

Remote Control User Guide

Setting Up DashBoard[™] Remote Control

For openGear[™] Frames Equipped with FUSION3G[™] or COMPASS[™] Cards



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This guide provides instructions for setting up and using DashBoardTM to provide the following COMPASSTM card functions:

Setting Up DashBoard[™] Remote Control (page 4)

Provides instructions for setting up and using DashBoardTM remote control for 8310-N / 8321-CN frames equipped with Cobalt[®] COMPASSTM or FUSION3GTM cards. Also provides helpful troubleshooting tips.

Managing Frames Using a Log (page 26)

• Provides a blank Frame Log Form and instructions that help ensure an orderly setup and installation process when using DashBoard[™].

- **Note:** For remote control setup of frames using a Cobalt[®] OGCP-9000 or OGCP-9000/CC Remote Control Panel, refer to the appropriate Remote Control Panel product manual (OGCP-9000-OM or OGCP-9000-CC-OM, as applicable).
- Note: For information about uploading firmware to a Cobalt[®] COMPASS[™] card, from the Cobalt[®] web site, go to **Support** → **Firmware**, and click on the <u>firmware update guide</u> link.

Setting Up DashBoard[™] Remote Control

DashBoardTM uses a standard 10/100 Mbps Ethernet LAN for communication between the 8310-N or 8321-CN frame containing the FUSION3GTM or COMPASSTM cards and the computer running DashBoardTM.

Before the cards can be used with DashBoardTM, the frame and the computer running DashBoardTM must be set up to communicate ("connect") with each other as described in this section.

- Note: Instructions in this guide assume the frame and its Network Controller Card are installed, powered, and cabled to the network in which it is to operate. To communicate with DashBoard[™], the frame must have the optional MFC-8310-N or MFC-8320-N Network Controller Card installed.
 - 10-slot frame 8310-N uses an MFC-8310-N or MFC-8320-N network card; 20-slot frame 8321-CN uses an MFC-8320-N network card. Setup for either card is very similar. Where setup procedure differences exist between the two cards, these differences are noted.

The flowchart below shows what's required to set up remote control for connecting the card/frame to a Cobalt[®] Remote Control Panel or DashBoardTM, along with corresponding references to procedures in this section.



Frame Setup Using DHCP

DHCP provides the simplest method of connecting frames to the LAN. However, it is typically recommended that frame connections be changed to use static IP addresses after the initial connection is established.

If it is desired to change the address to a static IP address after all frames have been connected in this procedure, follow the instructions in this procedure to change the address to a static IP address after the frame has connected.

Obtain and Install DHCP Server (if not present)

1. If the LAN connecting the frame(s) to DashBoard[™] is not already configured with a DHCP server, obtain and install a DHCP server ("TFTP32" or an equivalent is suitable).

▶ Install and Set Up DashBoard[™] (if not present)

- 2. On the computer connected to the frame LAN, go to the Cobalt Digital Inc. website: <u>www.cobaltdigital.com</u> and download DashBoardTM. Follow the on-line instructions.
- 3. Open DashBoard[™]. Under Window → Preferences... make certain Automatic discovery of devices Enable button is selected (as shown below).

pe filter text	Automatic Discovery $\Leftrightarrow * \Rightarrow *$
Automatic Discovery Help Install/Update Licensed Features	Automatic discovery of devices
	Search for devices using
	O All network interfaces
	O Selected network interface(s)
	Intel(R) PRO/1000 MT Network Connection - Packet Scheduler Miniport IP addresses: 192.168.0.95
	Refresh Restore <u>D</u> efaults <u>Apply</u>
	OK Cancel

Set Network Computer for DHCP

- Note: If connecting multiple frames using DHCP, allow adequate time to correlate the frame's network card serial number and its DHCP-assigned IP address before proceeding to the next frame. If frames are connected too rapidly without considering this, it may be difficult to correlate frame instances in DashBoard[™] and the DHCP-assigned addresses with the physical identity of the frames.
 - It is recommended to also identify each frame with its network card serial number and its assigned IP address. This can be easily done using the Frame Log Sheet included in the back of this manual. See Managing Frames Using a Log on page 26 for more information.
- **4.** On the computer where DashBoard[™] is installed, make certain TCP/IP Properties DHCP settings are as follows:
 - · Obtain an IP address automatically
 - Obtain DNS Server address automatically

Set Network Controller Card for DHCP

5. On the Network Controller Card, make certain switches are set to the **IP address** assigned by **DHCP server** position as shown below.



- 6. Connect the frame to the LAN.
- **7.** Install the network card in the frame and power-up the frame. Wait for the network card to fully boot (red LED turns off).
- 8. By default, DashBoard[™] is set to automatically connect to devices. The frame should now appear in the Basic Tree View pane (added frame "MFC-8310-N SN: 00108053" as shown in the example below).

(If necessary, right-click on the frame and select **Connect**. The frame is now connected to DashBoardTM.)

	Pile View Tree View Window Help Image: Basic Tree View Image: Constraint of the pile Image: Constraint of the pile Image: Basic Tree View Image: Constraint of the pile Image: Constraint of the pile Image: Basic Tree View Image: Constraint of the pile Image: Constraint of the pile Image: Basic Tree View Image: Constraint of the pile Image: Constraint of the pile Image: Basic Tree View Image: Constraint of the pile Image: Constraint of the pile Image: Basic Tree View Image: Constraint of the pile Image: Constraint of the pile Image: Basic Tree View Image: Constraint of the pile Image: Constraint of the pile Image: Basic Tree View Image: Constraint of the pile Image: Constraint of the pile Image: Basic Tree View Image: Constraint of the pile Image: Constraint of the pile Image: Basic Tree View Image: Constraint of the pile Image: Constraint of the pile Image: Constraint of the pile Image: Constraint of the pile Image: Constraint of the pile Image: Constraint of the pile Image: Constraint of the pile Image: Constraint of the pile Image: Constraint of the pile Image: Constraint of the pile Image: Constraint of the pile
Frame now connected in DashBoard™	DashBoard Ele View Tree View Window Help Basic Tree View X Image: Basic Tree View X<

- Note: DashBoard[™] may not be able to connect to the frame if firewalls or network segment controls are used between the computer running DashBoard[™] and the frame. (DashBoard[™] and the network card use TCP/IP and can be used with routers.)
 - If DashBoard[™] does not discover the added frame as described above, perform frame setup as described in Frame Setup Using Static IP Address on page 13. Also note that automatic discovery only works for frames within the subnet.
- **9.** If desired, the frame name displayed in the Basic Tree View pane can be changed as shown below.

Note: In the next step make certain the frame's network card is given a unique name correlating to the frame physical identity.

As shipped, a Network Controller Card and its controlled frame supplied by Cobalt[®] are identified in DashBoard[™] by the card part number and its serial number (SN) as shown in the examples in this section; therefore, no other action needs to be done unless a custom unique name is desired. Note that frames and/or network cards obtained from other vendors may not be similarly identified and may require a unique name before proceeding.

MFC-8310 Card	open Gear	
Right-click on the frame to open the network configuration pane.	Maili-Befinitian Terminal Equipment V open architecture frame and cards	
Enter the desired frame name in the	openGear frame: network configuration network configuration upload firmware snmp configur	ation
Frame Name: field and then click Save Changes.	Frame name: Frame 1A RCVR21 Software version: 1.12 Use DHCP: ONO O Yes IP address: Igo Iso Iso Iso Iso	
	Netmask: loce loce loce	
	Gateway: 10 0 1 1	
	Time server: 64 198 208 93	
	Save Changes	
	copyright 2006 - 2008, Ross video	Limite
MEC-8320 Card		
MFC-8320 Card Right-click on the slot containing the network card (slot 0) to open the network configuration pane.	Setup Network Data Safe SNMP Frame Name Frame 1A RCVR21 0.0.0.0 0.0.0.0	
MFC-8320 Card Right-click on the slot containing the network card (slot 0) to open the network configuration pane.	Setup Network Data Safe SNMP Frame Name Frame 1A RCVR21 0.0.0.0 0.0.0.0 NTP Server 0.0.0.0 0.0.0.0 0.0.0.0 Current DIP Switch DHCP 0.0.0.0 0.0.0.0	
MFC-8320 Card Right-click on the slot containing the network card (slot 0) to open the network configuration pane. Enter the desired frame name in the Frame Name: field and then click Apply.	Setup Network Data Safe SNMP Frame Name Frame 1A RCVR21 0.0.0.0 NTP Server 0.0.0.0 Current DIP Switch DHCP Addressing Mode Static	
MFC-8320 Card Right-click on the slot containing the network card (slot 0) to open the network configuration pane. Enter the desired frame name in the Frame Name: field and then click Apply.	Network Data Safe SMMP Frame Name Frame 1A RCVR21 Image: Constant of the second secon	
MFC-8320 Card Right-click on the slot containing the network card (slot 0) to open the network configuration pane. Enter the desired frame name in the Frame Name: field and then click Apply.	Setup Network Data Safe SMMP Frame Name Frame 1A RCVR21 NTP Server 0.0.0.0 Current DIP Switch DHCP Addressing Mode Static DHCP The following network settings, only for user static IP mode, are NOT active. See the currently active settings on the Network tab in the left status panel. IP Address	
MFC-8320 Card Right-click on the slot containing the network card (slot 0) to open the network configuration pane. Enter the desired frame name in the Frame Name: field and then click Apply.	Network Data Safe SNMP Frame Name Frame 1A RCVR21 NTP Server 0.0.0.0 Current DIP Switch DHCP Addressing Mode Static O DHCP The following network settings, only for user static IP mode, are NOT active. See the currently active settings on the Network' tab in the left status panel. IP Address 0.0.0.0 Subnet Mask 0.0.0.0	
MFC-8320 Card Right-click on the slot containing the network card (slot 0) to open the network configuration pane. Enter the desired frame name in the Frame Name: field and then click Apply.	Network Data Safe SMMP Frame Name Frame 1A RCVR21 NTP Server 0.0.0.0 Current DIP Switch DHCP Addressing Mode Static © DHCP The following network settings, only for user static IP mode, are NOT active. See the currently active settings on the Network' tab in the left status panel. IP Address 0.0.0 Subnet Mask 0.0.0 Default Gateway 0.0.0	
MFC-8320 Card Right-click on the slot containing the network card (slot 0) to open the network configuration pane. Enter the desired frame name in the Frame Name: field and then click Apply.	Setup Network Data Safe SMMP Frame Name Frame 1A RCVR21 Image: Constraint of the setup of	

- **10.** Depending on setup desired, proceed as follows:
 - To keep setup as **DHCP IP address**, no further setup is required. The frame is now ready to access and control cards. Proceed to the appropriate product manual(s) for card operating instructions.
 - To change to static IP address, depending on network card model, go to either:
 - Setting MFC-8310-N From DHCP to Static User Address
 - Setting MFC-8320-N From DHCP to Static User Address

Setting MFC-8310-N From DHCP to Static User Address

- 1. Right-click on the frame and open the Network Configuration page. Set **Use DHCP:** to **No**.
- 2. In the **IP address:** field, enter a desired static IP address other than the card fixed default making certain the selected address is in the **same subnet** as the MFC-8310-N card and LAN computer.
- **3.** Click on **Save Changes**. This sets DashBoard[™] to use the new static address for this frame.
- **4.** As shown on the next page, set the frame LAN computer to a static IP address to be on the same network as the MFC-8310-N default static IP address (i.e., **192.168.1.x**).

General		Set LAN computer to be of same network (1st through
You can get IP settings assig this capability. Otherwise, you the appropriate IP settings.	ned automatically if your network supports rneed to ask your network administrator for	3rd octets of static IP address) of MFC-8310-N card fixed default
🔘 <u>O</u> btain an IP address au	Itomatically	
Oge the following IP add		
IP address:	192.168.1.60	
S <u>u</u> bnet mask:	255.255.255.0	
Default gateway:		
Ubtain DNS server add	ess automatically	
OS Use the following DNS	erver addresses:	
Preferred DNS server:	· · · ·	
Alternate DNS server:	· · ·	
	Ad <u>v</u> anced	

- **Note:** When using a frame static IP address, it is recommended to isolate the LAN segment containing the frame, the hosting computer, and intermediate hubs or switches from other parts of the network. This prevents a potential conflict between the frame and any other node that might also have this address.
 - Time required for card to come back online depends upon amount of frames connected to DashBoard[™].
- **5.** The frame now shows connection to DashBoard[™] with the assigned static IP address ("192.168.1.86" as shown in the example on the next page).



6. The frame is now ready to access and control cards. Proceed to the appropriate product manual(s) for card operating instructions.

Setting MFC-8320-N From DHCP to Static User Address

1. On MFC-8320-N Network configuration pane, perform the settings shown below.

MFC-8320 Card	Setup Network Data Safe SNMP
1. Set Addressing Mode to Static.	Frame Name Frame 1A RCVR21
2. Set IP Address, Subnet Mask, and Default Gateway fields as appropriate. In the IP address: field, enter a desired static IP address other than the card fixed default ("192.168.2.4" in this example) making certain the selected address is in the same subnet as the	NTP Server 0.0.0 Current 20 Switch User Settings Addressing Mode Static O DHCP IP Address 192.168.2.4
MFC-8320-N card and LAN computer.	Subnet Mask 265.255.255.0 Default Gateway 192.168.0.1 Click the 'Apply' button to save the user settings and for them to take effect. Click the 'Cancel' button to revert to the previous settings. Note: IP net settings only take effect when the "Current DIP Switch" is set to "User Settings". Apply Cancel

- 2. On MFC-8320-N Network configuration pane, click Apply. The card will momentarily go offline; wait for the card to come back online before proceeding.
- 3. Remove the card from its slot and set DIP switches as shown below.



4. As shown below, set the frame LAN computer to a static IP address to be on the same network as the MFC-8310-N default static IP address (i.e., **192.168.2.x**).

You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.	same network (1st through 3rd octets of static IP address) of MFC-8320-N card fixed default
O Obtain an IP address automatically	
O Use the following IP address:	
IP address: 192.168.2.2	
Subnet mask: 255 . 255 . 0	
Default gateway:	
Obtain DNS server address automatically O Use the following DNS server addresses:	
Preferred DNS server:	
Alternate DNS server:	
Advanced	
OK Cancel	

- **Note:** When using a frame static IP address, it is recommended to isolate the LAN segment containing the frame, the hosting computer, and intermediate hubs or switches from other parts of the network. This prevents a potential conflict between the frame and any other node that might also have this address.
 - Time required for card to come back online depends upon amount of frames connected to DashBoard[™].
- Re-insert the card. When the card again comes online, the frame now shows connection to DashBoard[™] with the assigned static IP address ("192.168.2.4" as shown in the example on the next page).



6. The frame is now ready to access and control cards. Proceed to the appropriate Product Manual(s) for card operating instructions.

Frame Setup Using Static IP Address

This procedure provides instructions for using the manual mode for adding a frame to DashBoardTM. In this mode, the frame is set to use a static IP address, and DashBoardTM is set to look for and connect to a specific frame address. This mode is useful where network problems or resource availability prevent DHCP usage.

Note: If static IP addresses are to be used, carefully follow this procedure. If the procedure is not followed as specified, DashBoard[™] may lose all communication with the frame, thereby requiring the procedure to be repeated in its entirety.

Install and Set Up DashBoard™ (if not present)

- 1. If not already performed, install DashBoard[™] on the computer connected to the frame LAN as described in steps 2 and 2 in **Frame Setup Using DHCP** on page 5.
- 2. Open DashBoard[™]. Under Window → Preferences... make certain Automatic discovery of devices Enable button is selected (as shown below).

type filter text	Automatic Discovery	
← Automatic Discovery Help Install/Update Licensed Features	Automatic discovery of devices	
	Search for devices using All network interfaces Selected network interface(s) Intel(R) PRO/1000 MT Network Connection - Packet Scheduler Miniport	
	<i>IP addresses</i> :192.168.0.95	
	Refresh Restore Defaults Apply	
	OK Cancel	

Note: It is recommended to identify each frame with its MFC-8310-N / MFC-8320-N network card serial number and its assigned IP address. This can be easily done using the Frame Log Sheet included in the back of this manual. Refer to Managing Frames Using a Log on page 26 for more information.

Set Network Computer for Static IP Addressing

3. As shown below, set the frame LAN computer to a static IP address that is on the same network as the network card default static IP address:

Card Model	Factory Default Network
MFN-8310-N	192.168.1.x
MFN-8320-N	192.168.2.x

Internet Protocol (TCP/IP) P General You can get IP settings assigned this capability. Otherwise, you ne the appropriate IP settings. <u>O</u> btain an IP address autorr <u>O</u> Use the following IP address	automatically if your network supports ed to ask your network administrator for natically	Set LAN computer to be c same network (1st throug 3rd octets of static IP address) of network card fixed default
IP address:	192.168.1.60	
S <u>u</u> bnet mask:	255 . 255 . 255 . 0	
Default gateway:		
O Obtain DNS server address	automatically	
• Use the following DNS serv	er addresses:	
Preferred DNS server:		
<u>A</u> lternate DNS server:		
	Advanced	
	OK Cancel	

Note: When using a frame static IP address, if not already done it is recommended to isolate the LAN segment containing the frame, the hosting computer, and intermediate hubs or switches from other parts of the network. This prevents a potential conflict between the frame and any other node that might also have this address.

Set Network Controller Card for Initial Factory Fixed IP Address

4. Set network card switch(es) to the **factory fixed static IP address** position as shown below. This establishes the initial connection between the card and the network computer.



- 5. Connect the frame to the LAN and power-up the frame.
- **6.** Install the network card in the frame. Wait for the network card to fully reboot (red LED turns off).

7. The added frame should now appear in the Basic Tree View pane. If necessary, right-click on the frame and select **Connect**. The frame is now connected to DashBoardTM.



Set Network Controller Card to Desired Unique Static IP Address

- 8. Set the network card to the desired unique static IP address as described in:
 - Setting MFC-8310-N to Static User Address (page 17), or
 - Setting MFC-8320-N to Static User Address (page 19)

Setting MFC-8310-N to Static User Address

1. Right-click on the frame and select **Open**. The Network Configuration page appears (shown below).

Basic Tree View Image: Control View Image: Control View Image: Control View Image: C	MEC-8310-N SN: 00108053 - Slot 0 - MEC-8310-N	0-N 5N: 00108053 (192.168.1.86) ×
	openGear frame: network configuration	network configuration upload firmware
	Frame name:	MFC-8310-N SN: 001080
	Software version:	1.12
	Use DHCP:	No ○Yes
	IP address:	192 . 168 . 1 . 1
	Netmask:	255 . 255 . 255 . 0
	Gateway:	10 . 0 . 1 . 1
	Time server:	64 . 198 . 208 . 93 Setup_addft3.png

- 2. In the Network Configuration page, do the following:
 - Make certain Use DHCP: is set to No.
 - In the **IP address:** field, enter a desired static IP address other than the card fixed default ("192.168.1.86" in the example here) making certain the selected address is in the **same subnet** as the MFC-8310-N card and LAN computer.
 - Click on **Save Changes**. This sets DashBoard[™] to use the new static address for this frame.

At this point, the frame instance is installed in DashBoardTM, with DashBoardTM now looking for the frame whenever DashBoardTM is again opened.

- **Note:** Do not leave the IP address as the factory default 192.168.1.1. If other frame are to be installed later, the IP address being left at default will conflict with subsequent frames installed as described here.
- **3.** Remove the MFC-8310-N card and set switch SW-1 (position 8) to the opposite position in which it is now set. (**Normal** position).
- 4. Re-install the card and wait for the card to boot (red LED turns off).

5. On DashBoard[™], select the newly added frame. If necessary, click the **Re-query** button to again display the added frame. The added frame now appears with its new address (as shown below).

Because DashBoard[™] now "sees" the frame, its address can be changed as desired at this point. If desired, a new address can be applied in the frame Network Configuration page by entering the new address and then clicking on **Save Changes** to apply a different address.

Note: Whenever using a static address for the frame, the address must be compatible with the network of the computer running DashBoard[™].



Setting MFC-8320-N to Static User Address

1. On MFC-8320-N Network configuration pane, perform the settings shown below.

	Juliu	Setup Networ	k Data Safe SNMP	
1. Set Addressing Mode to Stat	ic.	Frame Name	Frame 1A RCVR21	
2. Set IP Address, Subnet Mask	k, and	NTP Server	0.0.0.0	
Default Gateway fields as app	propriate.	Current SHP Switch	User Settings	
In the IP address: field, enter a static IP address other than th factory fixed default (*192.168	a desired e card	Addressing Mode	Static	О рнср
this example) making certain t	he	IP Address	192.168.2.4	
as the MFC-8320-N card and	LAN	Subnet Mask	255.255.255.0	
computer.		Default Gateway	192.168.0.1	
			Click the 'Apply' button to save the user settings Click the 'Cancel' button to revert to the previous Note: IP net settings only take effect when the "	: and for them to take effect. s settings. Current DIP Switch" is set to "User Settings".
			Apply	

- **Note:** Do not leave the IP address as the factory default 192.168.2.1. If other frame are to be installed later, the IP address being left at default will conflict with subsequent frames installed as described here.
- 2. On MFC-8320-N Network configuration pane, click Apply. The card will momentarily go offline; wait for the card to come back online before proceeding.
- 3. Remove the card from its slot and set DIP switches as shown below.

MFC-8320 Card	
Rear of Card	

- Note: Time required for card to come back online depends upon amount of frames connected to DashBoard[™].
- **4.** Re-insert the card. When the card again comes online, the frame now shows connection to DashBoardTM with the assigned static IP address ("192.168.2.4" as shown in the example on the next page).



5. The frame is now ready to access and control cards. Proceed to the appropriate Product Manual(s) for card operating instructions.



Troubleshooting Network/Remote Control Errors

The table below provides network/remote control troubleshooting information. If the card or its remote connection(s) exhibits any of the symptoms listed in the table, follow the troubleshooting instructions provided.

Note: All remote control items described here use industry standard 10/100 Mbps Ethernet for communication between the Network Card/frame and remote control systems such as DashBoard[™].

Standard LAN troubleshooting techniques and practices are applicable to this usage. The RJ-45 receptacle that provides the frame connection to the LAN is equipped with an activity status indicator that can be used to determine activity status.

Troubleshooting Network/Remote Control Errors by Symptom

Symptom	Error	Corrective Action
DashBoard [™] does not discover newly added frame; newly added frame will not connect to network	 DashBoard[™] may not be set to automatically discover added devices 	 Make certain DashBoard[™] is set to automatically discover devices as specified in Frame Setup Using DHCP on page 5.
		Note: The surest method of establishing a connection is to use static addressing using the network card's factory fixed IP address to establish initial connection. When connection is established using factory fixed IP address, the connection can then be changed to a unique IP address in accordance with Setting MFC-8310-N to Static User Address (p. 17) or Setting MFC-8320-N to Static User Address (p. 19), as applicable.

(Continued) DashBoard™ does not discover newly added frame; mill not connect to network Damaged Ethernet cable or cable connector; cable mis-connected Make certain the Ethernet cable is properly connected (see below) and showing activity on the LAN switch indicators and the ETHERNET connector indicator on the frame. Use ping or netstat to check the connection. Network Controller Card not connector Singer With the Card mathematication in the frame. Network Controller Card not connector installations: where more than one instance of DashBoard™ is be used, if another user or ban one this installations to be used, if another user or ban one to the frame equipped with this network card, the prime disconnected without notice. Network Cantroller Card not compatible with frame. Network controller Card not compatible with frame. Network card here more than one instance of DashBoard™ is be used, if another user one than one instance of DashBoard™ is network card, the network card was not originally shipped with this network card, the frame. Part number is printed here (e.g., "MFC-8320-N') user originally shipped with the frame. It is network card, the prime more instance of DashBoard™ It is network card, the frame. Part number is printed here (e.g., "MFC-8320-N') It is network card, the frame. It is network card, the frame.	Symptom	Error	Corrective Action
 Network Controller Card not compatible with frame Connect or instance of DashBoardTM is to be used. If another user without notice. Nete: The MFC-8320-S is not suitable for installators where more than one instance of DashBoardTM is to be used. If another user without notice. Especially if network card was not originally shipped with frame, check the network card is compatible with the frame. Part number is printed here (e.g., "MEC-8320-N") user without notice. The following are compatible network card / frame (more combinations: 	(Continued) DashBoard [™] does not discover newly added frame; newly added frame will not connect to network	Damaged Ethernet cable or cable connector; cable mis-connected	• Make certain the Ethernet cable is properly connected (see below) and showing activity on the LAN switch indicators and the ETHERNET connector indicator on the frame. Use ping or netstat to check the connection.
 Network Controller Card not compatible with frame Note: The MFC-8320-S is not suitable for installations where more than one instance of DashBoard™ is to be used. If another user forces a connection to the frame equipped with this network card, the prior user will be disconnected without notice. Part number is printed here (e.g., "MFC-8320-N") without notice. Part number is printed here (e.g., "MFC-8320-N") The following are compatible network card/frame combinations: Network Card Frame MEC-8310-N, 8310-N, 8310-B-BNC 			Do not connect to "RossBUS" or "openBUS" connector
instance of DashBoard TM is to be used. If another user forces a connection to the frame equipped with this network card, the prior user will be disconnected without notice.		 Network Controller Card not compatible with frame Note: The MFC-8320-S is not suitable for installations where more than one instance of DashBoard[™] is to be used. If another user forces a connection to the frame equipped with this network card, the prior user will be disconnected without notice. 	• Especially if network card was not originally shipped with frame, check the network card part number (see below) and make sure it is compatible with the frame.
The following are compatible network card/frame combinations: Network Card Frame MFC-8310-N, MFC-8310-NS 8310-N, 8310-B-BNC			Part number is printed here (e.g., "MFC-8320-N")
Network CardFrameMFC-8310-N, MFC-8310-NS8310-N, 8310-B-BNC			The following are compatible network card/ frame combinations:
MFC-8310-N, 8310-N, 8310-B-BNC MFC-8310-NS			Network Card Frame
			MFC-8310-N, 8310-N, 8310-B-BNC MFC-8310-NS
MFC-8320-N, 8310-N, 8310-B-BNC MFC-8320-NS 8321-CN			MFC-8320-N, 8310-N, 8310-B-BNC MFC-8320-NS 8321-CN

Troubleshooting Network/Remote Control Errors by Symptom - continued

Symptom	Error	Corrective Action
(Continued) DashBoard [™] does not discover newly added frame; newly added frame will not connect to network	 Computer-to-frame Ethernet cable is not crossover-type cable Note: The MFC-8310-N network card does not support Auto-MDIX. If the frame is connected directly to the host computer running DashBoard™, a crossover-type cable is required. 	• Some computer NIC cards require a crossover-type cable to properly connect to the Tx and Rx pins used on the openGear frame Ethernet connector. It is generally recommended to use a crossover-type cable in these cases, as the auto-MDIX feature of the frame will adapt to either Rx/Tx orientation when a crossover-type cable is used.
Newly added frame in DashBoard [™] that uses static IP address will not activate (icon stays grayed-out)	 Network Card and LAN computer on different networks 	• Make certain LAN hosting computer and Network Controller Card are on same network. During setup, computer must use 192.168.1.x network (MFC-8310-N card) or 192.168.2.x network (MFC-8320-N card) to accommodate the Network Card fixed static IP address.
	Address conflict with other nodes or another Network Card	 Make certain that the LAN segment containing the frame, the hosting computer, and intermediate hubs or switches is isolated from other parts of the network. Make certain this Network Card or others have not been left with its address mode switch set to the factory fixed static IP address mode.
Previously connected and active frame now shows grayed-out icon in Card Access/Navigation Tree pane for Network Controller Card in DashBoard™. Error randomly occurred with no intervening action. Slot 0: MFC-8310-N SN: 00108053 Slot 0: MFC-8310-N Slot 7: CDI-9061 RCVR21	Network Controller Card not electrically/physically connected to frame, or communications error	 Make certain the Network Card is properly and fully seated in its frame card slot. Eject the card and reseat the card. Make certain the frame power supply shows proper operating status. Make certain the Ethernet cable is properly connected and showing activity on the LAN switch. Use ping or netstat to check the connection.

Troubleshooting Network/Remote Control Errors by Symptom — continued

Symptom	Error	Corrective Action
Previously connected and active frame now shows grayed-out icon in Card Access/Navigation Tree pane for Network Controller Card in DashBoard™. Error occurred immediately after applying DashBoard™ Network Configuration page changes, or when host computer/network had network setting changes applied.	DashBoard [™] has lost its connection to the frame. If a frame is set in Dashboard [™] as using DHCP, do not change the setting to static IP address ("Use DHCP: No") without following the entire procedure for static address usage (DashBoard [™] will not forward from DHCP-assigned addresses to a static address)	 Try removing and re-inserting the network card, and then repeating by closing and opening DashBoard[™] again. Re-establish connection by re-connecting the frame to Dashboard[™] using factory fixed static IP address (192.168.1.1 for MFC-8310-N or 192.168.2.1 for MFC-8320-N) as described in Frame Setup Using Static IP Address on page 13. Then, reconfigure the frame for DHCP in accordance with the instructions provided in the procedure.
DashBoard [™] shows red icon in Card Access/Navigation Tree pane for card (Network Controller Card OK). MFC-8310-N SN: 00108053 Slot 0: MFC-8310-N Slot 7: CDI-9061 RCVR21 Slot 8: CDI-9061 RCVR26	See "Corrective Action" to the right	 If other cards in the same frame show connection, the card showing red icon may not be communicating with Dashboard[™]. Check the following: Make certain the card is installed in the intended frame and slot location. Make certain the card is properly and fully seated in the frame card slot. Eject the card and reseat the card. Card may be experiencing error other than network-related. Check the card's status in its Card Info pane. If all other cards in the same frame do not show connection, the remote control system may not be connecting to the LAN. Check the following: Make certain the Ethernet cable is properly connected and showing activity on the LAN switch. Use pingto check the connection.

Troubleshooting Network/Remote Control Errors by Symptom - continued

Symptom	Error	Corrective Action
DashBoard [™] shows red icon in Card Access/Navigation Tree pane for Network Controller Card).	Network Controller Card LAN settings may be incorrect in DashBoard™ Network Configuration screen	• If cards in another frame display properly, the remote control system may not be connecting to the frame containing the cards. Check the following:
MFC-8310-N SN: 00108053 Slot 0: MFC-8310-N Slot 7: CDI-9061 RCVR21		 Make certain the IP settings for the frame specified in the DashBoard™ Network Configuration screen agree with the settings for the frame.
		 If cards in another frame also do not display properly, the remote control system may not be connecting to the LAN. Check the following:
		• Make certain the Ethernet cable is properly connected and showing activity on the LAN switch. Use ping- to check the connection.

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Consideration should be given to a means of correlating the frame physical identification/location with its remote control identity in DashBoardTM.

Especially when using DHCP to connect frames, a large number of frames may suddenly connect and appear in the DashBoardTM Basic Navigation Tree without any means of correlating each frame instance in DashBoardTM with the actual frame hardware.

To help prevent this, it is recommended that an orderly installation process be used that correlates the frame's physical identity (rack location, function, etc.) with its instance as displayed in DashBoardTM. A blank **Frame Log Form** is provided on the inside back cover of this guide that can be used for documenting the installation.

Using a Log for Managing Frames

The example below shows how to use the Frame Log Form. Photocopy or print copies of the Frame Log Form to document the frame correlation to its name in DashBoardTM. The form is equipped with on-line form fields that allow the form to be filled out as a PDF soft copy. Save the form page using the Adobe[®] Acrobat[®] save options.



Note: If a frame becomes "lost" after installation, its instance in DashBoard[™] can be identified by opening the frame's fan door, thereby causing an alert (yellow icon) for the corresponding frame in DashBoard[™]. The frame for which the door was opened can then be correlated to its instance in DashBoard[™] by taking note of the instance displaying a "Fan Door Open" alert.



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Frame Log Form

Use this form to document the frame correlation to its name in DashBoard[™]. Fill in the blanks for other information that can also be recorded as desired.

Sheet of	_		
Date:			
Site:			
Personnel:			
		I	Remote Control System
Rack ID	Frame ID	Network ID	Remarks:
		DHCP	
		Static	
		IP ADDR:	
		Netmask:	
		Gateway:	
		DHCP	
		Static	
		IP ADDR:	
		Netmask:	
		Gateway:	
		Netmask:	
		Gateway:	
		Netmask:	
		Gateway:	
		IP ADDR:	
		Gateway:	
		Netmask:	
		Gateway:	
		IP ADDR:	
		Netmask:	
		Gateway:	

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