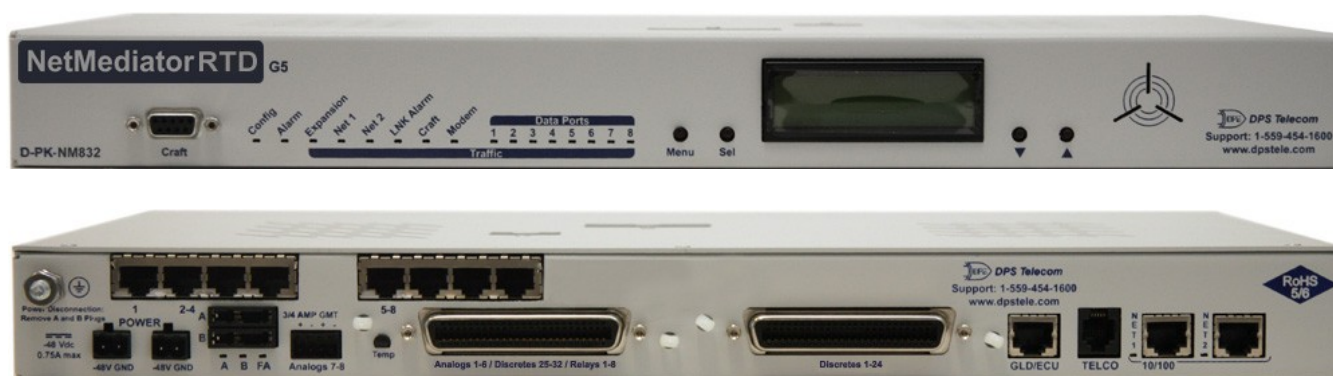


NetMediator RTD G5

USER MANUAL



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Revision History

July 15, 2015	Display Mapping Update
November 29, 2011	Updated TTY Interface images
July 30, 2011	Initial Release

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1 NetMediator RTD G5 Overview



The NetMediator RTD G5 has the tools you need to manage your remote site.

The NetMediator RTD G5 - The Intelligent RTU for Complete Site Management

The NetMediator RTD G5 is a RoHS 5/6-compliant, LAN-based, SNMP/DCPx remote telemetry unit. The NetMediator RTD G5 has all the tools you need to manage your remote sites, including built-in alarm monitoring, paging and email capabilities that can eliminate the need for an alarm master.

Increased Analog Visibility & Grouping

Your NetMediator RTD G5 is preset with control logic to provide an automated relay response to preset groups of discrete, system, and analog threshold alarms. It supports up to 2 RTD 32 DX expansion units, for up to 72 total analog inputs, maximizing temperature monitoring coverage. Analog channels on the RTD 32 DX Expansion units are also covered by your NetMediator's base control logic.

Redundant NetMediators Ensure Monitoring Never Fails

Your NetMediator RTD G5 is designed to work in tandem with another NetMediator RTD G5 to provide redundant monitoring and control responses. Configure primary and secondary NetMediators to ensure that you never lose coverage at your site.

With the NetMediator, you can:

- Monitor 32 discrete alarms, 32 ping alarms, and 8 analog alarms
- Expand analog coverage to 72 sensors with RTD 32 DX units
- Control remote site equipment via 8 terminal server ports and 8 control relays
- Set threshold groups and derive relay actions based on analog threshold alarms
- Monitor your remote site from anywhere using the NetMediator's built-in Web Browser Interface.
- Report alarms to multiple SNMP managers or the T/Mon Alarm Monitoring System.
- Report alarms via LAN or dial-up connection.
- Automatically send pager and email alarm notifications 24/7.
- Connect multiple concurrent users via Telnet over LAN to telecom switches, servers, radios, PBXs and other equipment.
- Ping IP network devices and verify that they're online and operating.
- Configure redundant LAN connectivity, to ensure reporting even if the primary LAN path fails

1.1 About This Manual

There are two separate user manuals for the NetMediator RTD G5: the Hardware Manual (which you're reading now), and the NetMediator RTD G5 Web Interface User Manual.

This Hardware Manual provides instructions for hardware installation and use of the TTY interface. The Web Interface User Manual provides instructions for databasing the NetMediator's alarms, analogs, control relays, and other system information via the unit's web interface.

See the **Grouped Analogs and Derived Controls** section of this manual for more information about your NetMediator's derived relay logic and alarm groups.

1.2 Specifications

Discrete Alarm Inputs:	32
Analog Alarms:	8 (Expandable to 72 with DX Expansions)
Analog Input Range:	(–94 to 94 VDC or 4 to 20 mA)
Analog Accuracy:	+/- 1% of Analog Range (See Analog Step Sizes)
Control Relays:	8 Form C
Maximum Voltage:	60 VDC/120 VAC
Maximum Current:	1 Amp, AC/DC
Ping Alarms:	32
Protocols:	SNMPv1, SNMPv2c, SNMPv3, DCPx, DCPf, TRIP, SNPP SMTP, TAP, HTTP, FTP, TELNET, ICMP, RADIUS
Interfaces:	9 RJ45 Yost serial ports 2 RJ45 10/100 Ethernet ports 1 RJ11 telco jack 2 50-pin amphenol connectors (discretes, controls, and analogs) 1 4-pin screw connector (analog)
Max Dimensions:	1.75"H x 17"W x 8.136"D (12.75"D with back panel) (4.5 cm x 43.2 cm x 20.6) (32.4 cm with back panel)
Weight:	4 lbs. 3 oz. (1.9 kg)
Mounting:	19" or 23" rack
Power Input	
Voltage Options Include:	–48 VDC nominal (–36 to –72 VDC) –24 VDC nominal (–18 to –36 VDC) Wide Range –24/–48 VDC (–18 to –72 VDC) +24VDC (+18 to +36VDC)
Current Draw:	200 mA at 48 VDC
GMT Fuse:	3/4 amp recommended
Modem:	33.6 K internal
Visual Interface:	LCD display 16 bicolor LEDs 5 unicolor LEDs
Audible Notification:	Alarm speaker
Operating Temperature:	32°–140° F (0°–60° C)
Operating Humidity:	0%–95% noncondensing
*RoHS 5 Approved	

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

1.3 Shipping List

While unpacking the NetMediator RTD G5, please make sure that all of the following items are included. If some parts are missing, or if you ever need to order new parts, please refer to the part numbers listed and call DPS Telecom at (800) 622-3314.



**NetMediator RTD G5
D-PK-NM832-12012**



**NetMediator RTD G5 Resource CD
(includes manuals, MIBs, and software)**



**Two Ethernet Cables 14 ft.
D-PR-923-10A-14**



**23" Rack Ears
D-CS-325-10A-01**



**Eight 3/8" Ear Screws
1-000-60375-05**



**Four Metric Rack Screws
2-000-80750-03**



**Two Large Power Connector Plugs for Main Power
2-820-00862-02**



**NetMediator RTD G5 Hardware
Manual D-UM-NM832-12012**



**DB9M-DB9F Download Cable 6 ft.
D-PR-045-10-A-04**



**Telephone Cable 6 ft.
D-PR-045-10A-01**



**19" Rack Ears
D-CS-325-10A-00**



**Four Standard Rack Screws
1-000-12500-06**



**Two 3/4-Amp GMT Main Power Fuses
2-741-00750-00**



**Four Cable Ties
(Sixteen with hinged panel)**



4 Pin Analog Connector
2-820-00814-02



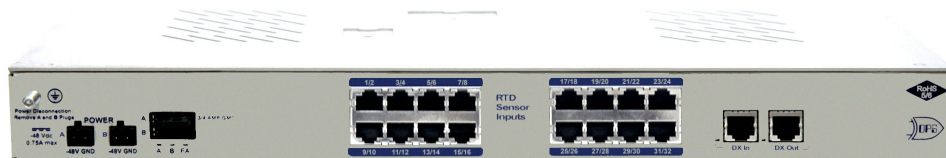
Pads
2-015-00030-00



Screws and connectors are packaged in a sealed hardware kit, shown above

1.4 Optional Accessories

You can extend the capabilities of the NetMediator RTD G5 through accessory units that provide greater discrete alarm capacity, remote audiovisual alarm notification, visual surveillance of remote sites, and other options. If you would like to order any of these accessories, or if you would like more information about them, call DPS Telecom at (800) 622-3314.



RTD 32 DX Expansion **D-PK-DXRTD-12001.00001**

The RTD 32 DX provides an additional 32 analog inputs for your NetMediator RTD G5. You can attach up to 2 RTD DX units to your NetMediator RTD G5 for a total analog capacity of 72 inputs. Scaling, threshold, and alarm groups are all configured from the primary NetMediator RTD G5 unit, keeping all of your analog inputs on one interface for simplified configuration.



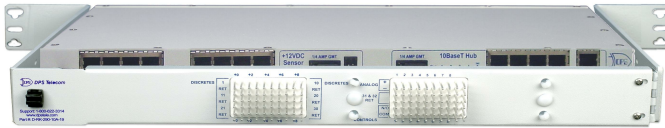
General LCD Display (GLD) **D-PC-820-10A-04**

The General LCD Display (GLD) is a small wall-mounted remote terminal for the NetMediator RTD G5. The LCD display shows system status and alarm messages, and the built-in speaker gives an audible notice of alarms. Up to 12 GLDs can be daisy-chained off the NetMediator RTD G5.



SiteMon IP G2 D-PK-CAMRA

The SiteMON provides streaming video security surveillance of remote sites and provides an additional 2 discrete inputs, 2 analog inputs, and 2 control relays. You can set the SiteMON to record images on a trigger. You can also monitor your SiteMON's view in real-time through the NetMediator's Web Browser Interface.

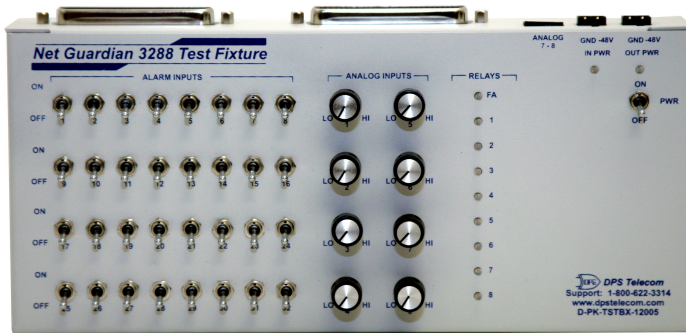


Hinged Wire-Wrap Back Panel

For 19" rack: **D-PK-NGPAN-12002**

For 23" rack: **D-PK-NGPAN-12006**

The hinged wire-wrap back panel provides wire-wrap connections for the NetMediator's alarms and control relays.



NetGuardian 3288 Test Fixture D-PK-TSTBX-12005.00001

Every DPS product is rigorously tested before shipping, and the NetGuardian Test Box allows technicians to verify every discrete alarm input, control relay, and voltage-based analog alarm input on a NetMediator RTD G5. This time-tested tool is now available to you as the NetGuardian 3288 Test Fixture (known casually as the "NetGuardian Test Box"). With 32 discrete alarm toggles, 8 analog knobs, and 8 control relay LEDs, you can verify every alarm input and control output on your NetMediators in a controlled way.

2 Hardware Installation

2.1 Tools Needed

To install the NetMediator RTD G5, you will need:



Phillips No. 2 Screwdriver



Small Standard No. 2 Screwdriver



Wire Strippers/Cutter



Wire Wrap Gun (if hinged wire wrap panel is used)



Punch Down Tool (if 66 blocks are used)



PC with access to the NetMediator (for initial TTY configuration and subsequent Web configuration)

2.2 Mounting

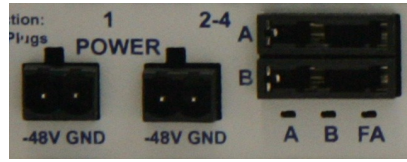


The NetMediator RTD G5 can be flush or rear-mounted

The NetMediator RTD G5 mounts in a 19" rack or a 23" rack using the provided rack ears for each size. Two rack ear locations are provided. Attach the appropriate rack ears in the flush-mount or rear-mount locations shown in Figure 6.2.1.

Note: Rack ears can be rotated 90° for wall mounting or 180° for other mounting options (not shown).

2.3 Power Connection



Power connectors and fuse.

The NetMediator RTD G5 has two screw terminal barrier plug power connectors, located on the left side of the back panel.



The Grounding Lug on the back of the unit provides a permanent connection to earth ground when connected. The Grounding Lug must be used in order to comply with C€ standards.




Grounding Lug and Symbol

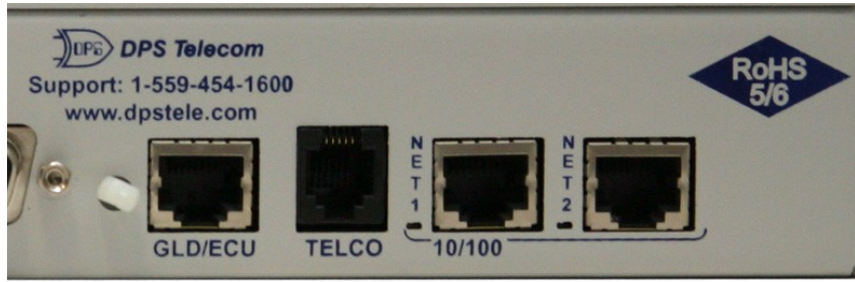
Before you connect a power supply to the NetMediator RTD G5, test the voltage of your power supply:

- Connect the black common lead of a voltmeter to the ground terminal of the battery, and connect the red lead of the voltmeter to the battery's **–48 VDC** terminal. The voltmeter should read **between –43 and –53 VDC**. If the reading is outside this range, test the power supply.

To connect the NetMediator RTD G5 to a power supply:

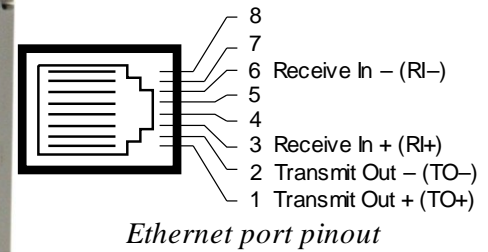
1. Remove the fuse from the back panel of the NetMediator RTD G5. **Do not reinsert the fuse until all connections to the unit have been made.**
2. Remove the power connector plug from Power Connector A. Note that the plug can be inserted into the power connector only one way - this ensures that the barrier plug can only be reinserted with the correct polarity. Note that the **–48V terminal is on the left** and the **GND terminal is on the right**.
3. Use the grounding lug to connect the unit to earth ground. The grounding lug is next to the  symbol. Insert the eyelet of the earth ground cable between the two bolts on the grounding lug (Ground cable not included).
4. Insert a **battery ground** into the power connector plug's **right terminal** and tighten the screw; then insert a **–48 VDC** line to the plug's **left terminal** and tighten its screw.
5. Push the power connector plug firmly back into the power connector. If the power feed is connected correctly, the LED by the connector will light **GREEN**. If the polarity of the power feed is reversed, the LED will not illuminate.
6. Repeat Steps 2–4 for Power Connector B.
7. Reinsert the fuse to power the NetMediator RTD G5. The front panel LEDs will flash **RED** and **GREEN**.

2.4 LAN Connection



Two 10/100 Ethernet ports

RJ45 Ethernet Connection



For enhanced security, the NetMediator RTD G5 has two independent 10/100 Ethernet ports. You will assign each port its own separate IP address and subnet allowing you to safely connect one port to your private LAN and the other to the public Internet.

By default, outbound data traffic from the NetMediator RTD G5 will be sent over Net 2. Only outbound data that is specifically directed to Net 1, will be sent to Net 1. To use both network interfaces, place Net1 and Net2 on separate Subnet Masks.

To use only one of the network interfaces, set the unused port IP, subnet, and gateway to 255.255.255.0.

When a connection is established on Net1 or Net2, the corresponding LED will turn solid green.

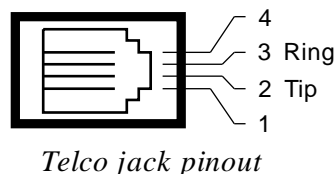
2.5 Telco Connection



Telco jack

The rear panel telco jack (see Figure 6.5.1) connects the NetMediator RTD G5 internal modem to a standard phone line for dial-up access and pager alarm notification.

RJ11 Phone Line Connection



2.6 Alarm and Control Relay Connections



Alarm and control relay connectors

You'll connect dry contacts, analog sensors, and control relays to the NetMediator's two 50-pin connectors labeled "Discretes 1–24" and "Analog 1–6/Discretes 25–32/Relays 1–8" on the back panel. Analog alarm inputs 7 and 8 are connected through the four-pin connector labeled "Analog 7–8."

2.6.1 Grouped Alarms and Derived Controls

Your NetMediator's 8 control relays operate based on derived logic for preconfigured groups of your base discrete, system, and analog threshold alarms (alarm groups 4–8). When wiring and configuring your NetMediator RTD G5, keep in mind group and relay relationships to ensure proper operation.

For more information about **Groups**, see the **Defining Point Groups** section of this Manual.

Note: While relationships between groups and relays are predetermined, you may edit descriptions, set, and clear messages for your alarm groups from the **Groups** menu in the web interface **without altering group-relay relationships**. For your relays, you can determine whether or not your relays will send SNMP traps when their state changes without affecting relay logic.

Group	Members	Group Name	Set Message	Clear Message	Echoed Relays
4	Base Analogs channels 1, 2, 3, 7	Analog 1, 2, 3, 7	Alarm	Clear	
5	System Alarms (Display 11) 36, 40, 56, & 57	All's Well (sys)	Alarm	Clear	7, 8
6	Discrete Alarms	Airflow Sensors	Alarm	Clear	8
7	All minor temperature threshold alarms from RTD 32 DX expansion analog channels	Minor Temp	Alarm	Clear	6
8	All major temperature threshold alarms from RTD 32 DX expansion analog channels	Major Temp	Alarm	Clear	1-5

Default alarm groups for the NetMediator RTD G5 and RTD 32 DX Expansions

Relay (display 11)	Logic	Group
1	_OR G8	Operates relay when an alarm condition is present in group 8.
2	_OR G8	Operates relay when an alarm condition is present in group 8
3	_OR G8	Operates relay when an alarm condition is present in group 8.
4	_OR G8	Operates relay when an alarm condition is present in group 8.
5	_OR G8	Operates relay when an alarm condition is present in group 8.
6	_OR G7	Operates relay when an alarm condition is present in group 7
7	_NO G5	Relay operates when there are no alarm conditions present in alarm group 5. (All points clear)
8	_OR G5 G6	Operates relay when an alarm condition is present in group 5 or group 6

Default relay logic for the NetMediator RTD G5

Default Derived Logic:

DPS Telecom does not recommend editing your NetMediator's default alarm groups or relay logic without expressed direction from DPS Telecom Support. However, if you edit your NetMediator's relay logic, you can return your relays to their default logic from the TTY interface. For more information on restoring your NetMediator's default derived logic, see the section of your NetMediator's hardware manual titled **Restoring Default Derived Logic**.

2.6.2 Alarm and Control Relay Connector Pinout Table

Discretes 1–25						Discretes 25–32			Control Relays 1–8		
	RTN	ALM		RTN	ALM		RTN	ALM		NO/NC	CO
ALM 1	1	26	ALM 13	13	38	ALM 25	1	26	CTRL 1	9	34
ALM 2	2	27	ALM 14	14	39	ALM 26	2	27	CTRL 2	10	35
ALM 3	3	28	ALM 15	15	40	ALM 27	3	28	CTRL 3	11	36
ALM 4	4	29	ALM 16	16	41	ALM 28	4	29	CTRL 4	12	37
ALM 5	5	30	ALM 17	17	42	ALM 29	5	30	CTRL 5	13	38
ALM 6	6	31	ALM 18	18	43	ALM 30	6	31	CTRL 6	14	39
ALM 7	7	32	ALM 19	19	44	ALM 31	7	32	CTRL 7	15	40
ALM 8	8	33	ALM 20	20	45	ALM 32	8	33	CTRL 8	16	41
ALM 9	9	34	ALM 21	21	46				FUSE	17	42
ALM 10	10	35	ALM 22	22	47						
ALM 11	11	36	ALM 23	23	48						
ALM 12	12	37	ALM 24	24	49						
			GND	25	50						

Analog 1–6			Analog 7–8		
ADC	+	–	ADC	–	+
ADC 1	19	44	7	7–	7+
ADC 2	20	45	8**	8–	8+
ADC 3	21	46			
ADC 4**	22	47			
ADC 5**	23	48			
ADC 6**	24	49			
GND	25	50			

Alarm and control relay connector pinout for G5

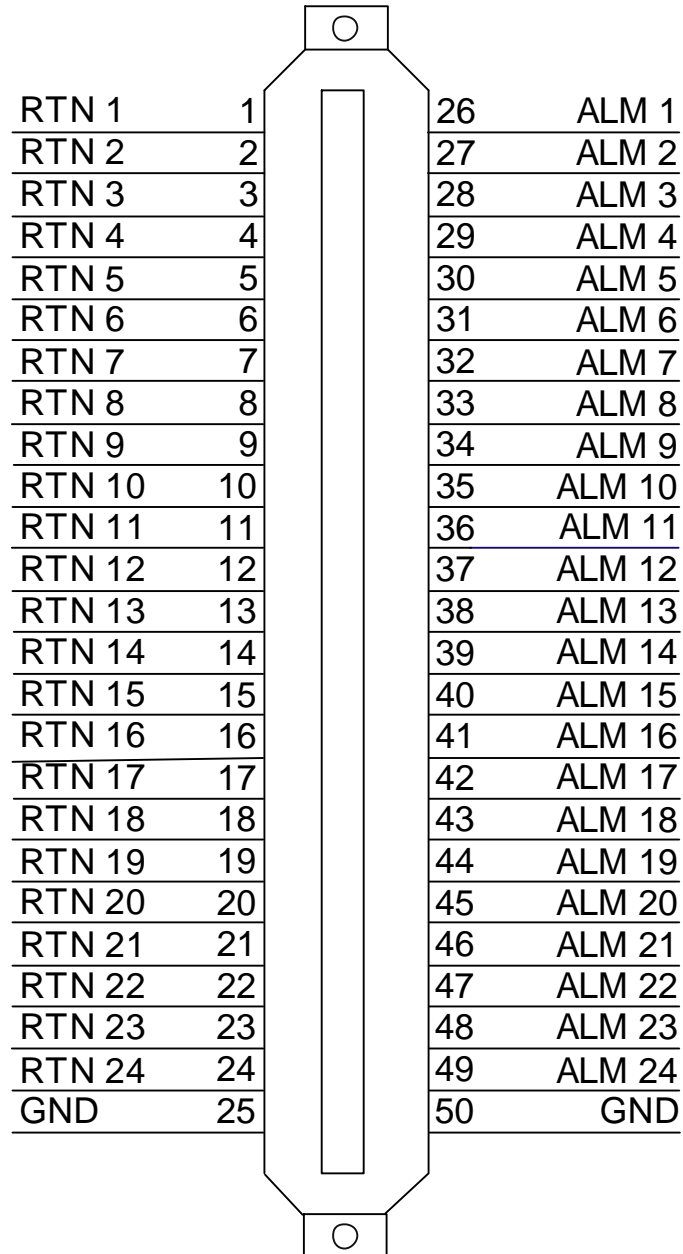
The table above shows pinouts for the 50-pin connectors "Discretes 1–24" and "Analog 1–6/Discretes 25–32/Relays 1–8," and the pinout for the four-pin connector "Analog 7–8."

Note that the NetMediator's control relays can be set for either Normally Open or Normally Closed operation. By factory default, your NetMediator's control relays are set for Normally Open operation. You can configure relays for Normally Closed operation at the hardware level by resetting a jumper on the NetMediator RTD G5 circuit board.

For instructions on resetting control relays for Normally Closed operation, see the section titled **Control Relays**.

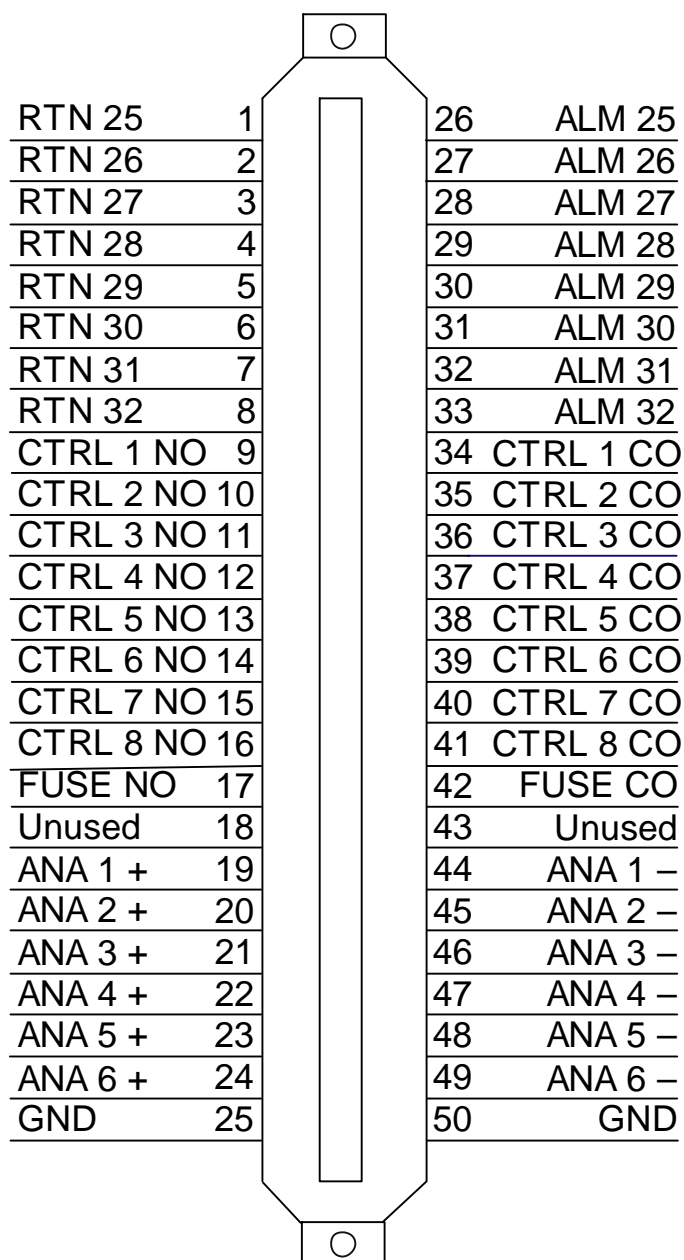
ADC** channels 4, 5, 6, and 8 may be unavailable for external use. Optional integrated temperature and battery sensors, operate on these four channels. For details regarding your unit's hardware build, please reference the product description appendix.

2.6.3 Discretes 1–24 Connector Pinout Diagram



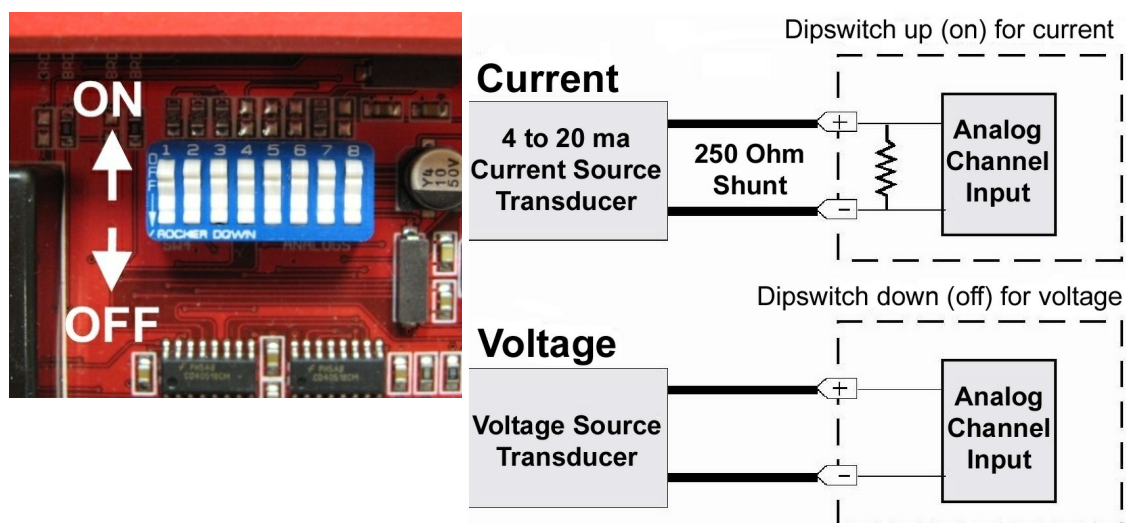
Pinout Diagram for Discretes 1–24 connector

2.6.4 Analogs 1–6/Discretes 25–32/Relays 1–8 Connector Pinout Diagram

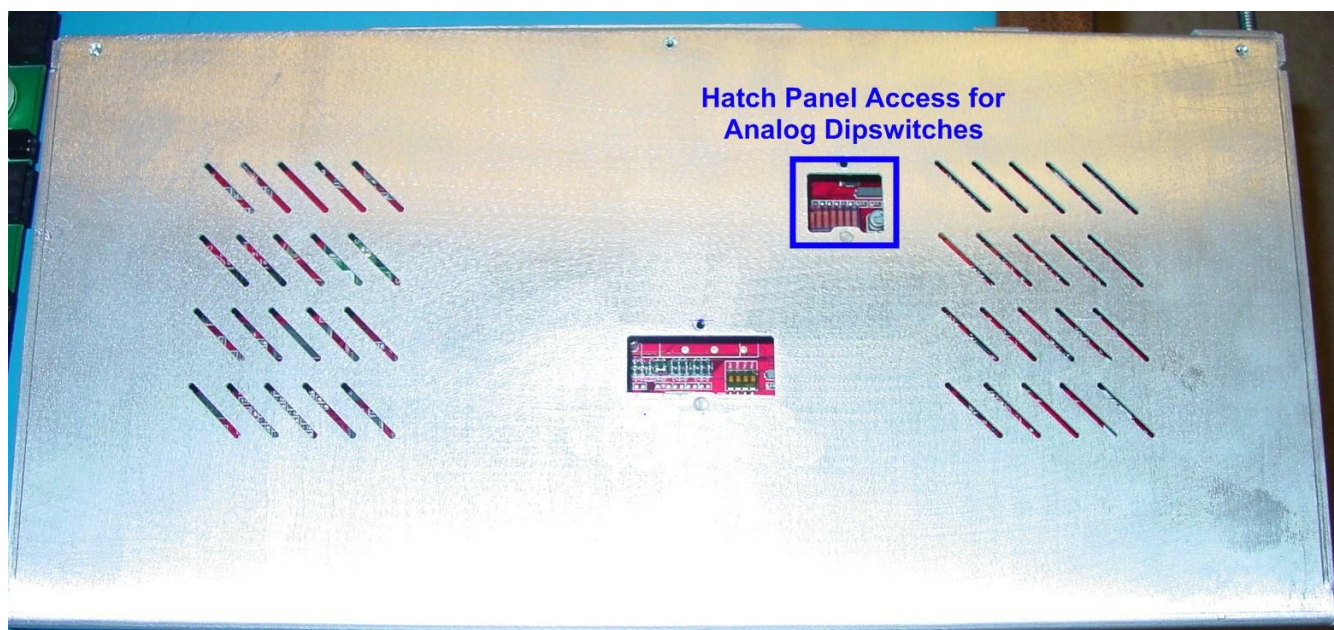


Pinout Diagram for Discretes 25–32/Relays 1–8 connector

2.6.5 Analog Dipswitches



By default, your NetMediator's analog inputs measure voltage. You can, however, configure them to measure a current loop instead by flipping dipswitches accessible via the NetMediator's top sliding panel. For milliamp (current loop) sensor operation on any analog channel, the dipswitch in the up (ON) position. For voltage operation, place the dipswitch in the down (OFF) position.



You can access the analog dipswitches via the sliding hatch panel on top of the unit



WARNING: Do not place dipswitches in the upward, ON position (current loop mode) unless you are sure your sensors are designed to measure a current loop. Placing a dipswitch in the ON position inserts a 250 ohm resistor across the input line. Any voltage beyond 5V or 20 mA will damage components.

2.6.6 Integrated Temperature and Battery Sensor (Optional)



The external temperature sensor

The NetMediator RTD G5 product line is available with optional integrated sensors to monitor internal temperature, external temperature, and current draw at the NetMediator's power input.

Note: Integrated sensors are options available only if ordered for your NetMediator RTD G5 RTU. You cannot add or remove them from the final product.

Each integrated sensor ordered with your NetMediator RTD G5 occupies one of the unit's 8 analog channels.

Sensor Function	Analog Input
Internal Temperature	analog input 4
Power Feed A	analog input 5
Power Feed B	analog input 6
External Temperature	analog input 8

Integrated sensor analog channels

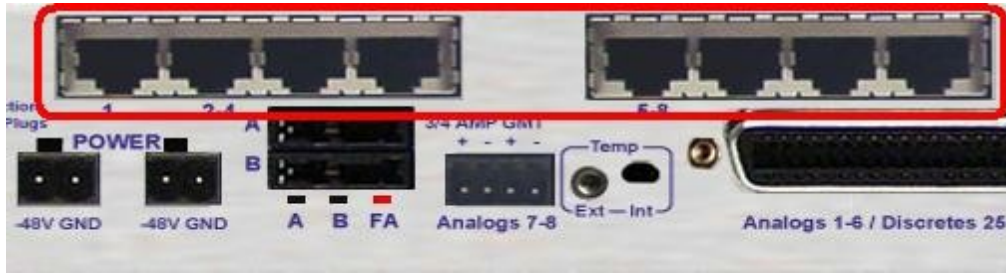
2.6.6.1 Analog Step Sizes

The NetMediator's analog inputs are accurate to within +/- 1% of the analog input range.

Analog Step Sizes and Accuracy		
Input Voltage Range	Resolution (Step Size)	Accuracy
0-5 V	.0015 V	+/- .05V
5-14 V	.0038 V	+/- .14V
14-30 V	.0081 V	+/- .30V
30-70 V	.0182 V	+/- .70V
70-90 V	.0231 V	+/- .90V

Analog step sizes and accuracy

2.7 Data Ports



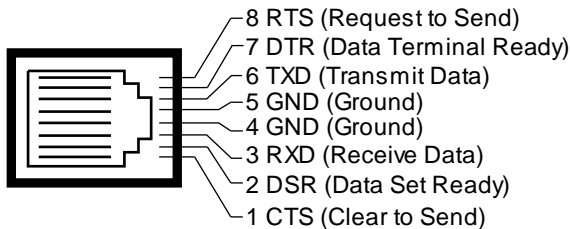
Data ports 1–8

The NetMediator's eight data ports provide reach-through terminal server functionality for connecting multiple simultaneous users to external equipment via Telnet over LAN. Each port can function as a proxy connection to an external device, a craft port, a channel port, a TCP or UDP reach-through port. The NetMediator RTD G5 can support simultaneous proxy connections for up to eight users.

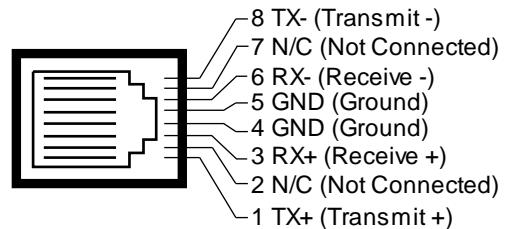
NetMediator RTD G5 data ports are available in Yost RS-232, RS-485, and 4-wire 202 RJ45 connections, factory set according to your preferences/build option. See the **Port Allocation** section of this manual for help identifying the data port types on your particular NetMediator RTD G5 build.

Pinouts for Data Ports on the NetMediator RTD G5

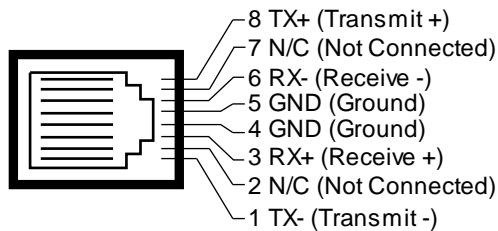
Yost RS-232 RJ45 Connector



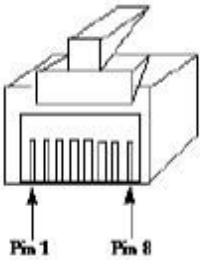
Yost RS-485 RJ45 Connector



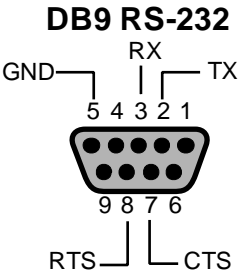
Yost 4-Wire 202 Connector



Data port pinouts



Location of Pin 1 on RJ-45 Connector

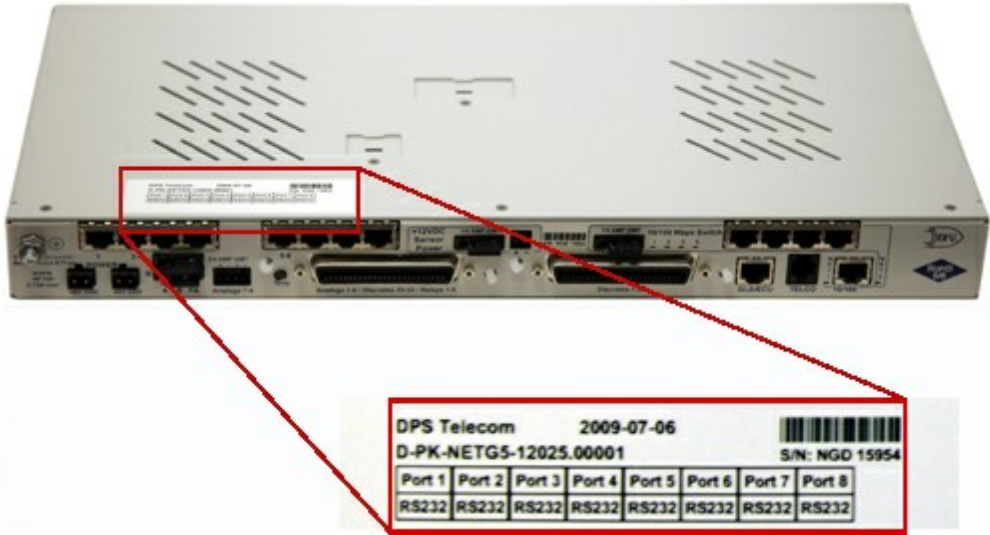


Pin #	Signal	Description
1		Not connected
2	TX	Transmit data
3	RX	Recieve Data
4		Not connected
5	GND	Ground
6		Not connected
7	CTS	Clear to send
8	RTS	Request to send
9		Not connected

DB9 RS-232 Pinout (*Craft Port Only*)

2.7.1 Port Allocation

The Port Allocation Sticker is located on the top of the unit in the back left corner. This sticker includes your part number (D-PK-NM832-#####.#####), specifying your build option. The table below it lists data port allocation.



2.7.2 Connecting NetMediator RTD DX Expansions

Connect your RTD 32 DX expansions to **Port 7**.

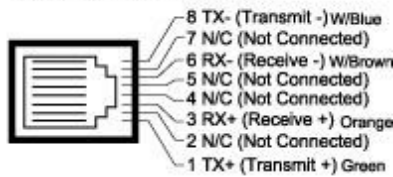
2.7.3 GLD/ECU Expansion Port (RS-485)

If you are using a General LCD Displays (GLD) or Entry Control Units (ECU), connect them to the GLD/ECU port. Both types of devices can be chained together. You can connect up to 13 GLD units or 8 ECUs to your NetMediator's GLD/ECU port.



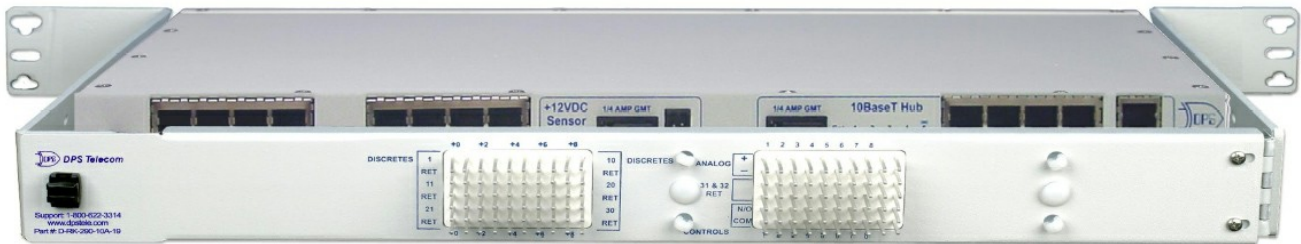
GLD/ECU Port

RS-485 RJ45 Connector



Data Port Pinout

2.8 Optional Hinged Wire-Wrap Back Panel



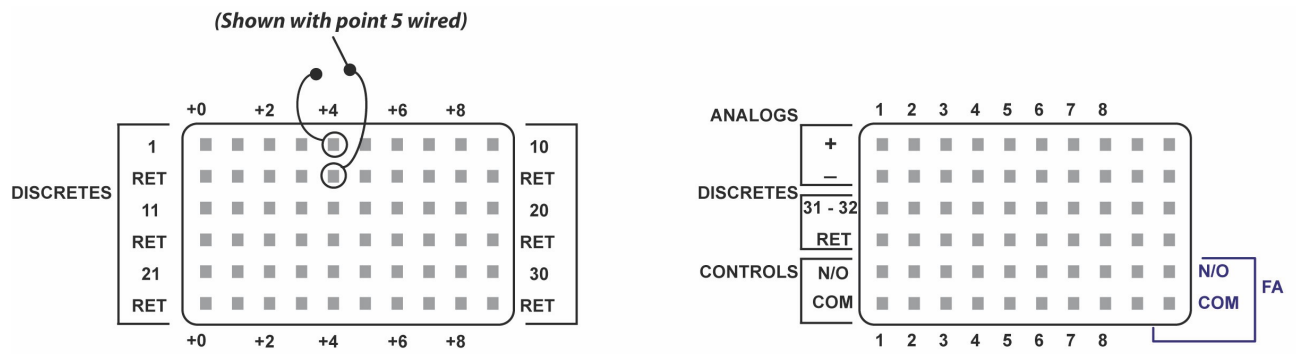
The hinged wire-wrap back panel, mounted on the mounting rack of the NetMediator RTD G5

The optional hinged wire-wrap back panel provides wire-wrap connections for the NetMediator's alarms and control relays.

Note: The hinged wire-wrap back panel supports 18-26 AWG wire (solid). **DPS Telecom recommends using 24 AWG wire (solid).**

To connect alarms and control relays to the wire-wrap panel:

1. Mount the hinged wire-wrap back panel on the mounting rack of the NetMediator RTD G5.
2. Close the hinged back panel and lock in place by turning the black plastic locking swivel to the vertical position.
3. Connect discrete alarms, analog alarms, and control relays to the two pin blocks.



Suggested Wire Wrapping Tools



Hand Wrap Tool

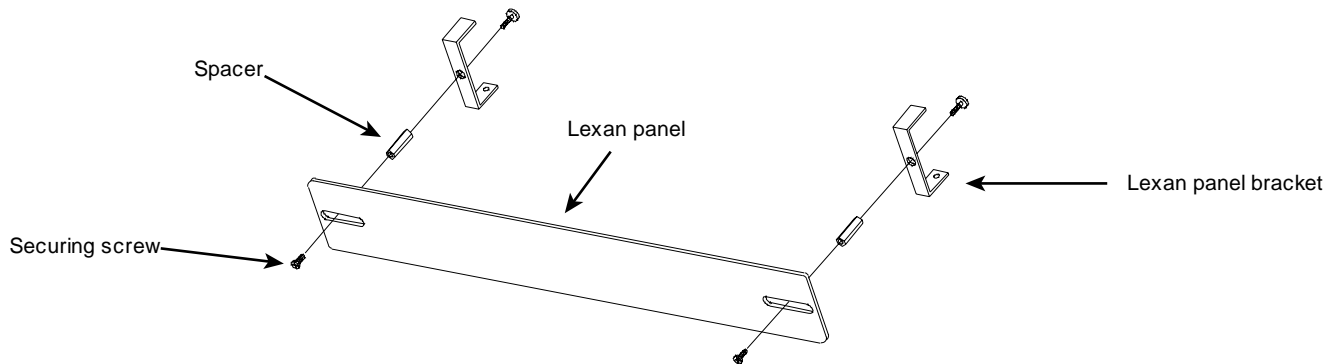


Wire Wrap Gun



Electrical
Wire Wrap Gun

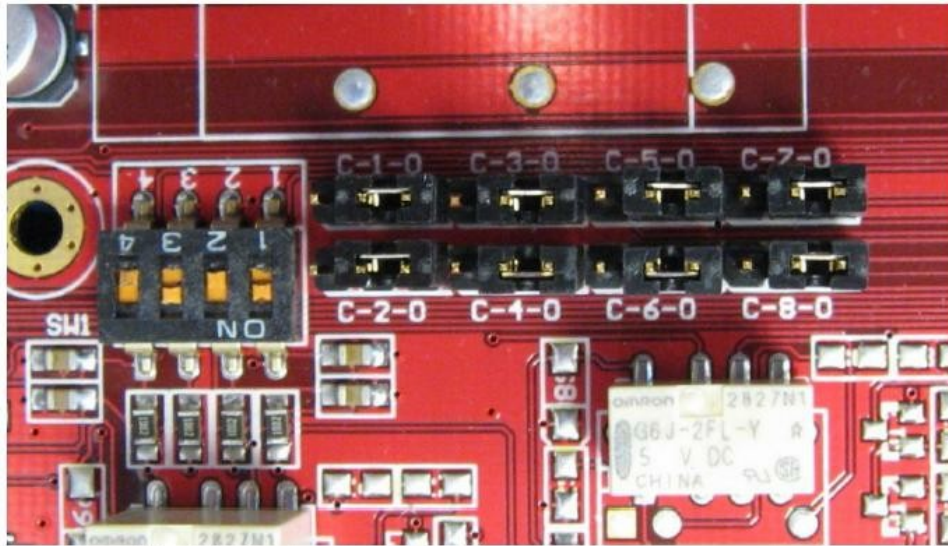
2.8.1 Lexan Wire-Wrap Cover



Lexan panel assembly

Once you've wired your alarms, analog inputs, and control relays, you can cover your connections with the Lexan cover. Simply attach the cover to the included mounting clips and connect to the rear of the hinged panel.

2.9 Control Relays



Adjustable jumpers on the NetMediator RTD G5 circuit board

By default, the NetMediator's Control Relays are configured for **Normally Open (N/O)** operation. You can set them for normally closed (N/C) operation via jumpers on the NetMediator's circuit board.

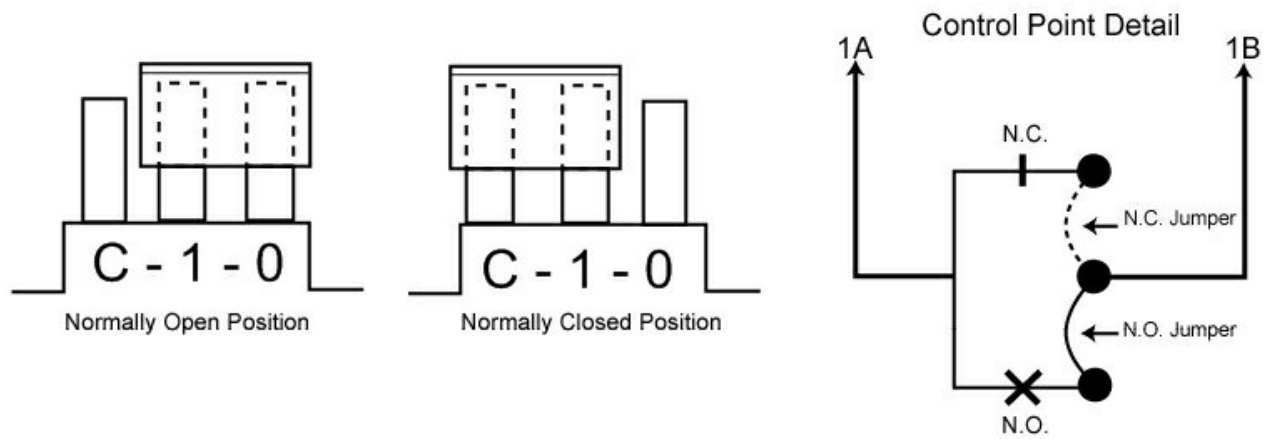
You can access your NetMediator's relay jumpers from the hatch panel on the top of the unit. Remove top screw on hatch panel and rotate hatch cover until you can easily reach the jumpers.



Hatch Panel Access on Top of the NetMediator RTD G5 Chassis

WARNING: Always observe anti-static precautions whenever opening the unit.

2.9.1 Control Relay Jumper Settings



Jumper settings for analog alarm inputs and control relays

The open position corresponds to normally open operation, and the closed position corresponds to normally closed operation.

3 LCD Display



NetMediator RTD G5 Front Panel LCD

The front panel LCD displays the current alarm and control status and provides a command menu for controlling the NetMediator's basic functions.

Using the LCD command menu

The four buttons surrounding the front panel LCD are used to access the LCD Command Menu. To access the menu, press the Menu button. To scroll the menu, use the ▼ and ▲ buttons. To select a menu command, press the Sel (Select) button.

Standard Prompt

When no Command Menu item is selected and no alarms or relays are active, the LCD displays the firmware version and the standard prompt, `Press MENU for front panel options.`

Controlling Display Speed

The scroll speed can be temporarily increased by pressing and holding the ▲ button while the message is active.

3.1 Alarm and Control Status Messages

The LCD will display messages to indicate active alarm and control relay status.

<i>Discrete Alarms:</i>	If there are any standing discrete alarms, the display will read "Discrete Alarms:", followed by the user-defined descriptions of the standing alarm points.
<i>Relays:</i>	If there are any latched relays, the display will read "Relays:", followed by the user-defined descriptions of the latched relays.
<i>Ping Alarms:</i>	If any ping targets have failed to respond within the specified time, the display will read "Ping Alarms:", followed by the user-defined descriptions of the ping targets.
<i>Analogs:</i>	If any analog channels have crossed a threshold value, the display will read "Analog", followed by the user-defined description of the analog channel, the channel's last voltage reading, and a letter indicating which threshold the channel has crossed.

Analog thresholds are represented by the following characters:

Major Over:	a capital O
Minor Over:	a lower-case o
Minor Under:	a lower-case u
Major Under:	a capital U

3.1.1 LCD Point Mode Operation

When the LCD is in **Point Mode**, it will display only points that are in alarm, rather than full alarm and relay descriptions. You can configure the LCD for point mode operation from either the TTY command line interface or the web interface.

Point Mode processes alarm windows in this order:

1. Base Alarms
2. Expansion 1 Alarms
3. Expansion 2 Alarms
4. Expansion 3 Alarms
5. Ping Alarms
6. Base Relays
7. Expansion 1 Relays
8. Expansion 2 Relays
9. Expansion 3 Relays
10. Base Analogs
11. Expansion 1 Analogs
12. Expansion 2 Analogs
13. Expansion 3 Analogs
14. Network Link Down

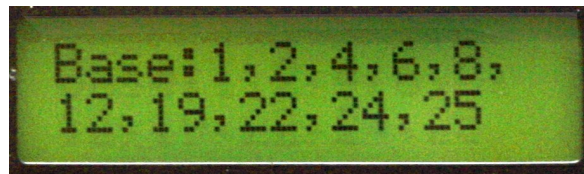
Only active alarms will appear on the LCD. If no alarms are active, a "no alarms active" message will appear.

You can determine the length of time for which each point will appear on the screen 1-60 seconds (default is 2 seconds) by setting the **LCD Delay** time via the TTY interface.

Using the Front Panel LCD buttons in Point Mode

Pressing the SEL, ▲, or ▼ buttons will force the NetMediator RTD G5 back into Scroll Mode (standard LCD operation) for 3 minutes. This is particularly useful for viewing the configured descriptions or analog values associated with the active alarms.

If, while in Point Mode, you enter Scroll Mode by mistake, you can press the **Menu** button twice to revert to Point Mode operation.



See the **TTY Command Mode** section of this manual for commands related to Point Mode.

3.2 LCD Command Menu



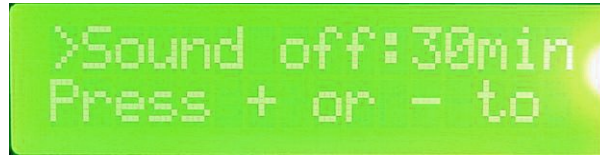
LCD display

To access the Command Menu, press the **Menu** button.

The LCD Command Menu provides commands for controlling some of the NetMediator's basic functions: temporarily silencing the alarm speaker, rebooting the unit, and running the TTY configuration utility.

When no Command Menu item is selected and no alarms or relays are active, the LCD displays the firmware version and the Standard Prompt, **Press MENU for front panel options.** (See example above.)

3.2.1 Sound off



Sound Off command

Sound off

The Sound off command suppresses sounds from the alarm speaker for a user-defined period of 10, 20, or 30 minutes. **To scroll to the next menu command**, press the ▼ button.

To change the Sound off setting, press Sel to select the command. The arrow cursor (>) will move to the right of the colon (:) in **Sound off:** to indicate that the command submenu is selected. Press the ▼ and ▲ buttons to scroll through the Sound off time period options. Select 0 minutes to allow all sounds. When the time period you want is displayed, press Sel to make your selection. **To exit the Command Menu** without changing the Sound off setting, press Menu.

3.2.2 Reboot



Reboot command

Reboot

The Reboot command reboots the NetMediator RTD G5. Press Sel. The LCD will briefly display the message **Rebooting . . .**, and the normal boot sequence will begin. **To exit the Command Menu** without rebooting, press Menu.

3.2.3 Run Config



Run Config command

Run Config

The Run Config command forces the TTY configuration interface to run over the craft port at the user defined baud rate (default is 9600 baud).

To run the TTY configuration utility, press Sel. **To exit the Command Menu** without running the TTY interface, press Menu.

3.2.4 Contrast

The **Contrast** command provides controls for adjusting the contrast of the LCD.

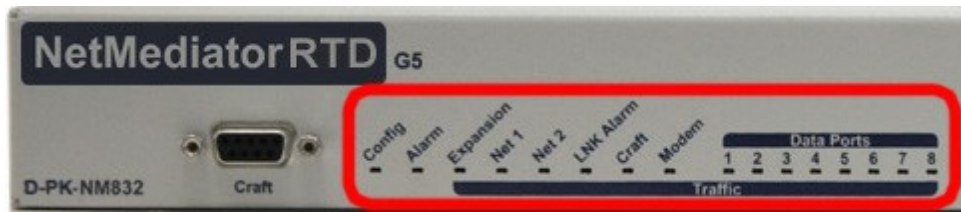
To adjust the contrast, press Sel to select the command. The arrow cursor (>) will move to the right of the colon (:) in **Contrast:** to indicate that the command submenu is selected. Press the ▼ or ▲ button until you're satisfied with the contrast setting, then press Sel to make your selection. **To exit** the Command Menu and **revert to the default contrast setting**, press Menu.

4 Alarm Speaker

The NetMediator's alarm speaker emits distinctive tones under two conditions

1. **If there is an Ethernet connection failure**, the speaker will emit a **high-low warbling tone**. Press any front panel button to silence the speaker.
2. **If an alarm occurs**, the speaker will emit an **intermittent beep**. Press any front panel button to silence the speaker. If you do not silence the speaker, the beep will continue for the user defined duration (default is a 6 second duration). Silencing the speaker will allow the next alarm, if any, to sound.

5 Front Panel LEDs



Front panel LEDs

The NetMediator's front panel LEDs indicate communication and alarm reporting status. LED status messages are described below in Table 9.A.

LED	Status	Description
Config	Blink Green	Valid Configuration
	Blink Red	Invalid Configuration
Alarm	Blink Red	New COS alarm*
	Solid Red	One or more standing alarms Note: You must configure alarms for notifications to be reflected in LED
Expansion	Blink Green	Transmit over expansion port
	Blink Red	Receive over expansion port
Net 1	Blink Green	Transmit over Ethernet port 1
	Blink Red	Receive over Ethernet port 1
Net 2	Blink Green	Transmit over Ethernet port 2
	Blink Red	Receive over Ethernet port 2
LNK Alarm	Solid Red	No Ethernet link detected (for configured Net1 or Net2)
Craft	Blink Green	Transmit over craft port
	Blink Red	Receive over craft port
Modem	Blink Green	Transmit over Modem port
	Blink Red	Receive over Modem port
Data Ports 1-8	Blink Green	Transmit over indicated data port
	Blink Red	Receive over indicated data port

Front panel LED Status message descriptions

6 Back Panel LEDs



Back panel LEDs for Power (left) and Ethernet connections

The back panel LEDs indicate the status of power and Ethernet connections. LED status messages are described below in Table 10.A.

	LED	Status	Description
Power	Power A and/or B	Solid Green	Polarity is correct on power feed A
		Off	No Power or Polarity Reverse
	FA	Solid Red	Fuse failure
10/100 Net	Net1	Blink Green	Activity over indicated integrated Ethernet port
	Net2	Solid Green	Link detected

Table 10.A. Back panel LED Status message descriptions

7 Initial Configuration

To incorporate the NetMediator RTD G5 into your network, you must configure its ethernet port(s). Initial NetMediator RTD G5 ethernet configuration is performed via the unit's integrated TTY interface. To access the TTY interface, you will establish either a serial craft port connection or a LAN connection that mimics the NetMediator's default network settings.

You may also use the TTY interface to fully configure the unit or, once the ethernet ports are configured, access the web interface to fully database the unit. For more information about the TTY interface, see the section titled Configuring the NetMediator RTD G5 via TTY. For information about the unit's web interface, see the NetMediator's Web Interface manual.

7.1 ... via Craft Port

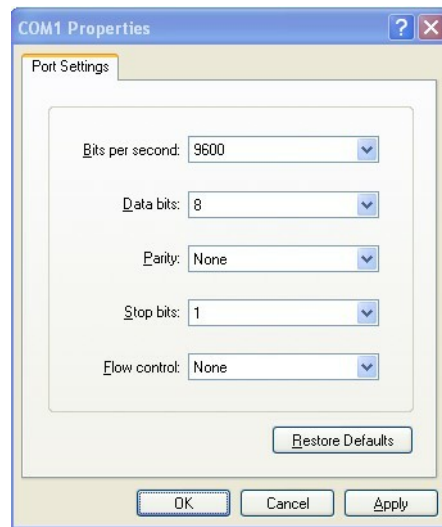


NetMediator RTD G5 Craft Port

The easiest way to connect to the NetMediator RTD G5 for initial configuration is via a craft serial connection.

To establish a craft serial connection:

- Use the DB9M-DB9F download cable provided with your NetMediator RTD G5 to connect to your NetMediator's craft port to your computer's serial port.
- Open HyperTerminal or a similar terminal emulation program and establish a connection with **the following COM port options:**
 - Bits per second: **9600**
 - Data bits: **8**
 - Parity: **None**
 - Stop bits: **1**
 - Flow control: **None**

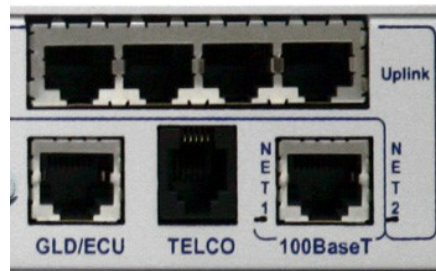


Configure your craft connection in HyperTerminal

- When prompted for the password, enter **dpstelecom**

You can perform basic configuration via the craft port - but if you like, you can connect via the craft port just to configure the NetMediator's Private LAN IP address, and then do the rest of your configuration via a LAN connection.

7.2 ... via LAN



Ethernet ports

You can also connect to the NetMediator RTD G5 over a LAN connection for initial configuration.

Note: NET1's default IP address is: 192.168.1.100

If you have physical access to the NetMediator RTD G5, it is easier to connect to the unit through the craft port and assign it an IP address than it is to initially connect to the unit via LAN. Once you have assigned the NetMediator's ethernet settings, you may then easily complete the unit's configuration over LAN. For help establishing a craft serial connection with your NetMediator RTD G5, see the previous section of this manual.

If you DON'T have physical access to the NetMediator RTD G5, you can establish an initial LAN connection with the unit by temporarily changing your PC's IP address and subnet mask to match the NetMediator's default settings.

To establish an Initial TTY connection to the NetMediator RTD G5 via LAN:

1. Look up your PC's current IP address and subnet mask, and write the information down; you will temporarily change your PC's IP and subnet mask to access the NetMediator RTD G5, and you'll want this information so you can easily restore your previous settings.
2. Reset your PC's IP address to **192.168.1.200**.
3. Reset your PC's subnet mask to **255.255.0.0**. You may have to reboot your PC to apply your changes.
4. Once the IP address and subnet mask of your computer coincide with the NetMediator's, you can access the NetMediator RTD G5 via Telnet session at port 2002 or via Web browser using the NetMediator's default IP address, **192.168.1.100**.
5. When prompted for the password, type **dpstelecom** and press Enter.
6. Provision the NetMediator RTD G5 with the appropriate information (see **Ethernet Configuration** later in this chapter for more information). Once you've configured your NetMediator's ethernet connection, you may revert your computer's IP address and subnet mask back to their original settings - the information you wrote down in Step 1.

7.3 Ethernet Port Setup

The NetMediator RTD G5 must be assigned appropriate IP, subnet, and gateway information before it can operate in your LAN/WAN environment.

```

asdas - HyperTerminal
File Edit View Call Transfer Help

Password: *****

Net Mediator RTD G5 v5.0B.3145
Net Mediator RTD G5 @ dpstele.com

C)onfig P)roxy T)elnet D)ebug e(X)it
E)dit M)onitor P)ing S)tats T)une Modem R)eset Port (ESC) ? E
NET(1) NET(2) n(V)ram P)PP D)ate/time R)ebboot s(Y)stem (ESC) ? 1
Net 1 Interface
Unit Address      : 126.010.220.197 (126.010.220.197)
Subnet Mask       : 255.255.192.000 (255.255.192.000)
Default Gateway   : 126.010.220.254 (126.010.220.254)
Link Status       : Detected
IP Filter         : Disabled
MAC Address       : 00.10.81.00.18.BA
Features          : 8AA5-D5-B995
U)nit Address S)ubnet Mask G)ateway
I)P Filter F)eatures (ESC) ?
  
```

Configure the Ethernet port parameters

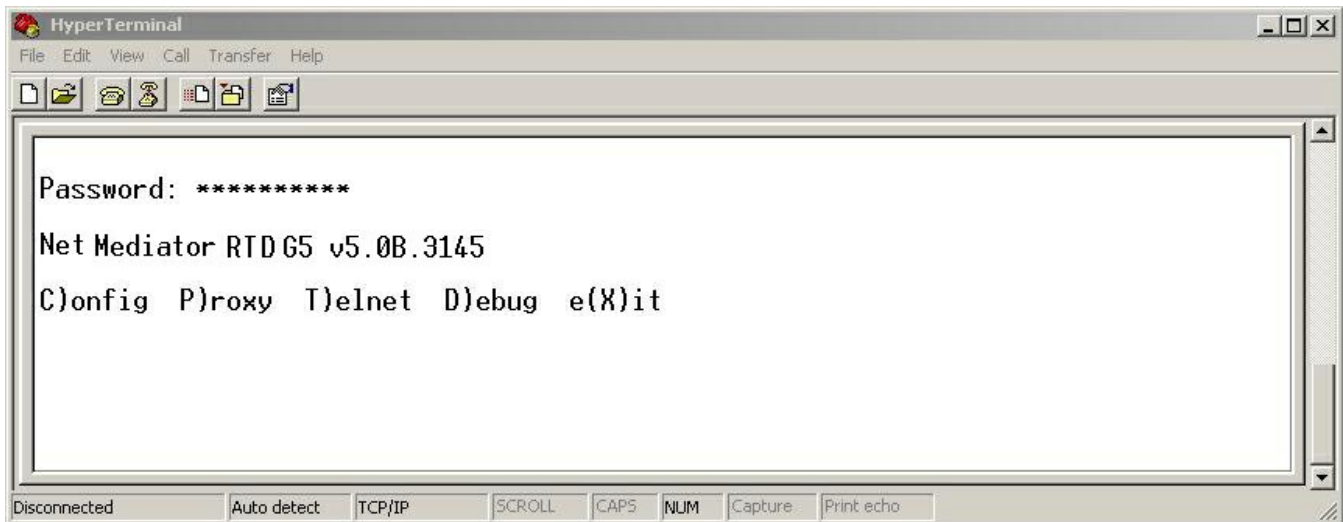
To assign your NetMediator's network settings:

Note: The following steps assume you have established a connection with the NetMediator RTD G5. If you have not done so, see the previous sections in this chapter to connect to your NetMediator RTD G5 either via serial craft connection or over LAN.

1. When prompted for the password, enter **dpstelecom**
2. Type **C** for the C)onfig menu.
3. Type **E** for E)dit menu.
4. Type **E** for port settings,
 - Press **1** to edit settings for the NetMediator's **Net 1** ethernet port
 - Press **2** to edit settings for the NetMediator's **Net 2** ethernet port.
5. Configure the **Unit** IP address, **Subnet** mask, and **Default** gateway.
6. **ESC** to the main menu.
7. When prompted to save your changes, press **Y** (yes).
8. Press **R** to reboot the NetMediator RTD G5.

Once the unit reboots, you can resume NetMediator RTD G5 configuration, access the unit over IP (Telnet TTY or Web Interface), and poll it via T/Mon.

8 Advanced TTY Configuration



The TTY interface

The TTY interface is the NetMediator's text terminal interface for configuring your NetMediator RTD G5.

You can access the TTY interface:

- via craft serial connection
- over IP address on **Port 2002**. Telnet sessions are established on port 2002 as a security measure.

For more instructions on connecting to your NetMediator RTD G5 to access the TTY interface, see the **Initial Configuration** section of this manual.

NOTE: The TTY default password is **dpstelecom**.

Navigating the TTY Interface:

The capitalized letters in each menu option, before, or enclosed in, parentheses (), are menu shortcut keys. Press a shortcut key to access a menu option. The ESC key will always bring you back to the previous menu level. Entries are not case sensitive.

8.1 Restoring Default Derived Logic

Your NetMediator's relays are factory set with derived logic to operate based on the conditions of preconfigured groups of base alarms, system alarms, and analog thresholds. If you edit the factory-defined relay logic in error, you can restore the default relay logic via the TTY interface.

To restore default relay logic:

1. Access the TTY Interface.
2. Navigate to **C**onfig > **E**dit > **R**e(L)ay.
3. Choose **Y**es to restore default derived logic.

```

Password: *****
NetMediatorRTD-G5 v5.3G.0246
C>onfig P>roxy T>elnet D>ebug e<X>it
E>dit M>onitor P>ing S>tats T>une Modem R>eset Port <ESC> ? E
E>thernet n<U>ram re<L>ay P>PP D>ate/time R<A>DIUS R>eboot <ESC> ? L
Default derived logic?
Y>es N>o <ESC> ? _

```

Restore default relay logic via the TTY Interface

8.2 Ethernet Backup Mode



```

Telnet 126.10.241.146
NetGuardian864-G5 v5.2G.0425
NG864test @ dpstale.com
C>onfig P>roxy T>elnet D>ebug e<X>it
E>dit M>onitor P>ing S>tats T>une Modem R>eset Port <ESC> ? E
E>thernet n<U>ram P>PP D>ate/time R<A>DIUS R>eboot <ESC> ? E
G>lobal NET<1> NET<2> <ESC> ? 2
Net 2 Interface
Unit Address      : 126.010.200.114 <126.010.241.146>
Subnet Mask       : 255.255.192.000 <255.255.192.000>
Default Gateway   : 255.255.255.255 <126.010.220.192>
Link Status       : Detected <not in use>
Backup Mode       : Enabled
Autoswitch        : Disabled
MAC Address       : 00.10.81.00.15.D8
Unit Address      S>ubnet Mask G>ateway B>ackup Mode
Autoswitch       s<W>itchToNet1 <ESC> ?

```

Enable "Backup Mode" to automatically switch between Net1 and Net2.

Backup Mode enables the NetMediator RTD G5 to automatically switch from the primary network path (Net1) to the backup network path (Net2) should the primary LAN connection fail, allowing you to maintain critical visibility even when a connection fails, without skipping a beat.

When operating in Backup Mode, both of the NetMediator's ethernet ports are configured and connected, but the NetMediator RTD G5 will only communicate via the Net1 interface until a LAN failure occurs. If a LAN failure occurs, your NetMediator RTD G5 will automatically employ the Net2 connection, reverting to the Net1 LAN connection when the primary interface's uplink is reestablished.

To enable Backup Mode

1. Login to the TTY interface and go to **C**onfig > **E**dit.
2. Go to **E**thernet > **NET(2)** to configure the Net 2 Interface.
3. Press **B** to enable Backup Mode
4. Press **A** to enable the automatic switching feature.

8.3 Edit PPP Port

From the E)dit menu, you can press **P** to edit the baud rate of the port you've chosen for PPP pass through.

```

C)onfig P)roxy T)elnet D)ebug e(X)it
E)dit M)onitor P)ing S)tats T)une Modem R)eset Port (ESC) ? E
E)thernet n(V)ram P)PP R)eboot s(Y)stem (ESC) ? P

Configuration
  Port      : Data1
  Baud      : 9600
  Compression : Yes

Client
  Mode      : onDemand
  Phone     :
  Username  :
  Password  :

Server
  Server    : Disabled
  Address   : 255.255.255.255 (Client Specified)

P)ort B)aud mo(D)em C)ompression M)ode
p(H)one U)sername pass(W)ord S)erver A)ddress B)aud mo(D)em (ESC) ?

```

Edit your PPP port

To configure your PPP port:

1. Navigate to the PPP menu: **C)onfig > E)dit > P)PP** menu
2. Press **P** to select the **P)ort**, you wish to configure for PPP operation.
3. Configure your port according to the remainder of the menu options in the PPP tab. See the table below for a list of available options in the PPP menu.

```

Client
  Mode      : onDemand
  Phone     :
  Username  :
  Password  :

Server
  Server    : Disabled
  Address   : 255.255.255.255 (Client Specified)

P)ort B)aud mo(D)em C)ompression M)ode
p(H)one U)sername pass(W)ord S)erver A)ddress B)aud mo(D)em (ESC) ? B
3)00 6)00 1)200 2)400 4)800 9)600 a)19200 b)38400 (ESC) ?

```

Select the baud rate for your PPP port

8.4 RADIUS Configuration

RADIUS (Remote Authentication Dial In User Service) is an industry-standard way to manage logins to many different types of equipment from a central user database.

With RADIUS enabled, the NetMediator RTD G5 will prompt users for both a username **and** password to logon to the unit. The NetMediator RTD G5 will then verify entered username and password against the RADIUS database, instead of its own local user database. The NetMediator RTD G5 will only use its own local password database for serial craft access.

Your NetMediator RTD G5 supports access to two RADIUS authentication servers, labeled by a 1 and 2 after each menu option in the RADIUS menu. All menu options ending in 1 refer to **RADIUS Server 1**, and all options ending in 2 apply to **Radius Server 2**.

```

E)thernet n(V)ram P)PP D)ate/time R(A)DIUS R)eboot (ESC) ? A
Global Settings
  Retry : 1
  Timeout: 10 seconds
Server 1
  IPA : 126.010.220.194
  Port : 1812
  IFace : NET2
  Secret : thisisanewsecret
Server 2
  IPA : 255.255.255.255 (Disabled)
  Port : 1812
  IFace : NET2
  Secret : default_secret
R)etry T)imeout a)IPA1 b)IPA2 c)Port1 d)Port2
e)Iface1 f)Iface2 g)Secret1 h)Secret2 (ESC) ? _

```

The RADIUS configuration menu using the TTY interface.

Hotkey	Option	Description
Global Settings		
R	R)etry	How many times the RADIUS server will retry a logon attempt
T	T)imeout	Enter in the number of seconds before a logon request is timed out
Servers 1 / 2		
A or B	IPA	Enter the IP address of your RADIUS servers.
C or D	Port	Enter the Port address for your Radius servers. Port 1812 is the industry-standard port for RADIUS authentication.
E or F	Interface	Choose the Ethernet Interface to which the RADIUS information will apply, Net1 or Net2.
G or H	Secret	Enter the RADIUS secrets.

```

Username: dps_user
Password: *****_

```

RADIUS logon screen prompts for a Username and Password.

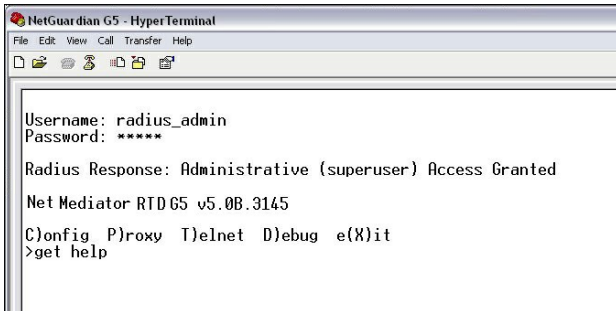
8.5 TTY Command Mode

TTY Command line Mode offers an alternate way of configuring the NetMediator RTD G5. This interface is scriptable, and is **recommended for advanced users**. Entries in Command Mode are NOT case sensitive.

To Enter Command Line Mode:

- From the TTY Interface's base menu, press **CTRL+C**

Note: You can only enter Command Line Mode from the top-level menu of the TTY interface. Pressing CTRL+C from any other level of the TTY interface will have no affect.



To enter Command Line mode, login to the TTY, then press Ctrl+C.

Tips for using Command Mode

- To view all acceptable operations, type **get help**, then press Enter.
- Invalid commands will return "Error" as the response.
- A **CRLF** is sent by the RTU following all responses from the RTU.

- Limited data validation is in place in the TTY interface. Use caution when setting variable values.
- You may need to reboot the NetMediator RTD G5 for new variable values to take effect.
- Changing **REF1**, **REF2**, **DISP1**, or **DISP2** affects the **MAJOR**, **MINOR**, **OVER**, and **UNDER** alarm thresholds. Changing any of these settings should be checked and re-entered as required.
- In the table below, variables (params) are noted in brackets.

Operation	Command	Params
Help	get help	None
Initialize NVRAM	init nvram {g2}	None
Write NVRAM	set nvram	None
Read NVRAM	get nvram	None
View System Up Time	get sysuptime	None
View Firmware Version	get prodid	None
Data Port Description	{get,set} dataport {1...9} desc	string {0...15} chars
Data Port Baud	{get,set} dataport {1...9} baud	{ 1200,300,600,1200,2400,4800,9600,19200,38400,57600,115200 }
Data Port Format	{get,set} dataport {1...9} wfmt	{ 8n1,8n2,7n1,7e1,7o1,8o2,8o1 }
Data Port RTS Head (msec)	{get,set} dataport {1...9} rtshead	{0..255}
Data Port RTS Tail (msec)	{get,set} dataport {1...9} rtstail	{0..255}
Data Port Type	{get,set} dataport {1...9} type	{off,tcp,ptcp,htcp,rtcp,udp,chan,crft,cap,ecu,sps8}
# of NetMediator	{get,set} ngddx	{0...3}

Operation	Command	Params
Expanders		
# of GLD or BSU	{get,set} gld	{0...16}
Timed Tick Period	{get,set} timed tick	{0...60} {min}
System Name	{get,set} name	string {0..31} chars
System Location	{get,set} location	string {0..31} chars
System Contact	{get,set} contact	string {0..31} chars
System Phone	{get,set} phone	string {0..20} chars
Reboot	set reboot	None
DCP Unit ID	{get,set} dcpaddr	{0...255}
DCP Port Number	{get,set} dcpport	{1..32767}
DCP Port Type	{get,set} dcptype	{udp,tcp,serial}
DCP Protocol	{get,set} dcpprot	{dcp,dcpx,dcpf,dcpe}
DCP Autonomous Time	{get,set} dcpautotm	{0..120} {sec,min}
Network Time IPA	{get,set} ntpipa	IP Address
Username	{get,set} username {1...16}	string {0...18} chars
Password	set password {master, 1...16}	string {0..15} chars
Access Rights	{get,set} access {1...16}	{0000..01ff} where Bit.0 – 1=admin Bit.1 – 1=database Bit.2 – 1=monitor Bit.3 – 1=rly control Bit.4 – 1=reachthru Bit.5 – 1=modem Bit.6 – 1=telnet Bit.7 – 1=sd_monitor Bit.8 – 1=ppp
Network IPA	{get,set} net {1,2} ipa	IP Address
Subnet Mask	{get,set} net {1,2} subnet	Subnet
Gate way IPA	{get,set} net {1,2} gateway	Gateway
Proxy Base	{get,set} proxybase	{1..32767}
Analog Description	{get,set} alg {1...8} desc	string {0..48} chars
Analog Display Unit	{get,set} alg {1...8} unit	string {0..3} chars
Analog Major Under Threshold	{get,set} alg {1...8} thres mju	{-94.0000...94.0000}
Analog Minor Under Threshold	{get,set} alg {1...8} thres mnu	{-94.0000...94.0000}
Analog Minor Over Threshold	{get,set} alg {1...8} thres mno	{-94.0000...94.0000}
Analog Major Over Threshold	{get,set} alg {1...8} thres mjo	{-94.0000...94.0000}
Analog Trap	{get,set} alg {1...8} trap	0=trap disabled 1=trap enabled
Analog Primary Notification	{get,set} alg {1...8} pri	{0...8}
Analog Secondary Location	{get,set} alg {1...8} sec	{0...8}
Analog Polarity	{get,set} alg {1...8} polarity	0=Normal 1=Reversed

Operation	Command	Params
Analog Group Number	{get,set} alg {1...8} group {mju,mnu, mno,mjo}	{1...8}
Analog Reference 1 VDC	{get,set} alg {1...8} ref1	Number
Analog Reference 1 Display	{get,set} alg {1...8} disp1	Number
Analog Reference 2 VDC	{get,set} alg {1...8} ref2	Number
Analog Reference 2 Display	{get,set} alg {1...8} disp2	Number
Analog Deadband	{get,set} alg {1...8} deadband	{0.1...9.9}
Alarm Description	{get,set} alm {base,exp1,exp2,exp3} {1...64} desc	string {0...48} chars
Alarm Polarity	{get,set} alm {base,exp1,exp2,exp3} {1...64} polarity	0=Normal 1=Reversed
Alarm Trap	{get,set} alm {base,exp1,exp2,exp3} {1...64} trap	0=trap disabled 1=trap enabled
Alarm Primary Notification	{get,set} alm {base,exp1,exp2,exp3} {1...64} pri	{0...8}
Alarm Secondary Notification	{get,set} alm {base,exp1,exp2,exp3} {1...64} sec	{0...8}
Alarm Group	{get,set} alm {base,exp1,exp2,exp3} {1...64} group	{1...8}
Global Trap IP Address	{get,set} trap {1,2} ipa	IP Address
Global Trap Format	{get,set} trap {1,2} format	{v1, v2c, v2cinf,v3}
LCD Display Mode	{get,set} lcdmode	{scroll,point}
LCD Delay Time (for Point Mode)	{get,set} lccdelay	{1..60} {sec}

Examples:

- You want to find out how long this NetMediator RTD G5 has been running (since last rebooted.) Get system uptime by typing **get sysuptime**, then press Enter.

```

NetGuardian G5 - HyperTerminal
File Edit View Call Transfer Help

Username: radius_admin
Password: *****

Radius Response: Administrative (superuser) Access Granted

Net Mediator RTD G5 v5.0B.3145

C)onfig P)roxy T)elnet D)ebg e(X)it
>get sysuptime
01:03:39:59
>_

```

- You want to set the Global Trap IP Address to 126.10.230.133. To enter this, type **set trap 1 ipa = 126.10.230.133**

```

NetGuardian G5 - HyperTerminal
File Edit View Call Transfer Help

Username: radius_admin
Password: *****

Radius Response: Administrative (superuser) Access Granted

Net Mediator RTD G5 v5.0B.3145

C)onfig P)roxy T)elnet D)ebg e(X)it
>set trap 1 ipa = 126.10.230.133
ok
>_

```

- You want to see the alarm description for Base Alarm 1. To see the description, type **get alm base 1 desc**

```

NetGuardian G5 - HyperTerminal
File Edit View Call Transfer Help

Username: radius_admin
Password: *****

Radius Response: Administrative (superuser) Access Granted

Net Mediator RTD G5 v5.0B.3145

C)onfig P)roxy T)elnet D)ebg e(X)it
>get alm base 1 desc
GENERATOR RUN
>_

```

- You want to change the LCD mode from Scroll (default) to Point Mode. To change this, type **set lcdmode = point**

```

NetGuardian G5 - HyperTerminal
File Edit View Call Transfer Help

Password: *****

Net Mediator RTD G5 v5.0B.3145
Net Mediator RTD G5 @ dpstele.com

C)onfig P)roxy T)elnet D)ebg e(X)it
>set lcdmode = point
ok
>_

```

9 Monitoring the NetMediator via the TTY Interface

You can monitor alarms and set controls via the NetMediator's TTY interface by navigating to **C)onfig > M)onitor**.

You can access the TTY interface to monitor your alarms:

- Via craft serial connection
- Over IP address on **Port 2002**. Telnet sessions are established on port 2002 as a security measure.

For more instructions on connecting to your NetMediator RTD G5 to access the TTY interface, see the **Initial Configuration** section of this manual.

NOTE: The TTY default password is **dpstelecom**.

Navigating the TTY Interface:

The capitalized letters in each menu option, before, or enclosed in, parentheses (), are menu shortcut keys. Press a shortcut key to access a menu option. The ESC key will always bring you back to the previous menu level. Entries are not case sensitive.

The following sections provide an explanation of the menu options available in the monitoring section of the TTY interface.

```
C)onfig P)roxy T)elnet D)ebug e(X)it
E)dit M)onitor P)ing S)tats T)une Modem R)eset Port (ESC) ? M
A)larms R)elays a(N)alogs E)vent log a(C)cum. Timer
  B)AC P)ing targets p(O)rts S)ystem (ESC) ?
```

The monitor menu allows status checking on all elements

9.1 Base Alarm Status

View the status of your discrete alarms from the **M**onitor menu > **A**larms option. Under **Status**, the word **Alarm** will appear if an alarm has been activated and **Clear** will appear if an alarm condition is not present. Points assigned to groups will display the user-defined status.

```

A)larms re(L)ays a(N)alogs E)vent log a(C)cum.Timer
  B)AC P)ing targets p(O)rts s(W)itch S)ystem a(R)p D)bg (ESC) ? A
B)ase E)xpansions (ESC) ? B

ID Description                               Status
1 INTRUSION                                Clear
2 BEACON                                   Clear
3 SIDE LIGHT                              Clear
4 HUMIDITY                                Clear
5 H2O LEAK                                Clear
6 FIRE                                    Clear
7 EQUIPMENT CRITICAL                      Clear
8 EQUIPMENT MAJOR                         Clear
9 EQUIPMENT MINOR                        Clear
10 TX A ACTIVE                            Clear
11 TX B ACTIVE                            Clear
12 DELAYED                                Clear
13 FUSE 112.10                             Clear
14 FUSE 112.11                             Clear
15 CRITICAL CS1500                         Clear
16 MAJOR CS1500                           Clear
ESC to exit Any key to continue

```

This example shows page two of the discrete alarms

9.2 Ping Targets

View the status of all your ping targets from the **M**onitor menu > **P**ing targets option. This screen displays the ping target ID, description, and IP address. The **Status** column will display the condition of each ping target, Alarm or Clear.

```

B)ase E)xpansions (ESC) ? <--
A)larms R)elays a(N)alogs E)vent log a(C)cum.Timer
  B)AC P)ing targets p(O)rts S)ystem (ESC) ? P
ID Description                               IP Address      Status
1 255.255.255.255 Clear
2 255.255.255.255 Clear
3 255.255.255.255 Clear
4 255.255.255.255 Clear
5 255.255.255.255 Clear
6 255.255.255.255 Clear
7 255.255.255.255 Clear
8 255.255.255.255 Clear
9 255.255.255.255 Clear
10 255.255.255.255 Clear
11 255.255.255.255 Clear
12 255.255.255.255 Clear
13 255.255.255.255 Clear
14 255.255.255.255 Clear
15 255.255.255.255 Clear
16 255.255.255.255 Clear
ESC to exit Any key to continue

```

The Ping info submenu allows you to change ping targets

9.2.1 Viewing Live Ping Targets

You ping devices from the NetMediator RTD G5 via the TTY interface.

From the **M**)onitor menu, press **ESC** to return to the **E**)dit menu, then press **P** to access the live target ping option. From here, you can ping any of the NetMediator's defined ping targets (1-32) or simply enter the IP address of a device you'd like to ping from the NetMediator RTD G5.

```
E)dit M)onitor P)ing S)tats T)une Modem R)eset Port (ESC) ? P
Ping Address / ID (1-32) :
```

Continuously ping an IP address that has been defined in the NetMediator's ping table

9.3 Operating Relays (Controls)

Your NetMediator's control relays operate based on the status of discrete, system, and analog threshold alarms.

By default, you cannot manually operate your NetMediator's control relays. If you wish to manually operate relays, you will have to delete your NetMediator's derived control logic. **Do not delete the default relay logic without expressed direction from DPS Telecom.**

You can activate your relays from the **M**)onitor menu > **R**)elays option.

Available Control Options:

- **S)tatus**: Refreshes the Status column
- **O)pr - Operate**: Operates the relay
- **R)ls - Release**: Releases the relay
- **M)om - Momentary**: activates a momentary control, temporarily operating the relay, and subsequently releasing the relay. The time between Operate and Release commands can be changed by setting a qualification timer for the relay. See the **Event Qualification Timers** section of your Web Interface manual for details.

```
A)larms R)elays a(N)alogs E)vent log a(C)cum. Timer
B)AC P)ing targets p(0)rts S)ystem (ESC) ? R
B)ase E)xpansions (ESC) ? B
Base Relays
ID Description                               Mode   Status
1                               Normal Rls
2                               Normal Rls
3                               Normal Rls
4                               Normal Rls
5                               Normal Rls
6                               Normal Rls
7                               Normal Rls
8                               Normal Rls
S)tatus      O)pr R)ls M)om (ESC) ?
```

view and operate your control relays from the TTY interface

9.4 Monitoring Analogs

View the current reading and the alarm status of your analog devices by pressing **N** from the Monitor menu (**M**)onitor menu > a(**N**)alogs). The value shown is a snapshot of the channels measurement, not a real-time reading. Refresh the readings by re-selecting the analogs option. An **X** in any of the threshold fields indicates an alarm.

```

Password: *****

Net Mediator RTD65 v5.0B.3145
C)onfig P)roxy T)elnet D)ebug e(X)it
E)dit M)onitor P)ing S)tats T)une Modem R)eset Port (ESC) ? M
A)larms re(L)ays a(N)alogs E)vent log a(C)cum.Timer
  B)AC P)ing targets p(O)rts s(W)itch S)ystem a(R)p D)bg (ESC) ? N
B)ase E)xpansions (ESC) ? B

Chn Description          Reading Units MjU MnU MnO MjO Err
1 EXT TEMPERATURE      -33.7500 F      X   X   -   -   -
2 CHANNEL 2             0.0000 VDC     -   -   -   -   -
3 CHANNEL 3             0.0000 VDC     -   -   -   -   -
4 CHANNEL 4             18.5534 VDC     -   -   -   -   -
5 CHANNEL 5            -47.9872 VDC     -   X   -   -   -
6 CHANNEL 6             0.0000 VDC     -   -   -   -   -
7 CHANNEL 7             0.0000 VDC     -   -   -   -   -
8 CHANNEL 8            -4.9857 VDC     -   -   -   -   -

B)ase E)xpansions (ESC) ?

```

This display allows you to monitor your eight analog inputs

9.5 Monitoring System Alarms

View the status of the NetMediator's system alarms by pressing **S** from the Monitor Menu (**M**)onitor menu > **S**)ystem). The Status column will display the appropriate label for each alarm as determined by its point group.

```

A)larms R)elays a(N)alogs E)vent log a(C)cum.Timer
  B)AC P)ing targets p(O)rts S)ystem (ESC) ? S

ID Description          Status
17 Timed Tick           Clear
18 Exp.Module Callout   Clear
19 Network Time Server  Clear
20 Accumulation Event   Clear
33 Unit Reset           Clear
36 Lost Provisioning     Clear
37 DCP Poller Inactive  Clear
38 LAN not Active       Clear
41 Modem not Responding Clear
42 No Dialtone          Clear
43 SNMP Trap not Sent   Clear
44 Pager Que Overflow   Clear
45 Notification Failed  Clear
46 Craft RcvQ Full      Clear
47 Modem RcvQ Full      Clear
48 Data 1 RcvQ Full     Clear
ESC to exit Any key to continue_

```

System Alarms can be viewed from the M)onitor menu > S)ystem option

9.6 Monitoring Data Port Activity

You can view the status of the NetMediator's data ports by pressing **O** from the Monitor Menu. Enter the number of the port you wish to view and press Enter.

The NetMediator RTD G5 provides an ASCII description under *Transmit* and *Receive*. Choose a) Transmit to view data transmitted to another device. Choose b) Receive to view data received from another device.

```
A)larms re(L)ays a(N)alogs E)vent log a(C)cum.Timer
  B)AC P)ing targets p(O)rts s(W)itch S)ystem a(R)p D)bg (ESC) ? 0
```

Data Port ID (1-9): 1

```
a)Transmit b)Receive c)Transmit-HEX d)Receive-HEX (ESC) ?
```

Data port activity can be viewed from the M)onitor menu > p(O)rts option

9.6.1 Proxy Menu

You can create proxy connections to reach-through to the craft port, modem port or any of the other eight serial ports from the P)roxy menu. You'll be able to monitor and control additional devices via proxy connection to the NetMediator RTD G5. Data presented and handshaking will be specified by the connected device.

To cancel the proxy connection wait a half second, then quickly type @@@ and press ENTER.

```
C)onfig P)roxy T)elnet D)ebug e(X)it
Available Data Ports:
C) Craft (In use)
M) Modem
1)
2)
3)
4)
5)
6)
7)
8) 8
Proxy to : M)odem 1) 2) 3) 4) 5) 6) 7) 8) (ESC) ?
```

Access devices connected to the eight data ports on the back panel through M)onitor menu > P)roxy option

9.7 Monitoring the Accumulation Timer

The Accumulation Timer keeps a running total of the amount of time a designated point is in an alarm state. When the alarm point exceeds the user-defined time threshold, the NetMediator RTD G5 will trigger an Accumulation Event system alarm. From the Monitor menu, pressing **C** provides access to the **Accumulation Timer**, displaying the amount of time a point has been in alarm, and allowing you to reset the timer.

Resetting the accumulation timer:

- Press **R** from the a(C)cum.Timer menu.

```
C)onfig P)roxy T)elnet D)ebug e(X)it
E)dit M)onitor P)ing S)tats T)une Modem R)eset Port (ESC) ? M
A)larms R)elays a(N)alogs E)vent log a(C)cum. Timer
  B)AC P)ing targets p(O)rts S)ystem (ESC) ? C
Accumulation Timer: enabled
Display Reference: 1
Point Reference: 11
Point Description:
Point Status: Clear
Event Threshold: 00:01:01 (dd:hh:mm)
Accumulated Time: 00:00:00 (dd:hh:mm)
Accumulated Since: 22-July-2001 03:16
R)eset AccTmr (ESC) ?
```

Monitor and reset the Accumulator Timer

Field	Description
Display and Point Reference	Indicates which alarm point is to be monitored.
Point Description	The user-defined description of the monitored alarm point.
Point Status	The current status of the monitored point.
Event Threshold	Amount of time allowed to accumulate before the system alarm, "Accumulation Event" is triggered. Note: Maximum is 45 days.
Accumulated Time	The total time the monitored point has been in an ALARM state.
Accumulated Since	Indicates the last time the accumulation timer was reset.
Reset Accumulation Timer	Selecting this option will reset the timer.

Field descriptions in the Accumulator Timer Settings

9.8 Event Logging

Choose **E**)vent log from the **M**)onitor menu to view the last 100 events posted to the NetMediator RTD G5, including power up, base and system alarms, ping alarms, analog alarms, and issued controls. Posted events for the various alarms include both alarm and clear status. Refer to the table below for event log field descriptions.

Note: All information in the event log will be erased upon reboot or a power failure.

```

Password: *****
NetMediatorRTD-G5 v5.3G.0246
C>onfig P>roxy T>elnet D>ebug e(X>it
E>dit M>onitor P>ing S>tats T>une Modem R>eset Port <ESC> ? M
A>larms R>elays a(N>alogs E>vent log a(C>cum. Timer
  B>AC P>ing targets p(O>rts S>ystem <ESC> ? E

Evt Date          Time          Grp State    PRef  Description
1 04-20-2006      10:02:10    1 setgrp1   11.59 GLD/BSU 1 Fail
2 01-01-2045      12:00:00    1 clrgrp1   11.33 Unit Reset
3 01-01-2045      12:00:00    1 setgrp1   11.33 Unit Reset
4 01-01-2001      12:00:06    1 setgrp1    9.3  MjU:7
5 01-01-2001      12:00:06    1 setgrp1    9.1  MnU:7
6 01-01-2001      12:00:04    1 setgrp1   11.39 NET 2 is not Active

Would you like to Reset the Event Log? <y/N>

```

Monitor the last 100 events recorded by the NetMediator RTD G5 from the M)onitor menu > E)vent log option

Event Log Field	Description
Evt	Event number (1–100)
Date	Date the event occurred
Time	Time the event occurred
Grp	Alarm Group
State	State of the event (A=alarm, C=clear)
PRef	Point reference (See Appendix A for display descriptions).
Description	User defined description of the event as entered in the alarm point and relay description fields.

Event Log field descriptions

9.9 Debug Input and Filter Options

Debug Input Options	
ESC	Exit Debug
B	Show BAC status points
T	Show task status
U	Show DUART information
R	Show network routing table
X	Clear debug enable bitmap. Turn all debug filters OFF
?	Display Options
Debug Filter Options:	
a	(1) Alarm toggle switch. Shows posting of alarm data
A	(2) Analog toggle switch. Shows TTY interface debug
c	(3) Config toggle switch. Shows TTY interface debug
C	(4) Control relay toggle switch. Shows relay operation
d	(5) DCP responder toggle switch. Shows DCP protocol
D	(6) Device toggle switch. Shows telnet and proxy information and NGEEditG5 serial communication.
e	(7) Expansion poller toggle switch. Shows NGDdx polling
E	(8) ECU Interrogator toggle switch. Shows BAC processing
f	(9) FTP Command toggle switch. Shows command string parsing
F	(10) FTP Data toggle switch. Shows FTP Read / Write
G	(11) GLD poller toggle switch. Shows GLD polling
h	(12) HTML debug switch. Shows Web Browser processing
H	(13) HWACS debug switch. Shows hardware access operation
i	(14) PING toggle switch
k	(15) Socket toggle switch. Shows current dcu resources
l	(16) LED toggle switch. Shows current LED state
L	(17) LCD display toggle switch. Shows LCD control and text
m	(18) Modem toggle switch. Shows modem vectored initialization
M	(19) Undefined
o	(20) Osstart toggle switch. Miscellaneous application debug, including NVRAM read and write operation, and event posting
O	(21) Undefined
p	(22) SPORT toggle switch. Port init debug and channeled port debug
P	(23) PPP toggle switch. Shows PPP functioning
q	(24) QAccess toggle switch. Reserved for future use
Q	(25) Undefined
r	(26) Report toggle switch. Shows reporting event activity, including SNMP, pagers, email, etc. Also shows PPP negotiation for NG client PPP mode.
s	(27) SNMP toggle switch. Reserved for future use
S	(28) STAK toggle switch. Shows network processing and IPA of arp requests. Also shows packets discarded by Filter IPA.
t	(29) TERM toggle switch. Shows UDP/TCP port handling. The camera and network time (NTP) jobs also use the TERM toggle switch
V	(30) Undefined
w	(31) HTTP toggle switch. Shows handling of web browser packets
W	(32) WEB toggle switch 2. Dump HTML text from web browser

10 Backing Up NetMediator Configuration Data via FTP

1. From the Start menu on your PC, select RUN.
2. Type "ftp" followed by the IP address of the NetMediator RTD G5 you are backing up (e.g. ftp 126.10.120.199).
3. When the connection has been established, press Enter.
4. Enter the your password (the default password is **dpstelecom**), then press Enter.
5. Type **binary** and press Enter (necessary for NetMediator RTD G5 file transfer).
6. Type **lcd** and press Enter (this allows you to change the directory of your local machine).
7. Type **get** followed by the name you wish to define for the NetMediator RTD G5 backup file. Add the extension ".bin" to the file name (e.g. get ngdbkup.bin) and press Enter.
8. After reloading, type **bye** and press Enter to exit.

Note: The backup file name can have a maximum of eight characters before the file extension.

10.1 Reloading NetMediator Configuration Data

1. From the Start menu on your PC, select RUN.
2. Type "ftp" followed by the IP address of the NetMediator RTD G5 you are backing up (e.g. ftp 126.10.120.199).
3. After the connection is made press Enter.
4. Enter the password of the NetMediator RTD G5 (default password is dpstelecom), then press ENTER.
5. Type "binary" and press Enter (necessary for NetMediator RTD G5 file transfer).
6. Type "lcd" and press Enter (this allows you to change the directory of your local machine).
7. Type "put" followed by the name you defined for the NetMediator RTD G5 backup file and press Enter (e.g. put ngdbkup.bin).
8. Type "literal REBT" to reboot the NetMediator RTD G5.
9. After reloading, type "bye" and press Enter to exit.

11 Reference Section

11.1 Display Mapping

Port	Address	Display	Description	Set	Clear
99	1	1	Discrete Alarms 1-32	8001-8032	9001-9032
99	1	1	E16 DX Controls 1-16	8049-8064	9049-9064
99	1	2	Ping Table	8065-8096	9065-9096
99	1	3	Analog Channel 1**	8129-8132	9129-9132
99	1	4	Analog Channel 2**	8193-8196	9193-9196
99	1	5	Analog Channel 3**	8257-8260	9257-9260
99	1	6	Analog Channel 4**	8321-9324	9321-9324
99	1	7	Analog Channel 5**	8385-8388	9385-9388
99	1	8	Analog Channel 6**	8449-8452	9449-9452
99	1	9	Analog Channel 7**	8513-8516	9513-9516
99	1	10	Analog Channel 8**	8577-8580	9577-9580
99	1	11	Relays/System Alarms (See table below)	8641-8674	9641-9674

Display descriptions and SNMP Trap numbers for the NetMediator RTD G5

* The TRAP number ranges shown correspond to the point range of each display. For example, the SNMP Trap "Set" number for alarm 1 (in Display 1) is 8001, "Set" for alarm 2 is 8002, "Set" for alarm 3 is 8003, etc.

** The TRAP number descriptions for the Analog channels (1-8) are in the following order: minor under, minor over, major under, and major over. For example, for Analog channel 1, the "Set" number for minor under is 8129, minor over is 8130, major under is 8131, and major over is 8132.

11.1.1 NetMediator RTD DX Expansion 1

Your RTD 32 DX Expansion's analog channels are databased on displays 12-27 for expansion 1 and 28-43 for expansion 2.

Expansion analog channels use points 1-5 for the first channel, and 33-37 for the second channel in each 64 point display, each corresponding to the trap numbers listed below. Analog thresholds are listed in the following order (1-4, 33-36): Minor Under, Minor Over, Major Under, and Major Over. The fifth bit for each analog channel is a trap indicating the absence of a sensor on that channel.

Port	Address	Display	Description	Points	Set	Clear
99	1	12	RTD 32 DX 1 Analog Channel 1	1-5	10001-10005	11001-11005
99	1	12	RTD 32 DX 1 Analog Channel 2	33-37	10006-10010	11006-11010
99	1	13	RTD 32 DX 1 Analog Channel 3	1-5	10011-10015	11011-11015
99	1	13	RTD 32 DX 1 Analog Channel 4	33-37	10016-10020	11016-11020
99	1	14	RTD 32 DX 1 Analog Channel 5	1-5	10021-10025	11021-11025
99	1	14	RTD 32 DX 1 Analog Channel 6	33-37	10026-10030	11026-11030
99	1	15	RTD 32 DX 1 Analog Channel 7	1-5	10031-10035	11031-11035
99	1	15	RTD 32 DX 1 Analog Channel 8	33-37	10036-10040	11036-11040
99	1	16	RTD 32 DX 1 Analog Channel 9	1-5	10041-10045	11041-11045
99	1	16	RTD 32 DX 1 Analog Channel 10	33-37	10046-10050	11046-11050
99	1	17	RTD 32 DX 1 Analog Channel 11	1-5	10051-10055	11051-11055
99	1	17	RTD 32 DX 1 Analog Channel 12	33-37	10056-10060	11056-11060
99	1	18	RTD 32 DX 1 Analog Channel 13	1-5	10061-10065	11061-11065
99	1	18	RTD 32 DX 1 Analog Channel 14	33-37	10066-10070	11066-11070
99	1	19	RTD 32 DX 1 Analog Channel 15	1-5	10071-10075	11071-11075
99	1	19	RTD 32 DX 1 Analog Channel 16	33-37	10076-10080	11076-11080
99	1	20	RTD 32 DX 1 Analog Channel 17	1-5	10081-10085	11081-11085
99	1	20	RTD 32 DX 1 Analog Channel 18	33-37	10086-10090	11086-11090
99	1	21	RTD 32 DX 1 Analog Channel 19	1-5	10091-10095	11091-11095
99	1	21	RTD 32 DX 1 Analog Channel 20	33-37	10096-10110	11096-11100
99	1	22	RTD 32 DX 1 Analog Channel 21	1-5	10101-10105	11101-11105
99	1	22	RTD 32 DX 1 Analog Channel 22	33-37	10106-10110	11106-11110
99	1	23	RTD 32 DX 1 Analog Channel 23	1-5	10111-10115	11111-11115
99	1	23	RTD 32 DX 1 Analog Channel 24	33-37	10116-10120	11116-11120
99	1	24	RTD 32 DX 1 Analog Channel 25	1-5	10121-10125	11121-11125
99	1	24	RTD 32 DX 1 Analog Channel 26	33-37	10126-10130	11126-11130
99	1	25	RTD 32 DX 1 Analog Channel 27	1-5	10131-10135	11131-11135
99	1	25	RTD 32 DX 1 Analog Channel 28	33-37	10136-10140	11136-11140
99	1	26	RTD 32 DX 1 Analog Channel 29	1-5	10141-10145	11141-11145
99	1	26	RTD 32 DX 1 Analog Channel 30	33-37	10146-10150	11146-11150
99	1	27	RTD 32 DX 1 Analog Channel 31	1-5	10151-10155	11151-11155
99	1	27	RTD 32 DX 1 Analog Channel 32	33-37	10156-10160	11156-11160

Display descriptions and Point numbers for the RTD 32 DX Expansion

11.1.2 NetMediator RTD DX Expansion 2

Port	Address	Display	Description	Points	Set	Clear
99	1	28	RTD 32 DX 2 Analog Channel 1	1-5	10161-10165	11161-11165
99	1	28	RTD 32 DX 2 Analog Channel 2	33-37	10166-10170	11166-11170
99	1	29	RTD 32 DX 2 Analog Channel 3	1-5	10171-10175	11171-11175
99	1	29	RTD 32 DX 2 Analog Channel 4	33-37	10176-10180	11176-11180
99	1	30	RTD 32 DX 2 Analog Channel 5	1-5	10181-10185	11181-11185
99	1	30	RTD 32 DX 2 Analog Channel 6	33-37	10186-10190	11186-11190
99	1	31	RTD 32 DX 2 Analog Channel 7	1-5	10191-10195	11191-11195
99	1	31	RTD 32 DX 2 Analog Channel 8	33-37	10196-10200	11196-11200
99	1	32	RTD 32 DX 2 Analog Channel 9	1-5	10201-10205	11201-11205
99	1	32	RTD 32 DX 2 Analog Channel 10	33-37	10206-10210	11206-11210
99	1	33	RTD 32 DX 2 Analog Channel 11	1-5	10211-10215	11211-11215
99	1	33	RTD 32 DX 2 Analog Channel 12	33-37	10216-10220	11216-11220
99	1	34	RTD 32 DX 2 Analog Channel 13	1-5	10221-10225	11221-11225
99	1	34	RTD 32 DX 2 Analog Channel 14	33-37	10226-10230	11226-11230
99	1	35	RTD 32 DX 2 Analog Channel 15	1-5	10231-10235	11231-11235
99	1	35	RTD 32 DX 2 Analog Channel 16	33-37	10236-10240	11236-11240
99	1	36	RTD 32 DX 2 Analog Channel 17	1-5	10241-10245	11241-11245
99	1	36	RTD 32 DX 2 Analog Channel 18	33-37	10246-10250	11246-11250
99	1	37	RTD 32 DX 2 Analog Channel 19	1-5	10251-10255	11251-11255
99	1	37	RTD 32 DX 2 Analog Channel 20	33-37	10256-10260	11256-11260
99	1	38	RTD 32 DX 2 Analog Channel 21	1-5	10261-10265	11261-11265
99	1	38	RTD 32 DX 2 Analog Channel 22	33-37	10266-10270	11266-11270
99	1	39	RTD 32 DX 2 Analog Channel 23	1-5	10271-10275	11271-11275
99	1	39	RTD 32 DX 2 Analog Channel 24	33-37	10276-10280	11276-11280
99	1	40	RTD 32 DX 2 Analog Channel 25	1-5	10281-10285	11281-11285
99	1	40	RTD 32 DX 2 Analog Channel 26	33-37	10286-10290	11286-11290
99	1	41	RTD 32 DX 2 Analog Channel 27	1-5	10291-10295	11291-11295
99	1	41	RTD 32 DX 2 Analog Channel 28	33-37	10296-10300	11296-11300
99	1	42	RTD 32 DX 2 Analog Channel 29	1-5	10301-10305	11301-11305
99	1	42	RTD 32 DX 2 Analog Channel 30	33-37	10306-10310	11306-11310
99	1	43	RTD 32 DX 2 Analog Channel 31	1-5	10311-10315	11311-11315
99	1	43	RTD 32 DX 2 Analog Channel 32	33-37	10316-10320	11316-11320

Display descriptions and Point numbers for your second RTD 32 DX Expansion

11.1.3 System Alarms Display Map

Display	Point	Alarm Point	Description	Solution
11	17	Timed Tick	Toggles state at constant rate as configured by the Timed Tick timer variable. Useful in testing integrity of SNMP trap alarm reporting.	To turn the feature off, set the Timed Tick timer to 0.
	18	Exp. Module Callout	Alarm is triggered whenever an alarm point from an Entry Control Unit (ECU) is collected. A notification event may be associated with the alarm to force a call out or trap.	Disable Building Access Control (BAC) by setting the BAC Unit ID to 0. If Building Access is being used, then investigate the ECU alarm source or don't associate notification with the alarm event.
	19	Network Time Server	Communication with Network Time Server has failed.	Try pinging the Network Time Server's IP Address as it is configured. If the ping test is successful, then check the port setting and verify the port is not being blocked on your network.
	20	Accumulation Event	An alarm has been standing for the time configured under Accum. Timer. The Accumulation timer enables you to monitor how long an alarm has been standing despite system reboots. Only the user may reset the accumulated time, a reboot will not.	To turn off the feature, under Accum. Timer, set the display and point reference to 0.
	21	Duplicate IP Address	The unit has detected another node with the same IP Address.	Unplug the LAN cable and contact your network administrator. Your network and the unit will most likely behave incorrectly. After assigning a correct IP Address, reboot the unit to clear the System alarm.
	33	Power Up	The unit has just come-online. The set alarm condition is followed immediately by a clear alarm condition.	Seeing this alarm is normal if the unit is powering up.
	36	Lost Provisioning	The internal NVRAM may be damaged. The unit is using default configuration settings.	Use Web or latest version of NGEEdit4 to configure unit. Power cycle to see if alarm goes away. May require RMA.
	37	DCP Poller Inactive	The unit has not seen a poll from the Master for the time specified by the DCP Timer setting.	If DCP responder is not being used, then set the DCP Unit ID to 0. Otherwise, try increasing the DCP timer setting under timers, or check how long it takes to cycle through the current polling chain on the Master system.
	38	NET1 not active	The Net1 LAN port is down.	Check LAN cable. Ping to and from the unit.
	39	NET2 not active	The Net2 LAN port is down.	
	40	LNK Alarm	No network connection detected	
	41	Modem not responding	An error has been detected during modem initialization. The modem did not respond to the initialization string.	Remove configured modem initialization string, then power cycle the unit. If alarm persists, try resetting the Modem port from the TTY

Display	Point	Alarm Point	Description	Solution
11				interface, or contact DPS for possible RMA.
	42	No Dial Tone	During dial-out attempt, the unit did not detect a dial tone.	Check the integrity of the phone line and cable.
	43	SNMP Trap not Sent	SNMP trap address is not defined and an SNMP trap event occurred.	Define the IP Address where you would like to send SNMP trap events, or configure the event not to trap.
	44	Pager Queue Overflow	Over 250 events are currently queued in the pager queued and are still trying to report.	Check for failed notification events that may be filling up the pager queue. There may be a configuration or communication problem with the notification events.
	45	Notification failed	A notification event, like a page or email, was unsuccessful.	Use RPT filter debug to help diagnose notification problems.
	46	Craft RcvQ full	The Craft port received more data than it was able to process.	Disconnect whatever device is connected to the craft serial port. This alarm should not occur.
	47	Modem RcvQ full	The modem port received more data than it was able to process.	Check what is connecting to the NetMediator. This alarm should not occur.
	48	Serial 1 RcvQ full	Serial port 1 (or appropriate serial port number) receiver filled with 8 K of data (4 K if BAC active).	Check proxy connection. The serial port data may not be getting collected as expected.
	49	Serial 2 RcvQ full	Serial port receiver filled with 8K data (4K if BAC Active)	Check proxy connection. Serial port data may not be getting collected as expected.
	50	Serial 3 RcvQ full		
	51	Serial 4 RcvQ full		
	52	Serial 5 RcvQ full		
	53	Serial 6 RcvQ full		
	54	Serial 7 RcvQ full		
	55	Serial 8 RcvQ full		
	11	56	NetMediator DX 1 fail	NGDdx 1 Fail (Expansion shelf 1 communication link failure)
	57	NetMediator DX 2 fail	NGDdx 2 Fail (Expansion shelf 2 communication link failure)	
	58	NetMediator DX 3 fail	NGDdx 3 Fail (Expansion shelf 3 communication link failure)	
	59	GLD 1 fail	GLD address 1 is failed.	Connect just GLD unit 1 and attempt to poll. Verify GLD is connected to data port 8 and the hardware is RS485, not RS232.
	60	GLD 2 fail	GLD address 2 is failed.	Verify the GLD unit addressing, and test GLD units individually on the GLD communication bus.

Display	Point	Alarm Point	Description	Solution
11	61	GLD 3+ fail	One or more GLD units addressed 3 through 12 may be failed.	Reduce the number of connected GLD units to determine which unit may be causing the link to fail.
	62	Chan. Port Timeout	Chan. Port has not forwarded any traffic in the time specified by the Channel Timeout Timer. The channel feature forwards data between two ports so the NG may be used to analyze serial traffic using CHAN filter debug.	Change the data port type to OFF, or set the Channel Timer to a different setting.
	63	Craft Timeout	The Craft Timeout Timer has not been reset in the specified time. This feature is designed so other machines may keep the TTY link active. If the TTY interface becomes unavailable to the machine, then the Craft Timeout alarm is set.	Change the Craft Timeout Timer to 0 to disable the feature.
	64	Event Que Full	The Event Que is filled with more than 500 uncollected events.	Enable DCP timestamp polling on the master so events are collected, or reboot the system to clear the alarm.

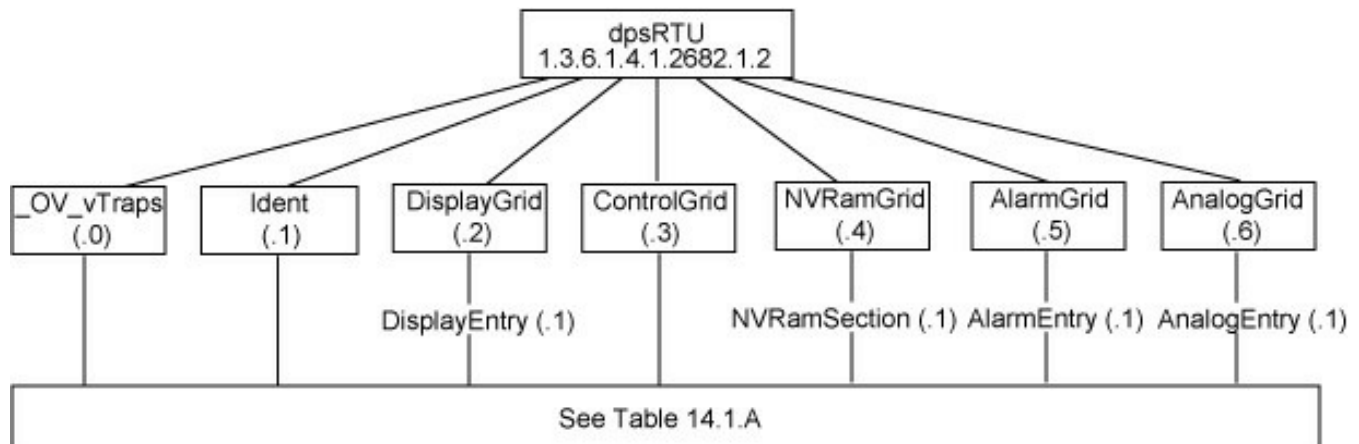
System Alarms Descriptions

11.2 SNMP Manager Functions

The SNMP Manager allows the user to view alarm status, set date/time, issue controls, and perform resynchronizations. The display and tables below outline the MIB object identifiers for the NetMediator.

The table below begins with dpsRTU; however, the MIB object identifier tree has several levels above it. The full English name is: **root.iso.org.dod.internet.private.enterprises.dps-Inc.dpsAlarmControl.dpsRTU**. Therefore, dpsRTU's full object identifier is 1.3.6.1.4.1.2682.1.4.

Each level beyond dpsRTU adds another object identifying number. For example, the object identifier of the Display portion of the Control Grid is 1.3.6.1.4.1.2682.1.4.3.3 because the object identifier of dpsRTU is 1.3.6.1.4.1.2682.1.4 + the Control Grid (.3) + the Display (.3).



Tbl. B1 (O.) _OV_Traps points

_OV_vTraps (1.3.6.1.4.1.2682.1.4.0)
PointSet (.20)
PointClr (.21)
SumPSet (.101)
SumPClr (.102)
ComFailed (.103)
ComRestored (.014)
P0001Set (.10001) through P0064Set (.10064)
P0001Clr (.20001) through P0064Clr (.20064)

Tbl. B2 (.1) Identity points

Ident (1.3.6.1.4.1.2682.1.4.1)
Manufacturer (.1)
Model (.2)
Firmware Version (.3)
DateTime (.4)
ResyncReq (.5)*
* Must be set to "1" to perform the resync request which will resend TRAPS for any standing alarm.

Tbl. B3 (.2) DisplayGrid points

DisplayEntry (1.3.6.1.4.1.2682.1.4.2.1)
Port (.1)
Address (.2)
Display (.3)
DispDesc (.4)*
PntMap (.5)*

Tbl. B3 (.3) ControlGrid points

ControlGrid (1.3.6.1.4.1.2682.1.4.3)
Port (.1)
Address (.2)
Display (.3)
Point (.4)
Action (.5)

Tbl. B5 (.5) AlarmEntry points

AlarmEntry (1.3.6.1.4.1.2682.1.4.5.1)
Aport (.1)
AAddress (.2)
ADisplay (.3)
APoint (.4)
APntDesc (.5)*
AState (.6)

Tbl. B6 (.6) Analog Channels

Channel Entry (1.3.6.1.4.1.2682.1.4.6.1)
Channel Number (.1)
Enabled (.2)
Description (.3)
Value (.4)
Thresholds (.5)*
*If Mj, Mn is assumed

11.3 SNMP Granular Trap Packets

The tables below provide a list of the information contained in the SNMP Trap packets sent by the NetMediator RTD G5.

SNMP Trap managers can get alarm information via:

1. Granular traps (not necessary to define your NetMediator's point descriptions.)

OR

2. Reading trap descriptions.

UDP Header	Description
1238	Source port
162	Destination port
303	Length
0xBAB0	Checksum

UDP Headers and descriptions

SNMP Header	Description
0	Version
Public	Request
Trap	Request
1.3.6.1.4.1.2682.1.4	Enterprise
126.10.230.181	Agent address
Enterprise Specific	Generic Trap
8001	Specific Trap
617077	Time stamp
1.3.7.1.2.1.1.1.0	Object
NetMediator 216 v1.0K	Value
1.3.6.1.2.1.1.6.0	Object
1-800-622-3314	Value
1.3.6.1.4.1.2682.1.4.4.1.0	Object
01-02-1995 05:08:27.760	Value
1.3.6.1.4.1.2682.1.4.5.1.1.99.1.1.1	Object
99	Value
1.3.6.1.4.1.2682.1.4.5.1.2.99.1.1.1	Object
1	Value
1.3.6.1.4.1.2682.1.4.5.1.3.99.1.1.1	Object
1	Value
1.3.6.1.4.1.2682.1.4.5.1.4.99.1.1.1	Object
1	Value
1.3.6.1.4.1.2682.1.4.5.1.5.99.1.1.1	Object
Rectifier Failure	Value
1.3.6.1.4.1.2682.1.4.5.1.6.99.1.1.1	Object
Alarm	Value

SNMP Headers and descriptions

11.4 Trap SNMP Logic

NET1	NET2	Trap Dest.	Result
Subnet 1 & Gateway	Not Defined	Subnet 3	Trap goes out NET1's Gateway
Subnet 1 & Gateway	Subnet 2, No Gateway	Subnet 3	Trap goes out NET1's Gateway
Subnet 1 & Gateway	Subnet 2 & Gateway	Subnet 3	Trap goes out NET2's Gateway
Subnet 1 & Gateway	Subnet 2 & Gateway	Subnet 2	Trap goes out NET2
Subnet 1 & Gateway	Subnet 2 & Gateway	Subnet 1	Trap goes out NET1
Subnet 1, No Gateway	Subnet 2 & Gateway	Subnet 1	Trap goes out NET1
Subnet 1, No Gateway	Subnet 2 & Gateway	Subnet 2	Trap goes out NET2
Subnet 1, No Gateway	Subnet 2 & Gateway	Subnet 3	Trap goes out NET2

Trap SNMP Logic

11.5 ASCII Conversion

The information contained in Table D.1 is a list of ASCII symbols and their meanings. Refer to the bulleted list below to interpret the ASCII data transmitted or received through the data ports. Port transmit and receive activity can be viewed from the Web Browser Interface.

- Printable ASCII characters will appear as ASCII.
- Non-printable ASCII characters will appear as labels surrounded by { } brackets (e.g. {NUL}).
- Non-ASCII characters will appear as hexadecimal surrounded by [] brackets (e.g. [IF]).
- A received BREAK will appear as <BRK>.

Abbreviation	Description	Abbreviation	Description
NUL	Null	DLE	Data Link Escape
SOH	Start of Heading	DC	Device Control
STX	Start of Text	NAK	Negative Acknowledge
ETX	End of Text	SYN	Synchronous Idle
EOT	End of Transmission	ETB	End of Transmission Block
ENQ	Enquiry	CAN	Cancel
ACK	Acknowledge	EM	End of Medium
BEL	Bell	SUB	Substitute
BS	Backspace	ESC	Escape
HT	Horizontal Tabulation	FS	File Separator
LF	Line Feed	GS	Group Separator
VT	Vertical Tabulation	RS	Record Separator
FF	Form Feed	US	Unit Separator
CR	Carriage Return	SP	Space (blank)
SO	Shift Out	DEL	Delete
SI	Shift In	BRK	Break Received

ASCII symbols

11.6 RADIUS Disctionary File (Available on Resource Disk)

```
# -*- text -*-
#
# dictionary.dps
#
#     DPS Telecom, Inc
#     For assistance or support, please contact support@dpstele.com
#     v1.0 Released - 1/23/09 (CBH/DPS)

VENDOR            DPS                2682

#
# Standard attribute for NetMediator RTU.
# All values are integer with 1 = True, 0 = False.
# If attribure does not exist in Access-Accept packet, default value will be 0.
#
BEGIN-VENDOR      DPS

ATTRIBUTE dps-admin                1      integer
ATTRIBUTE dps-edit                 2      integer
ATTRIBUTE dps-monitor              3      integer
ATTRIBUTE dps-SD-monitor           4      integer
#To allow monitor of data port buffer/activity
ATTRIBUTE dps-reach-through        5      integer
#To allow proxy to serial ports via TTY interface
ATTRIBUTE dps-telnet               6      integer
#To allow telnet in and out of NetMediator
ATTRIBUTE dps-control              7      integer
#To allow manipulation of dry contact relay outputs
ATTRIBUTE dps-modem               8      integer
#To allow dial in and out of NetMediator
ATTRIBUTE dps-ppp                 9      integer
#To allow this user PPP (inbound) access to the NetMediator

END-VENDOR        DPS
```

12 Frequently Asked Questions

Here are answers to some common questions from NetMediator RTD G5 users. The latest FAQs can be found on the NetMediator RTD G5 support web page, <http://www.dpstelecom.com>.

If you have a question about the NetMediator RTD G5, please call us at **(559) 454-1600** or e-mail us at support@dpstele.com

12.1 General FAQs

Q. How do I telnet to the NetMediator RTD G5?

- A. You must use **Port 2002** to connect to the NetMediator RTD G5 . Configure your Telnet client to connect using TCP/IP (**not** "Telnet," or any other port options). For connection information, enter the IP address of the NetMediator RTD G5 and Port 2002. For example, to connect to the NetMediator RTD G5 using the standard Windows Telnet client, click Start, click Run, and type "telnet <NetMediator RTD G5 IP address> 2002."

Q. How do I connect my NetMediator RTD G5 to the LAN?

- A. To connect your NetMediator RTD G5 to your LAN, you need to configure the unit IP address, the subnet mask and the default gateway. A sample configuration could look like this:

Unit Address: 192.168.1.100

subnet mask: 255.255.255.0

Default Gateway: 192.168.1.1

Save your changes by writing to NVRAM and reboot. Any change to the NetMediator's IP configuration requires a reboot.

Q. When I connect to the NetMediator RTD G5 through the craft port on the front panel it either doesn't work right or it doesn't work at all. What's going on?

- A. Make sure your using the right COM port settings. Your COM port settings should read:

Bits per second: 9600 (9600 baud)

Data bits: 8

Parity: None

Stop bits: 1

Flow control: None

Important! Flow control **must** be set to **none**. Flow control normally defaults to hardware in most terminal programs, and this will not work correctly with the NetMediator RTD G5.

Q. I can't change the craft port baud rate.

- A. If you select a higher baud rate, you must set your terminal emulator program to the new baud rate and then type `DPSCFG` and press Enter. If your terminal emulator is set to a slower baud rate than the craft port, normal keys can appear as a break key - and the craft port interprets a break key as an override that resets the baud rate to the standard 9600 baud.

Q. How do I use the NetMediator RTD G5 to access TTY interfaces on remote site equipment?

- A. If your remote site device supports RS-232, you can connect it to one of the eight data ports located on the NetMediator RTD G5 back panel. To make the data port accessible via LAN, configure the port for TCP/IP operation. You now have a LAN-based proxy port connection that lets you access your device's TTY interface through a Telnet session.

Q. I just changed the port settings for one of my data ports, but the changes did not seem to take effect even after I wrote the NVRAM.

- A. In order for data port and craft port changes (including changes to the baud rate and word format) to take effect, the NetMediator RTD G5 must be rebooted. Whenever you make changes, remember to write them to the NetMediator's NVRAM so they will be saved when the unit is rebooted.

Q. The LAN link LED is green on my NetMediator RTD G5, but I can't poll it from my T/Mon.

- A. Some routers will not forward packets to an IP address until the MAC address of the destination device has been registered on the router's Address Resolution Protocol (ARP) table. Enter the IP address of your gateway and your T/Mon system to the ARP table.

Q. What do the terms "port," "address," "display" and "alarm point" mean?

- A. These terms refer to numbers that designate the location of a network alarm, from the most general (a port to which several devices are connected) to the most specific (an individual alarm sensor).

Port: A number designating a serial port through which a monitoring device collects data.

Address: A number designating a device connected to a port.

Display: A number designating a logical group of 64 alarm points.

Alarm Point: A number designating a contact closure that is activated when an alarm condition occurs. For example, an alarm point might represent a low oil sensor in a generator or an open/close sensor in a door.

These terms originally referred only to physical things: actual ports, devices, and contact closures. For the sake of consistency, port-address-display-alarm point terminology has been extended to include purely logical elements: for example, the NetMediator RTD G5 reports internal alarms on Port 99, Address 1.

Q. What characteristics of an alarm point can be configured through software? For instance, can point 4 be used to sense an active-low signal, or point 5 to sense a level or a edge?

- A. The NetMediator's standard configuration is for all alarm points to be level-sensed. You **cannot** use configuration software to convert alarm points to TTL (edge-sensed) operation. TTL alarm points are a hardware option that must be specified when you order your NetMediator RTD G5. Ordering TTL points for your NetMediator RTD G5 does not add to the cost of the unit. What you can do with the configuration software is change any alarm point from "Normal" to "Reversed" operation. Switching to Reversed operation has different effects, depending on the kind of input connected to the alarm point:

- **If the alarm input generates an active-high signal**, switching to Reversed operation means the NetMediator RTD G5 will declare an alarm in the absence of the active-high signal, creating the practical equivalent of an active-low alarm.
- **If the alarm input generates an active-low signal**, switching to Reversed operation means the NetMediator RTD G5 will declare an alarm in the absence of the active-low signal, creating the practical equivalent of an active-high alarm.
- **If the alarm input is normally open**, switching to Reversed operation converts it to a normally closed alarm point.
- **If the alarm input is normally closed**, switching to Reversed operation converts it to a normally open alarm point.

Q. Every time my NetMediator RTD G5 starts up, I have to reenter the date and time. How can I get the NetMediator RTD G5 to automatically maintain the date and time setting?

- A. You have three options for keeping the correct time on your NetMediator RTD G5:

Real Time Clock Option: You can order your NetMediator RTD G5 with the Real Time Clock hardware option. Once it's set, the Real Time Clock will keep the correct date and time, regardless of reboots.

Network Time Protocol Synchronization: If your NetMediator RTD G5 has Firmware Version 2.9F or later, you can configure the unit to automatically synchronize to a Network Time Protocol (NTP) server.

- To get the latest NetMediator RTD G5 firmware, sign in to MyDPS at www.dpstelecom.com/mydps.
- For instructions on configuring your NetMediator RTD G5 to use NTP synchronization, see your NGEEditG5 or NetMediator RTD G5 Web Browser Interface user manual.

T/Mon RTU Time Sync Signal: You can configure your T/Mon NOC to send an RTU Time Sync signal at a regular interval, which you can set to any time period between 10 and 10,080 minutes. The Time Sync will

automatically synchronize the NetMediator's clock to the T/Mon's clock. And if you set your T/Mon to NTP synchronization, you'll make sure you have consistent, accurate time stamps throughout your monitoring network.

12.2 SNMP FAQs

Q. How do I configure the NetMediator RTD G5 to send traps to an SNMP manager? Is there a separate MIB for the NetMediator RTD G5? How many SNMP managers can the agent send traps to? And how do I set the IP address of the SNMP manager and the community string to be used when sending traps?

A. The NetMediator RTD G5 begins sending traps as soon as the SNMP managers are defined. The NetMediator RTD G5 MIB is included on the NetMediator RTD G5 Resource CD. The MIB should be compiled on your SNMP manager. (**Note:** MIB versions may change in the future.) The unit supports 2 SNMP managers, which are configured by entering its IP address in the Trap Address field of Ethernet Port Setup. You can also configure up to eight secondary SNMP managers, which is configured by selecting the secondary SNMP managers as pager recipients. Community strings are configured globally for all SNMP managers. To configure the community strings, choose System from the Edit menu, and enter appropriate values in the Get, Set, and Trap fields.

Q. Does the NetMediator RTD G5 support MIB-2 and/or any other standard MIBs?

A. The NetMediator RTD G5 supports the bulk of MIB-2.

Q. Does the NetMediator RTD G5 SNMP agent support both NetMediator RTD G5 and T/MonXM variables?

A. The NetMediator RTD G5 SNMP agent manages an embedded MIB that supports only the NetMediator's RTU variables. The T/MonXM variables are included in the distributed MIB only to provide SNMP managers with a single MIB for all DPS Telecom products.

Q. How many traps are triggered when a single point is set or cleared? The MIB defines traps like "major alarm set/cleared," "RTU point set," and a lot of granular traps, which could imply that more than one trap is sent when a change of state occurs on one point.

A. Generally, a single change of state generates a single trap, but there are two exceptions to this rule. Exception 1: the first alarm in an "all clear" condition generates an additional "summary point set" trap. Exception 2: the final clear alarm that triggers an "all clear" condition generates an additional "summary point clear" trap.

Q. What does "point map" mean?

A. A point map is a single MIB leaf that presents the current status of a 64-alarm-point display in an ASCII-readable form, where a "." represents a clear and an "x" represents an alarm.

Q. The NetMediator RTD G5 manual talks about eight control relay outputs. How do I control these from my SNMP manager?

A. The control relays are operated by issuing the appropriate set commands, which are contained in the DPS control grid. For more information about the set commands, see Appendix, "Display Mapping," in any of the NetMediator RTD G5 software configuration guides.

Q. How can I associate descriptive information with a point for the RTU granular traps?

A. The NetMediator RTD G5 alarm point descriptions are individually defined using the Web Browser, TTY, or NEditG5 configuration interfaces.

Q. My SNMP traps aren't getting through. What should I try?

A. Try these three steps:

1. Make sure that the Trap Address (IP address of the SNMP manager) is defined. (If you changed the Trap Address, make sure you saved the change to NVRAM and rebooted.)
2. Make sure all alarm points are configured to send SNMP traps.
3. Make sure the NetMediator RTD G5 and the SNMP manager are both on the network. Use the NetMediator's ping command to ping the SNMP manager.

12.3 Pager FAQs

Q. Why won't my alpha pager work?

- A. To configure the NetMediator RTD G5 to send alarm notifications to an alpha pager, enter the **data** phone number for your pager in the Phone Number field. This phone number should connect to your pager service's modem. Then enter the PIN for your pager in the PIN/Rcpt/Port field. You don't need to enter anything in any of the other fields. If you still don't receive pages, try setting the Dial Modem Init string to ATS37=9. This will limit the NetMediator's connection speed. Be sure to use the rpt debug feature, if needed.

Q. Numeric pages don't come in or are cut off in the middle of the message. What's wrong?

- A. You need to set a delay between the time the NetMediator RTD G5 dials your pager number and the time the NetMediator RTD G5 begins sending the page message. You can set the delay in the Pager Number field, where you enter your pager number. First enter the pager number, then enter some commas directly after the number. Each comma represents a two-second delay. So, for example, if you wanted an eight-second delay, you would enter "555-1212,,," in the Pager Number field.

Q. What do I need to do to set up e-mail notifications?

- A. You need to assign the NetMediator RTD G5 an e-mail address and list the addresses of e-mail recipients. Let's explain some terminology. An e-mail address consists of two parts, the user name (everything before the "@" sign) and the domain (everything after the "@" sign). To assign the NetMediator RTD G5 an e-mail address, choose System from the Edit menu. Enter the NetMediator's user name in the Name field (it can't include any spaces) and the domain in the Location field. For example, if the system configuration reads:

Name: NetMediator

Location: proactive.com

Then e-mail notifications from the NetMediator RTD G5 will be sent from the address

"NetMediator@proactive.com."

The next step is to list the e-mail recipients. Choose Pagers from the Edit menu. For each e-mail recipient, enter his or her e-mail domain in the Phone/Domain field and his or her user name in the PIN/Rcpt/Port field. You must also enter the IP address of an SMTP server in the IPA field and configure the alarm point to use the pager you setup as email.

13 Technical Support

DPS Telecom products are backed by our courteous, friendly Technical Support representatives, who will give you the best in fast and accurate customer service. To help us help you better, please take the following steps before calling Technical Support:

1. Check the DPS Telecom website.

You will find answers to many common questions on the DPS Telecom website, at <http://www.dpstelecom.com/support/>. Look here first for a fast solution to your problem.

2. Prepare relevant information.

Having important information about your DPS Telecom product in hand when you call will greatly reduce the time it takes to answer your questions. If you do not have all of the information when you call, our Technical Support representatives can assist you in gathering it. Please write the information down for easy access. Please have your user manual and hardware serial number ready.

3. Have access to troubled equipment.

Please be at or near your equipment when you call DPS Telecom Technical Support. This will help us solve your problem more efficiently.

4. Call during Customer Support hours.

Customer support hours are Monday through Friday, from 7 A.M. to 6 P.M., Pacific time. The DPS Telecom Technical Support phone number is **(559) 454-1600**.

Emergency Assistance: *Emergency assistance is available 24 hours a day, 7 days a week. For emergency assistance after hours, allow the phone to ring until it is answered with a paging message. You will be asked to enter your phone number. An on-call technical support representative will return your call as soon as possible.*

14 End User License Agreement

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