GREEN SPRING
C O M P U T E R S

User Manual

XM Octal I/O

Dual 8 Port Rack
Mounting Connector Panel
For Octal I/O IndustryPack®s

XM-Octal I/O

**Dual 8 Port Rack
Mounting Connector Panel
For Octal I/O IndustryPacks**

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1. General Product Description

The GreenSpring Computers IP-Octal Distribution Panel operates with Octal format IndustryPacks IP-Octal Serial and IP-Octal 422. Each panel interfaces up to two IndustryPacks to industry standard D9 connectors. Each D9 connector can be configured meet individual channel requirements. The D9 output emulates the IBM-PC/AT style output for RS-232. These signal names are provide in Figure 9 of this manual.

The IP-Octal Distribution Panel is rack mountable into most standard 19" cabinets and only requires 1U (43.6mm) of rack space. Some mounting hardware is provided for your convenience. D9 to DB25 adapter cables are available in groups of eight. These adapters are shown in figure 10 in this user manual.

2. Model Numbers

IP-Octal Distribution Panel Dual 8 Port Rack Mounting Connector Panel to IP- Octal Serial and IP-Octal 422

Add the following option:

-Eng Kit Provides 8 D9 to DB25 adapters

A 6' (six feet) 50 position flat cable for connection to IndustryPacks is available. Order number:

IP-50 Cable

3. Inspection, Warranty, and Repair

Upon receipt, carefully inspect the IP-Octal Distribution Panel and shipping container for evidence of damage in shipping. Notify the factory immediately if shipping related damage is suspected.

Limited Warranty

GreenSpring Computers warrants this product to be free from defects in workmanship and materials under normal use and service and in its original, unmodified condition, for a period of one year from the time of purchase. If the product is found to be defective within the terms of this warranty, GreenSpring Computers' sole responsibility shall be to repair, or at GreenSpring Computers' sole option to replace, the defective product, provided the product is returned shipping prepaid and insured to GreenSpring Computers. All replaced products become the sole property of GreenSpring Computers.

GreenSpring Computers' warranty of and liability for defective products is limited to that set forth above. GreenSpring Computers disclaims and excludes all other product warranties and product liability, expressed or implied, including but not limited to any implied warranties of merchantability or fitness for a particular purpose or use, liability for negligence in manufacture or shipment of product, liability for injury to persons or property, or for any incidental or consequential damages.

GreenSpring's products are not authorized for use as critical components in life support devices or systems without the express written approval of the president of GreenSpring Computers, Inc.

Service Policy

Before returning a product for repair, verify as well as possible that the suspected unit is at fault. Then call the factory for a RETURN MATERIAL AUTHORIZATION (RMA) number. Carefully package the unit, in the original shipping carton if this is available, and ship prepaid and insured with the RMA number clearly written on the outside of the package. Include a return address and the telephone number of a technical contact. For out-of-warranty repairs, a purchase order for repair charges must accompany the return. GreenSpring Computers will not be responsible for damages due to improper packaging of returned items.

Out of Warranty Repairs

Out of warranty repairs will be billed on a material and labor basis. The current minimum repair charge is $100. Customer approval will be obtained before repairing any item if the repair charges will exceed one third of the quantity one list price for that unit. Return transportation and insurance will be billed as part of the repair and is in addition to the minimum charge.

4. Specifications

Capacity:	16 Channels of RS-232 or RS-422
Connector type	D9 Female
	IBM-PC/AT D9 Serial I/O output
Signals supported	
RS-232	RX, TX, RTS, CTS, DTR, DCD, DSR, RI, GND
RS-422	TX+, TX-, RX+, RX-, GND
Size, inch:	18.99 w
	1.72 h
	1.5 d
Weight:	1.45 lbs

Requires 50 pin ribbon cable (one per IndustryPack) and an IP-Octal Serial or IP-Octal 422

5. Installation and Jumper Options

The Octal panel can be mounted in a standard 19" rack with the provided hardware (4, 10-24 x 1" machine screws).consult the rack manufacturer if the provide hardware is not sufficient for installation.

IndustryPacks can be connected via a 50 pin flat cable to J1 and J2 (located on the back side of the panel). Be careful to put pin 1 in the right location. (The IP-50 cable is keyed to prevent incorrect installation)
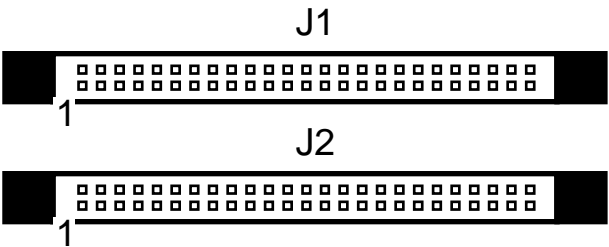
J1

J2

Figure 1, IP-Distribution connectors as viewed from unit back

Each channel of the Octal panel can be configured to meet individual needs. Each channel has a corresponding 16 pin jumper block. Factory default settings are shown below.
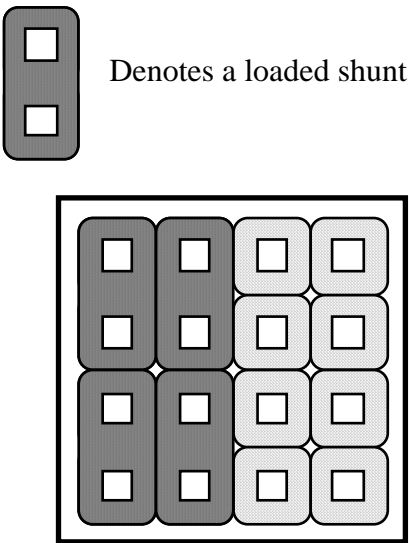
Denotes a loaded shunt

Figure 2. Default jumpering of the Octal Panel

The above jumper setting will allow connection to DCE equipment. The pin assignment on the D9 connector will be as follows:
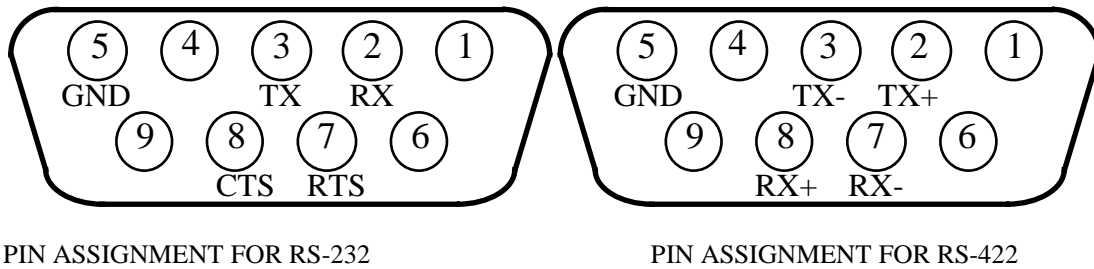

PIN ASSIGNMENT FOR RS-232   PIN ASSIGNMENT FOR RS-422

Figure 3. Default D9 output

To allow connection to DTE RS-232 equipment, the following jumper setting is required:

Denotes a loaded shunt
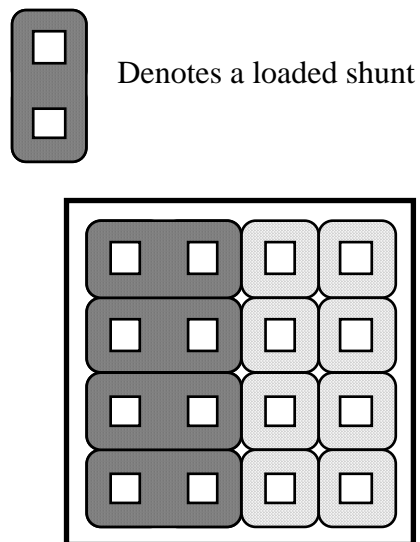

Figure 4. Null modem setting RS-232

The above jumper setting will assign pins on the D9 connector as follows :
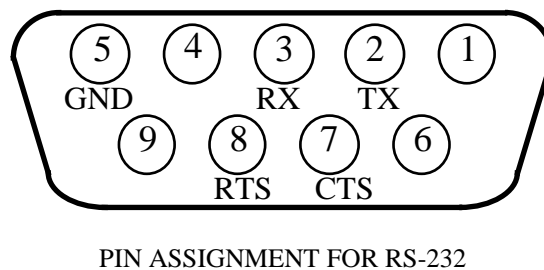

PIN ASSIGNMENT FOR RS-232

Figure 5. Null Modem Output RS-232

To allow connection to DTE RS-422 equipment, the following wire wrapping is required:
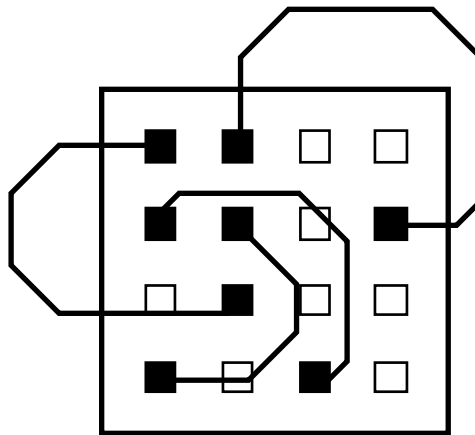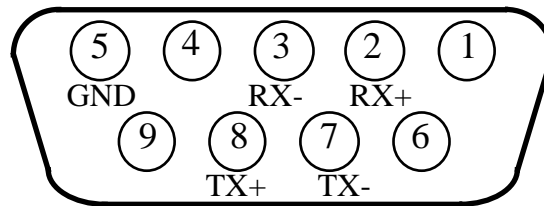

Figure 6. Null modem setting RS-422

The above jumper setting will assign pins on the D9 connector as follows :

PIN ASSIGNMENT FOR RS-422

Figure 7. Null Modem Output RS-422

The Octal panel can also be jumpered to support the following signals standard to some RS-232 equipment:

DCD (Data Carrier Detect)
DTR (Data Terminal Ready)
DSR (Data Set Ready)
RI (Ring Indicator)

Figure 8 shows the Pinout for the jumper blocks when connected to the IP-Octal serial (RS-232). The pins have been configured to provide the maximum amount of options with the use of shunt. If shunts are not available or the configuration required cannot be achieved with shunts, standard wire-wrapping can be done.
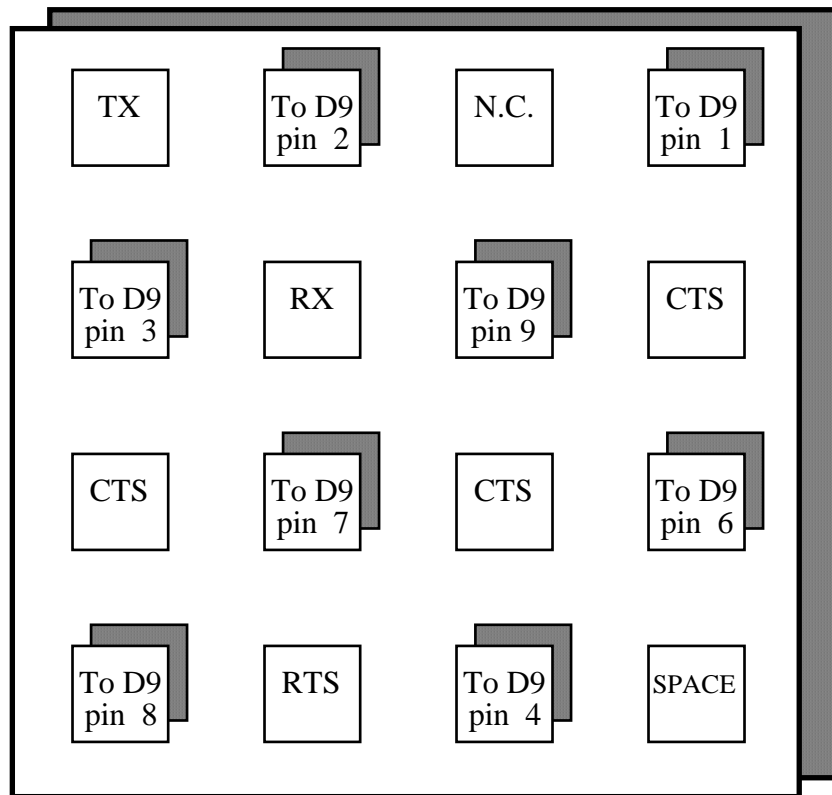

Figure 8. Jumper group pinout for RS-232

Figure 9 shows the Pinout for the jumper blocks when connected to the IP-Octal 422 (RS-422).

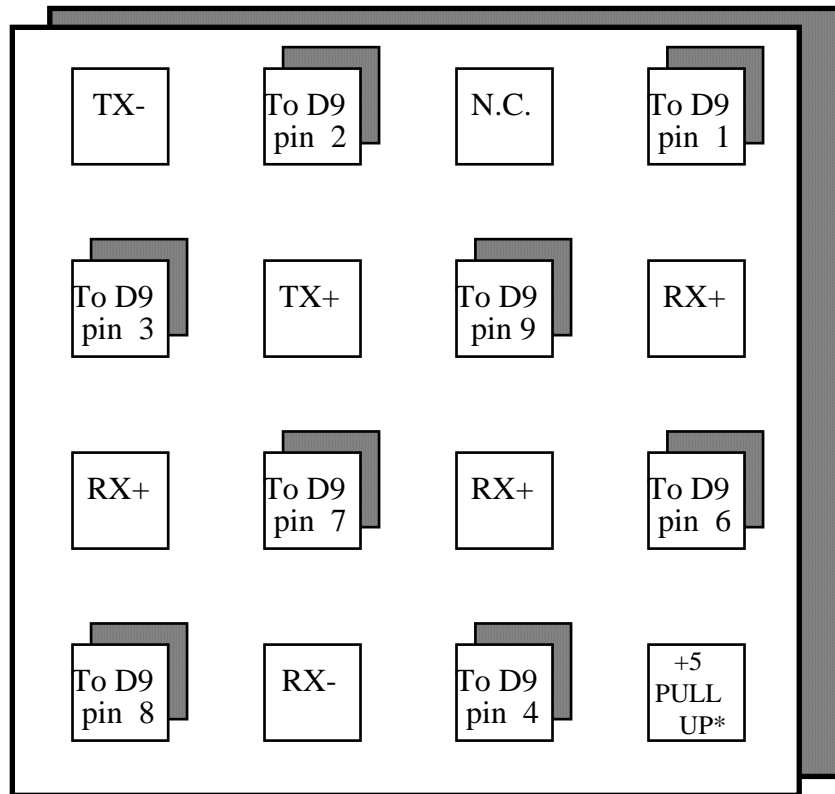|			
TX-	To D9 pin 2	N.C.	To D9 pin 1
To D9 pin 3	TX+	To D9 pin 9	RX+
RX+	To D9 pin 7	RX+	To D9 pin 6
To D9 pin 8	RX-	To D9 pin 4	+5 PULL UP*

Figure 9. Jumper group pinout for RS-422

* Please note that the +5 pull up signal is a function of the installed Industry Pack. This signal is available through pin 42 of the IP's I/O connector. Refer to your IP-Octal documentation to verify that +5 volts is available on this pin.
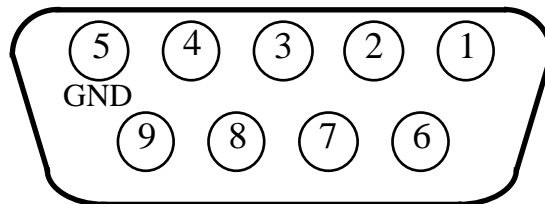
Figure 10. Basic pin out of D9 Female connectors

6. D9 to DB25 Translation

The following chart shows the industry standard RS-232 signals for the D9:

D9	DB25	Signal Name	
1	8	DCD	(Data Carrier Detect)
2	3	RX	(Receive Data)
3	2	TX	(Transmit Data)
4	20	DTR	(Data Terminal Ready)
5	7	GND	Ground
6	6	DSR	(Data Set Ready)
7	4	RTS	(Request To Send)
8	5	CTS	(Clear To Send)
9	22	RI	(Ring Indicator)

Figure 11. D9 to DB25 Translation

7. Accessories

DB25 Female   D9 Male
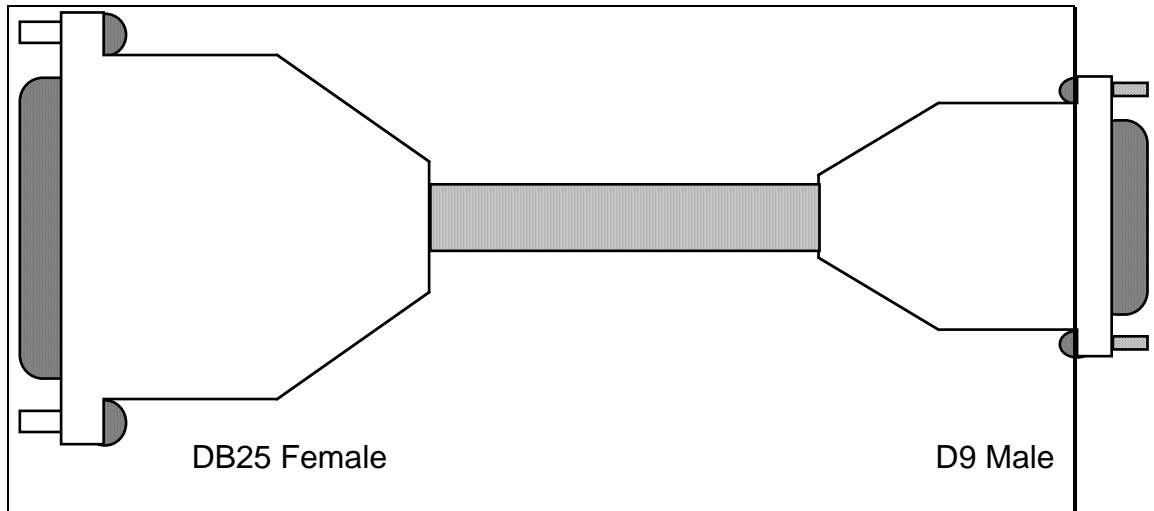
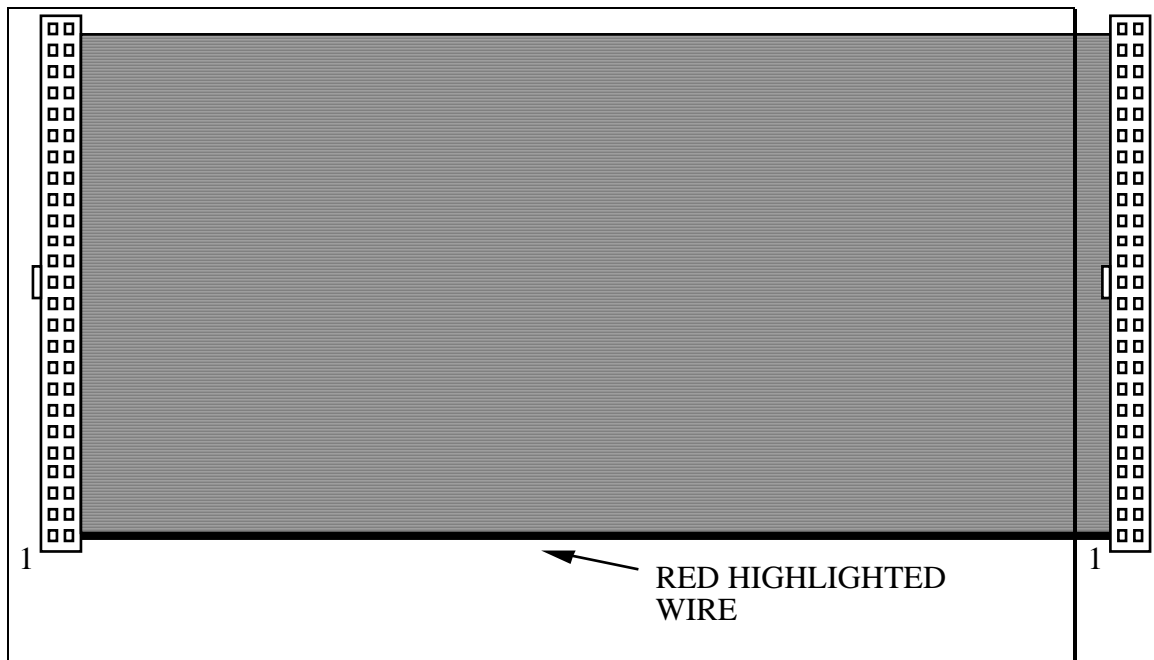Figure 12, DB25 to D9 adapter

1   1

RED HIGHLIGHTED
WIRE

Figure 13. 6' 50 pin flat cable