RAYMAR
TELENETICS

Installation, Operation & Diagnostics

for the
Myriad

Industrial Grade
Rack Mount Modems

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1. GENERAL DESCRIPTION

The *Myriad* Rack Mount Modem Bank is an industrial grade, 19" x 5.25" (3U) chassis with slots for 18 modem cards and 2 power supply cards. Each modem card can be installed with any of Telenetics popular **Pony Express™** Modem Modules.

The *Myriad* can be powered from a wide range of AC or DC voltages. Two power supply cards can be installed to provide automatic backup in the event the primary power supply fails.

The *Myriad* will operate in temperatures from -20 to 85°C and is surge protected on both the power and analog lines.

Each *Myriad* Rack Mount Modem Bank consists of four (4) main components...

1.	Chassis and Backplane	(1)
2.	Power Supply Card	(1 or 2)
3.	Modem Carrier Card	(1 per Modem Module)
4.	Pony Express ™ Modem Module	(Up to 18)
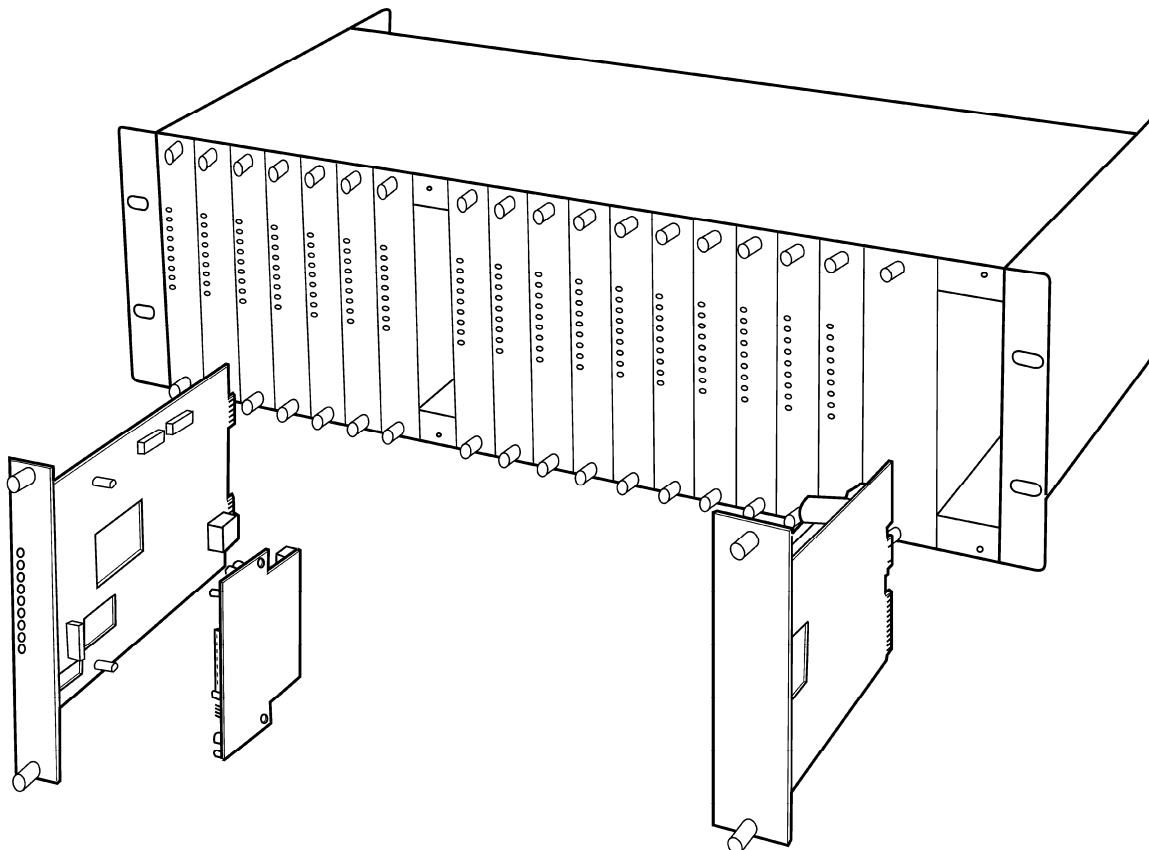
2. MODEL NUMBERS AND DESCRIPTIONS...

The *Myriad* Model Number is defined as follows...

MDR/ aaPEbbbb / ccc dd e

Where...

aa   =   Number of modems to be installed

PEbbbb   =   Type of Pony Express Modem Module (See Section 2)

ccc   =   Power Supply Voltage

dd   =   AC or DC

e   =   Number of Power Supply Cards
                      ("1" = Primary only; "2" = Primary and Backup).

For Example:

MDR/16PE202T/120AC2

16 x PE202T (Bell202T) modems in a rack with 2 x 120VAC power supply cards (Primary and Backup).

3. MODEM CARDS & PONY EXPRESS MODEM MODULES

The modem card that plugs into each of the 18 modem slots in the *Myriad* chassis has a **Pony Express** Modem Module installed on it.

The full range of available **Pony Express** modules is described below...

Part Number	Description
PE2.4-D0	V.22bis 2400bps Dial Modem
PE14.4-D0	V.32bis 14400bps Dial Modem
PE14.4L-D0	V.32bis 14400bps Leased Line Modem
PE9.6FPD-D0	9600bps Digital Fast Poll Modem
PE202T-N0	Bell202T (1200bps) Leased Line Modem
PE-LDM-D0	Limited Distance Modem

4.   POWER SUPPLIES

Slots 19 and 20 on the right hand side of the rack (as viewed from the front) are for power supply cards. The following power supply cards are available:

Part Number	Description	
MDP-01	Power Supply Card with Frontplate:	38 - 56VDC
MDP-02	Power Supply Card with Frontplate:	90 -140VAC, 50/60Hz 90 - 150VDC
MDP-03	Power Supply Card with Frontplate: 50/60Hz	175 - 265VAC,
MDP-00	Power Supply Card with Frontplate:	22 - 36VDC

The voltage range of the power supply supplied with your *Myriad* Rack is marked on the backplane.

Single Power Supply:

If your *Myriad* has only one power supply module installed it should be in **Slot 20**, and Slot 19 should be empty.

Two Power Supplies:

If your *Myriad* has Power Supply Cards in Slots 19 and 20, the card in **Slot 19** should be connected to your **primary power** source, and the card in **Slot 20** should be connected to your **standby power** source. The card in Slot 20 will automatically go into service in the event of a failure of the power supply to Slot 19.

5.   POWER CONSUMPTION

To calculate the power consumption of your *Myriad* Modem Bank, multiply the number of modems installed by the power requirement listed in the following table, *and add 9.5Watts per power supply.*

Modem Module	Description	Current Requirements per Module
PE2.4-D0	V.22bis 2400bps Dial Modem	375 mw
PE14.4-D0	V.32bis 14400bps Dial Modem	1163 mw
PE14.4L-D0	V.32bis 14400bps Leased Line Modem	1163 mw
PE9.6FPD-D0	9600bps Digital Fast Poll Modem	431 mw
PE202T-D0	Bell202T Modem	375 mw
PE-LDM-D0	Limited Distance Modem	84 mw

For Example:

A *Myriad* Rack with sixteen (16) PE202T (Bell 202T) modem modules installed and one (1) power supply card will draw (16) x 375mW = 6 Watts, plus 9.5 Watts for the power supply, = 15.5 Watts Total.

6.   DIMENSIONS, WEIGHT AND ENVIRONMENT

Chassis:	19" Wide x 5.25" High x 9" Deep
Weight (Fully Populated)	10 lbs.
Operating Temperature:	-20 to 85°C
Storage Temperature:	-55 to 100°C
Relative Humidity:	0 to 90% (non-condensing)
Max. Operating Altitude:	20,000 feet
Max. Shipping Altitude:	40,000 feet (shipping)

7.   INDICATOR LIGHTS

(a)   Modem Cards...

Each modem card has LED indicators as follows...

DSR	Data Set Ready
TxD	Transmit Data
RxD	Receive Data
MR	Modem Ready
CD	Carrier Detect
RTS	Ready to Send
CTS	Clear to Send
RI	Ring Indicator

(b)   Power Supply Cards...

Each power supply card has LED to indicate power on.

8.   BACK PLANE CONNECTIONS

Each modem slot is provided with a DB25 (Female) connector for serial data connector. The pinout is standard RS232 as shown in Section 10.

Each modem slot is provided with an RJ11 analog data connector.

The power supply connector will be one of the following, depending on the type of power supply card installed (see Section 4)...

Power Supply Card Part No.	Voltage Range	Power Connectors
MDP-01	40 -60VDC	Screw Terminals
MDP-02	85 -140VAC, 50/60Hz	IEC 320 3-Pin Socket
MDP-02	90 - 150VDC	Screw Terminals
MDP-03	185 - 275VAC, 50/60Hz	IEC 320 3-Pin Socket
MDP-00	19 - 36VAC, 50/60Hz	2.5mm Barrel Connectors
MDP-00	19 - 36VDC	Screw Terminals

Primary Telephone Connector RJ11

Pin   Lease Line 2W   Lease Line 4W

2   2-Wire: Not Used 4-Wire Rx
3   2-Wire: Tx/Rx   4-Wire Tx
4   2-Wire: Tx/Rx   4-Wire Tx
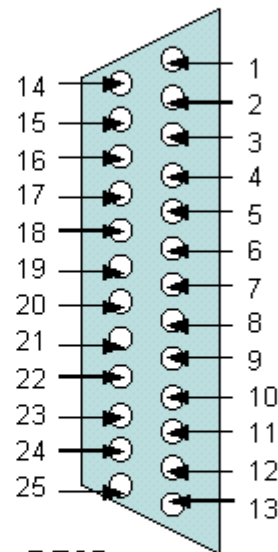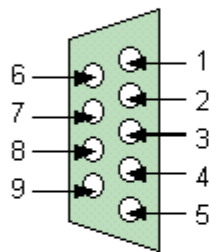5   2-Wire: Not Used 4-Wire Rx

9. SPARE PARTS LIST

Part Number	Description
MDR	Rack Mount Chassis and Backplane Assembly
MDP-01	Power Supply Card with Frontplate: 36 -60VDC
MDP-02	Power Supply Card with Frontplate: 85 -150VAC, 50/60Hz 90 - 150VDC
MDP-03	Power Supply Card with Frontplate: 185 - 275VAC, 50/60Hz 90 - 150VDC
MDMC	Modem Card with Frontplate (Without Modem Module)
PE2.4-D0	Pony Express Modem Module: 2400bps Dial
PE14.4-D0	Pony Express Modem Module: 14400bps Dial
PE14.4L-D0	Pony Express Modem Module: 14400bps Leased Line
PE9.6FPD-D0	Pony Express Modem Module: 9600bps Digital Fast Poll
PE202T-D0	Pony Express Modem Module: Bell202T
PE-LDM-D0	Pony Express Modem Module: Limited Distance Modem

10.   CONNECTOR PIN-OUTS

RS232C is the most commonly used serial data interface and defines the Physical, Functional and Electrical boundaries between two or more communicating devices

~ D-SHAPED SERIAL PORT CONNECTORS ~
are usually used to interconnect DTEs (computers, controllers, etc.)
and DCEs (modems, converters, etc.)

DB9   DB25

Pin	Signal	Pin	Source
1	CD - Carrier Detect	8	MODEM
2	RXD - Receive Data	3	MODEM
3	TXD - Transmit Data	2	TERMINAL
4	DTR - Data Term'l Ready	20	TERMINAL
5	Signal Ground	7	N/A
6	DSR - Data Set Ready	6	MODEM
7	RTS - Ready to Send	4	TERMINAL
8	CTS - Clear to Send	5	MODEM
9	RI - Ring Indication (Dial Modems Only)	22	MODEM

11.   PONY EXPRESS MODEM MODULE

The following pages provide details of the Telenetics Pony Express Modem Modules installed in your *Myriad* Modem Bank.

Section 11 provides specific information relating to the PE module(s) supplied with your particular *Myriad* Modem Bank.