1) COMPATIBILITY.

This Interface is only compatible with Type 2 (CE) Control Modules with V5.22 firmware and above. DO NOT fit this board to a Type 0 or Type 1 Control Module, as this may result in damage to both the Control Module and the UART Interface.

(Controller PCB Type can be identified via the “System Info” screen at the LCD Terminal. Press <MENU>, 2 [or just <MENU> if V2 or earlier] without logging on.)

2) SERIAL PORT APPLICATIONS.

Port 1: Supports any Comms Task format that requires UART Serial Port communications.

Ports 2 & 3: Supports most Comms Task formats that utilize the TXD/RXD and CTS/RTS connections for UART Serial Port communications.

See Page 4 for full details of Comms Task Formats supported by each Port.

3) FITTING / REMOVING THE UART INTERFACE

This board is designed for permanent installation and should not be fitted or removed unless power is completely removed from the Control Module. (AC input and Battery)

If a temporary interface is required by the installer for Upload/Download connection to a PC, the manufacturer’s “Port 0” interface (P/N: 993030) should be used. The Port 0 interface cable connects to JP1 located next to the battery connections. Note that Port 0 shares the on-board modem with the Telephone Line interface and therefore **MUST NOT** be used as a permanent connection.

ETHERNET UART PARTS LIST

- Ethernet UART PCB assembly.
- Installation Kit in Plastic bag containing:
 - 2 x M3x6mm Pan Head screws.
 - 2 x M3 Hex Nuts.
 - 2 x 16mm Hexagonal Brass PCB Standoffs.
 - 2 x M3 Shakeproof washers.
 - 1 x Installation Manual. (This document)
 - 1 x Ethernet UART System Administrators Guide.

INSTALLING THE ETHERNET UART PCB

- 1) Power to the Control Module must be disconnected. When doing this, ensure that both the AC Input AND Battery are disconnected.
- 2) Check if the Control Module already has the hex metal standoffs mounted in the two UART mounting holes adjacent to U10 (RAM chip) and U4 (CEPIC Options chip).
If the standoffs are already fitted, go to step 4. If these standoffs are not fitted, proceed to step 3.
- 3)
 - a) Remove the screws securing the Control Module PCB to the mounting plate and lift the Control Module from the plate. **DO NOT DISCARD THE SCREWS.**
 - b) Fit 16mm hex metal standoffs to the component side of the Control Module PCB in the two holes adjacent to U10 (RAM chip) and U4 (CEPIC Options chip). The standoffs are secured by using the M3 nuts and washers. *See diagram opposite.* NOTE: Both standoffs **MUST BE FITTED** to comply with regulations.
 - c) Refit the Control Module to the mounting plate using the original screws.
- 4) Fit the UART board by plugging **JP9** directly onto the controller expansion port marked **JP2**, and secure the board with two 3mm screws into the standoffs.
IMPORTANT NOTE: Type 2 Control Modules. Before fitting, check the Power Transistors, Q9 & Q10 on the controller. These devices should be bent over toward the inside of the PCB so that they do not short to the bottom of the UART PCB. (These Transistors are now fitted elsewhere to avoid this problem. This note only applies to earlier Control Modules which still have Q9 & Q10 near the UART board)
- 5) Connect the required Port/s to the Network and/or Serial Port on the external equipment. A range of pre-assembled cables are available for most applications. *See page 4 for details.*
If it is necessary to assemble your own Serial Port cable, note that shielded RS232 data cable must be used. The cable should not exceed 15 metres in length (Up to 19,200 Baud), and the shield should only be connected to ground at one end.
See Pin-out diagram at the bottom of the next page.
NOTE: If connecting to external equipment via a Comms Task format that provides operations that can alter the level of security (e.g. The "Automation" or "PC Direct" formats which can control Areas and Doors, Isolate Inputs, etc.), ensure that the interface cabling is suitably protected against interference and technical attack.

INDICATOR & DIAGNOSTIC LAMPS

<u>LAMP No.</u>	<u>NAME</u>	<u>DESCRIPTION</u>
L1	R1	Receive Data on UART Port 1.
L2	T1	Transmit Data on UART Port 1.
L3	R2	Receive Data on UART Port 2. (Ethernet +3 Port UART only)
L4	T2	Transmit Data on UART Port 2. (Ethernet +3 Port UART only)
L7	R3	Receive Data on UART Port 3. (Ethernet +3 Port UART only)
L8	T3	Transmit Data on UART Port 3. (Ethernet +3 Port UART only)
L9	SYS	Flashes once per second to indicate unit is running. Flashes twice per second for 30 seconds after a Reset has occurred.
L10	RX	Receive Data on the Ethernet Port.
L11	TX	Transmit Data on the Ethernet Port.
L12	LINK	Factory use only.

ETHERNET UART PCB

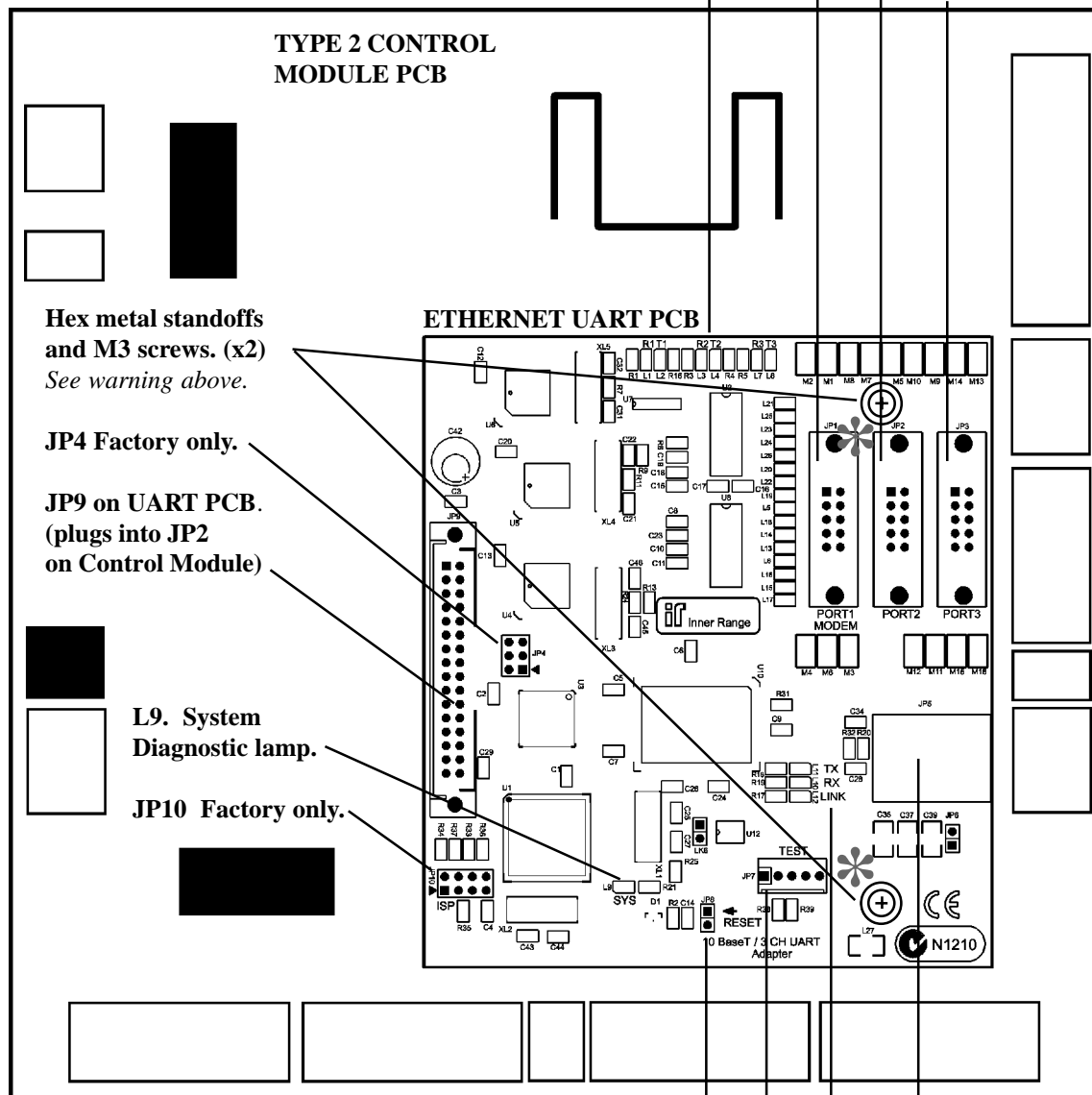
! WARNING: Do not place metal mounting clips or standoffs under the Control Module board at the two holes marked with asterisks (*) on the diagram. This may illegally ground the local 0V on the panel logic and cause irreparable (non-warranty) damage to the Control Module.

L1, 2, 3, 4, 7 & 8. Serial Port Indicator lamps.

JP1. Serial UART Port 1.

JP2. Serial UART Port 2.

JP3. Serial UART Port 3.



Hex metal standoffs and M3 screws. (x2)
See warning above.

JP4 Factory only.

JP9 on UART PCB.
(plugs into JP2 on Control Module)

L9. System Diagnostic lamp.

JP10 Factory only.

Pin-outs of the Port 1 to Port 3 connectors viewed from component side of PCB. Use this information if it is necessary to assemble your own cables. (Note that JP2 & JP3 supports RXD, TXD, CTS, RTS & GND only)

Pin	1	2	3	4	5	6	7	8	9	10
	DCD	DSR		RTS		CTS		RI		n.c

JP5.
10BaseT Ethernet connection.

L10, L11 & L12
Ethernet Port Indicator Lamps

JP7. TEST
Factory use ONLY

JP8. RESET
Factory use ONLY

