

# *DS Series Manual*

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## *DATA SWITCH*

### *DS62-MD4 Host-Modem Module*

## *QUICK START*

BayTech Manual Publication

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## **DS62-MD4 Network/Modem Host Module**

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## DS62-MD4 Network/Modem Host Module

### QUICK START: DS62 & DS62-MD4 Module

by Bay Technical Associates

For those Administrators who have requested the bare minimum for this type of equipment, follow these steps exactly. If this is a new unit shipped directly from Baytech, follow the steps. If this is a previously own unit, perform a factory reset to clear out any users and passwords still in the unit.

#### Ethernet Controller Configuration:

Before continuing your System Administrator needs to tell you to use DHCP or give you an IP Address, Subnet Address, and Gateway Address.

1. Connect the 9FRJ45PC-4 or 9FRJ45PC-1 adapter to your PC.
2. Connect the supplied rollover flat cable RJ08X007 to the adapter and to the EIA232 serial port on the Baytech DS62 & DS62-MD4 Module.
3. Use terminal emulation software to access the unit, (i.e. Microsoft Hyper-terminal). Set the PC serial port configuration to the following: **9600 bps, 8 data bits, 1 stop bit and no parity.**
4. If you get only a blinking cursor Press 'Enter'. If still only a blinking cursor, Type 5 semi-colons (;),The Attention Character will not echo on the screen. There is a one second delay before the menu is displayed. You should see a menu similar to (Figure 1).
5. Select 'C' for the configuration menu.
6. Select the DS62 & DS62-MD4 module. You should see a menu similar to (Figure 2).
7. Select the number for 'Login Setup' option. You should see a menu similar to (Figure 3).
8. Select the number for 'Manage Users' option. You should see a menu similar to (Figure 4).
9. **NOTE: The 'root' user can not be deleted.**
10. Select 'A' to add user. Type the name and password at the prompts.
11. Press 'Enter' until get to the 'Login Setup Menu' (Figure 3).
12. Select option 'Access Control' to enable or disable the Tenet and Serial Login Prompt.
13. Press 'Enter' until you get the Configuration menu (Figure 2).
14. Select 'Network Port Configuration' option. You should see a menu similar to (Figure 5).
15. If your System Administrator requires you to use DHCP, then select 'DHCP Enable/Disable' and type 'Y' to enable DHCP. If you wish to assign a static IP address to this unit, Disable the DHCP and go to step 18.
16. Press 'Enter' until you are asked to 'Accept Changes'. Type 'Y' to accept changes or 'N' to decline changes.
17. After Accepting or Declining Changes Pres 'Enter ' until you get the Network Access Menu (Figure 1).
18. Select 'Unit reset' to update the external connections. Once the reset is completed (1 minute) connect the Baytech device to your network using an Ethernet cable.
19. If you disabled the DHCP in step 14, you should see a menu similar to (Figure 5).
20. Select the 'IP Address' option and type the assigned IP address and press 'Enter'.
21. Select the 'Subnet Mask' option and type the assigned subnet mask address and press 'Enter'.
22. Select the 'Gateway Address' option and type the assigned Gateway address and press 'Enter'.
23. Press 'Enter' until you are asked to 'Accept Changes'. Type 'Y' to accept changes.
24. Press 'Enter' until you get the Network Access Menu, (Figure 1).
25. Select 'Unit reset' to update the external connections. Once the reset is completed (1 minute) connect the Baytech device to your network using an Ethernet cable.

At this point you have enough basic configurations needed to operate this Baytech unit.

## DS62-MD4 Network/Modem Host Module

### Serial Setup

- Verify **JMP5** is set to pins **1** and **2** on the DS62 & DS62-MD4 module.
- Connect the *9FRJ45PC-4* adapter to the user's computer
- Connect the Host Module's EIA-232 port to the adapter via the *RJ08X007* rolled flat ribbon cable.
- Use terminal emulation software to access the unit, **9600 bps, 8 data bits, 1stop bit and no parity**.

**NOTE:** At any time during the session you need to go to another menu, use the **Attention Character = semi-colon (;)**. Press the attention character key 5 consecutive times to get back to the main status menu.

Figure 1

```
DS-Series - F 2.10.05      (C) 2005 Bay Technical Associates
Module Name: DS62

Module: 1
Attention Character: ;
Device A      (2 ,1).....1
Device B      (2 ,2).....2
Device C      (2 ,3).....3
Device D      (2 ,4).....4
DS-DS        (5 ,1).....5
Status.....S      Current configuration
Configure.....C   Make Changes
Unit Reset.....RU Resets the DS-Unit, terminates internal &
                  external modem connections, allow 10
                  seconds for reset.

Logout.....T
Enter Request :c
```

Select option 'C' for the configuration menu. Select the DS62 module option and the following menu is displayed:

## DS62-MD4 Network/Modem Host Module

Figure 2

```
Copyright(C) Bay Technical Associates 2006
DS62 Ethernet Host module
Revision F 2.10.05      Module 1
Hardware 1.01          Serial number 509      colilo version 1.05.01

Status.....1 Current setting of the module
Serial Port Configuration.....2 Setup the port configuration menu
Serial Port Device Name.....3 Name the port
Attention Character.....4 Pressing the attention character 5
consecutive times will return back to the
main menu.
Disconnect Timeguard.....5 If more data is received within the delay
period, the DS series treats the
character as data, not an attention
character; thereby preventing unwanted
port disconnection.
Connect Port ID Echo.....6 Enable port echo by name or module&port#
Login Setup.....7 Login menu Access/Users/Direct Port
Connection/Radius/TACACS
Network Port Configuration.....8 Network Setup IP Address
Module Name.....9 Enter a name for the module
DS Management.....10 Set up Voltage/Current/Sensor thresholds
Firmware / Config Download.....11 Updates by FTP & Reset to Factory Config
Exit.....X,CR
Enter Request :
```

### Attention Character

If no Baytech power strips are to be controlled through this Data Server, skip this step. Pressing the Attention Character 5 consecutive times will access the network main menu. **The Default is a semi-colon (;)**. Select this option to change the attention character. The DS displays the following:

Attention Character is..... ;

Enter Attention Character :

### Login Setup Menu

Figure 3

```
Access Control.....1 Telnet/Serial Enable/Disable Login prompt
Manage Users.....2 Change user password or port access,
add/delete user,
Direct Port Connection.....3 Enable/Disable
Radius Configuration.....4 See below for Radius menu
TACACS Configuration.....5 See below for TACACS menu
Exit.....X,CR
Enter Request :
```

### Access Control

This security feature allows the admin to enable or disable usernames and passwords for both network and serial port access.

If either login has been enabled you will get a prompt similar to the following:

## DS62-MD4 Network/Modem Host Module

Coldfire login: root  
Password:

The default user and password is “root/baytech”, all lower case.

### Manage Users

This menu allows the administrator to add/delete users and change their passwords for multiple users. Up to 19 users plus an administrator allowed. Usernames and passwords are case sensitive and alphanumeric. The root user can not be removed. Select Manage User and the DS displays the following:

**Figure 4**

```
User Management Menu
To change user password or port access, enter number of user.
To add/delete user, select appropriate menu choice.
SNMP V3 requires passwords that are between 8 and 31 characters long
Enter request, CR to exit menus.
  A)...Add user
  1)...root
Enter Request :
```

### Radius Configuration

Radius is used to authenticate logins for the serial and the network ports if passwords and user names are enabled on the DS. If the Radius server rejects either the username or password or does not respond, the DS will display “Invalid Password”.

### TACACS Configuration

TACACS can be used to authenticate logins for the serial port, the network port, and modem. When a telnet / SSH session (or rs232 session) is started the Host module will prompt for the username and password. The Host will communicate with the TACACS server. If the server verifies the username and password, the Host will display the menus. If the server rejects the username and password or does not respond the Host will display the reason why the login failed.

### Network Port Configuration

**IMPORTANT:** For network access, enable Telnet and configure the IP addresses, Subnet Mask, and Gateway Address, or enable the DHCP. The module must be reset for network changes to take effect.

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**Figure 5**

```

Network setup :
Ethernet Address..... 00:C0:48:00:01:FD
IP Address..... 70.150.140.89
Subnet Mask..... 255.255.255.224
Default Gateway..... 70.150.140.65

Connection Inactivity Timeout (mins): Disabled
Carriage Return Translation: Enabled
Break Length (msecs): 350
DHCP is Disabled Telnet is Enabled SSH is Enabled
SSH host keys are set to factory default

IP Address.....1
Subnet Mask.....2
Gateway Address.....3
Inactivity Timeout.....4
Carriage Return Translation.....5
Break Length.....6
DHCP Enable/Disable.....7
Telnet Enable/Disable.....8
SSH Enable/Disable.....9
SSH Host Key Generation.....10
IP Filter Configuration.....11
SNMP Configuration.....12
Web Server Configuration.....13
Exit.....X,CR
Enter Request :
    
```

## Cabling

### *RJ-45 Cables and Adapters*

#### DS62 EIA-232 RJ-45 Signal

Pin	EIA 232 Signal	Signal Direction	Description
1	DTR	Out	Handshake, Line Driver Inactive State = High: +12V when power is applied. Used as a handshake line to enable/disable the receiving of characters.
2	GND		Signal Ground
3	RTS	Out	Handshake, Line Driver Inactive State = High: +12 V when power is applied. Not used to enable/disable.
4	TX	Out	Transmit Data Out
5	RX	In	Receive Data In
6	DSR	In	Handshake In. -12V when not used.
7	GND		Signal Ground
8	CTS	In	Used as a handshake line to enable/disable the receiving of characters.

## DS62-MD4 Network/Modem Host Module

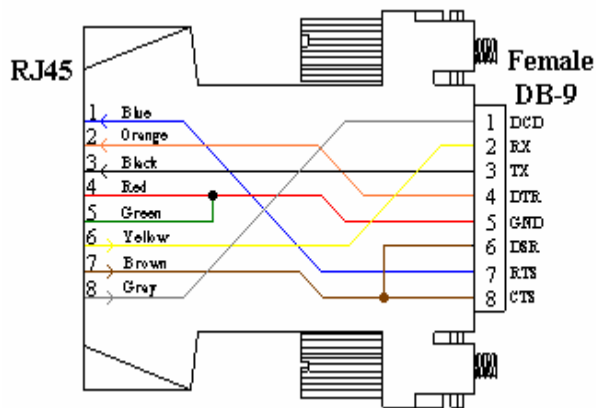
### Adapters Signals

Listed are the pin specifications for the BayTech cable and adapters and the terminal COM ports:

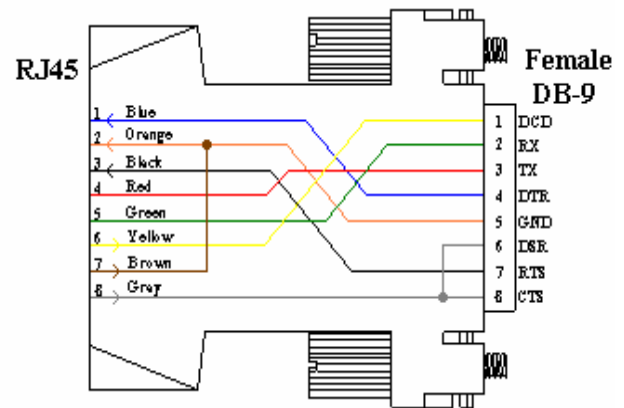
Signal	RS-232 Port (DS)	RS-232 Port (RPC)	COM Port DE-9 Pin	COM Port DB-25 Pin	Signal
DTR	1	1	4	20	DSR
GND	2	2		1	GND
RTS	3	3	7	5	CTS
TXD	4	4	3	2	RXD
RXD	5	5	2	3	TXD
DSR	6	N/C	6	6	DTR
GND	7	7	5	7	GND
CTS	8		8	4	RTS
DTR			4		DCD
DCD		8	1	8	DTR
RI	9			22	

### Adapters

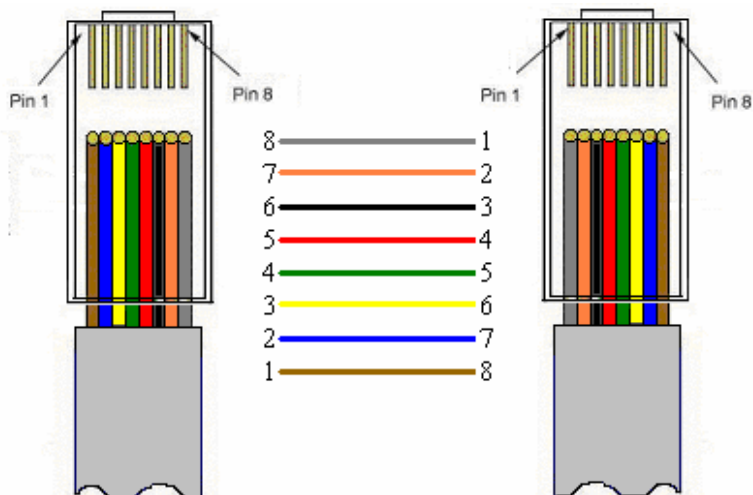
9FRJ45PC (With Cisco Interface)



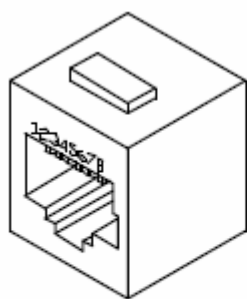
9FRJ45PC-1 (Without Cisco Interface)



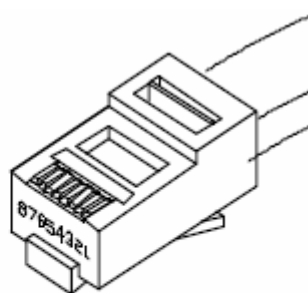
### DS62-MD4 Network/Modem Host Module RJ08X007



Figures 1 and 2 provide visual representation of an RJ-45 receptacle and plug.



**Fig. 1: RJ-45 Receptacle**



**Fig. 2: RJ-45 Plug**