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Dialogic® BorderNet™ 2020 Integrated Multimedia Gateway Quick Start Installation Guide

This document provides a high-level overview on how to connect the power and network cabling required to download the system software to the BorderNet 2020 IMG. For detailed information about the installation, refer to the online documentation located at <http://www.dialogic.com/manuals>.

Before beginning, review the enclosed packing list and verify that all items listed have been received. If there are any discrepancies, contact your local Dialogic representative.

Locating the Base MAC Address

The base MAC address is used only when configuring the 2020 IMG to get its software load from a server running DHCP/FTP. If loading software using only an SD card or using the SD card to point to an FTP server, the MAC address is not needed. Because of the location of the sticker that displays the MAC address, Dialogic recommends that the base MAC address be copied from this sticker before installing the system into a rack.

The base MAC address is printed on an identification label located on the underside rear of the 2020 IMG. The base MAC address has been assigned to the CTRL0 and CTRL1 interfaces on the rear of the unit. All other MAC addresses are under software control.

Grounding the 2020 IMG

AC Version

Plug the AC power cable into a grounded outlet and then insert the other end into the power module located on the rear of the 2020 IMG. Do not use the external grounding lug located on the rear of the system to ground the system. The grounding lugs are for grounding a 2020 IMG that is powered by DC volts.

DC Version

Connect the 2020 IMG to earth ground before connecting to DC power. To connect a true earth ground to the 2020 IMG, Dialogic supplies a two hole (5/8" spacing) #10 solderless crimp grounding lug that is attached to the grounding screws on the rear of the 2020 IMG. Follow instructions below.

1. Remove the two-hole grounding lug by removing the grounding screws.
2. Crimp a #10, #12, or #14 AWG machine tool wire (MTW) (green/yellow for earth ground) to this lug. Re-attach the lug to the 2020 IMG using the grounding screws previously removed.
3. Attach the other end of grounding wire to either a grounding point on the mounting rack or a building ground point.

Note: On the supplied DC Cable described below there is a third wire that can be used to connect the 2020 IMG to earth ground. If connecting the 2020 IMG to earth ground using the grounding lug method described above, do not connect the gnd wire from the supplied power cable. To prevent any grounding loops, only one grounding connection is needed. When connecting the 2020 IMG to ground, the preferred method is through the grounding lug method described above.

Connecting AC power

The redundant, hot-swappable AC power modules are located at the rear of the docking station. Connect the supplied three prong grounded cable into the three-prong grounded outlet located at the rear of these power modules. Do not use the external grounding lugs located on the rear of the 2020 IMG to ground the system. These grounding lugs are used for grounding the DC version of the 2020 IMG.

The AC input power must conform to the following specifications:

- 100 - 240 V AC, 60 - 50 Hz, (2 A - 1 A)
- Range: 100 to 132 V AC (115 V AC nominal), 180 - 264 V AC (230 V AC nominal)
- Power Supplies will operate at any frequency between 47 and 63 Hz.

Note: When connecting a second power supply, you do not need to turn off power to the primary AC power module.

Connecting DC power

Connecting to a Single DC Power Source

The Redundant, hot-swappable DC power modules are located at the rear of the docking station. To connect a single external DC power source to the 2020 IMG follow the instructions below.

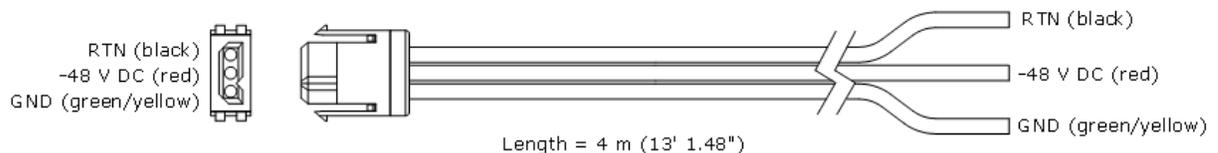
The DC input power must conform to the following specifications:

- 48 volts DC (nominal) 5 amps
- 40 to -60 volts DC (-48 volts DC nominal) @ 6 amps

1. Turn OFF the existing external DC power source.

Warning! Failure to turn the power OFF at the source may result in electrical shock.

2. Using the supplied DC Power cable, attach the wires from the cable to the external power source. Refer to diagram below.



Note: Do not connect the wire labeled GND if using the preferred method of grounding a DC version system. This is described in the Grounding the 2020 IMG section above

3. Insert the plug into the DC power module.
4. Reconnect the external DC power source and turn the power at the external power source to ON.

Caution: Do not daisy-chain two or more systems. Do not wire the 2020 IMG directly to other equipment or to a common bus bar.

Connecting to a Redundant Power Source (Optional)

Depending on the model number of the 2020 IMG ordered, a second redundant power supply may come installed in the second slot on the rear of the unit. The AC and DC versions of the 2020 IMG both support power supply redundancy. If a redundant power supply is installed, follow the instructions below on how to connect an external power source.

AC Version

On the AC version 2020 IMG, connect the supplied three prong grounded AC power cable into the three-prong grounded outlet of the redundant power module. Insert the other end of the cable into the external power supply.

DC Version

On the DC version 2020 IMG, attach the wires from the supplied DC power cable to the external power source as described in the section above. Refer to cable diagram above.

Note: Do not connect the wire labeled GND if using the preferred method of grounding a DC version system. This is described in the Grounding the 2020 IMG section above

The power has now been connected. Do not turn the power on at this time. The next step is to connect the network cabling to the CTRL 0 interface so that the system software can be installed into the unit.

Connect CTRL 0 for software loading

The CTRL 0 interface is used for loading software and also supports other management functionalities. If the system software for the 2020 IMG will be loaded through use of an FTP or DHCP server, the interface should be connected to an ethernet switch that connects to the FTP or DHCP server that the system software load will be retrieved from.

1. Using a shielded Ethernet cable, connect the CTRL 0 and/or the CTRL 1 interface on the rear of the 2020 IMG to the network that the server running the FTP or DHCP applications are located.
2. Once connected to that network, the system software can be downloaded. Refer to the section labeled *Installing the Software* in the online WebHelp. To access the online WebHelp, go to the <http://www.dialogic.com/manuals> link and expand the BorderNet 2020 Integrated Multimedia Gateway tab.
3. Select the version of software from the drop down list and then click on the link to the BorderNet 2020 Integrated Multimedia Gateway Webhelp.
4. Expand the section *Installing the Software*. Review the options for installing the software and choose the appropriate installation method for your site.

Connecting to one or more Networks

Once the system software has been loaded, the 2020 IMG needs to be connected to the network that it will be used in. The following topics are in the online WebHelp and describe how to connect the 2020 IMG to one or more subnets.

- Cable Specifications
- Cabling Multiple Subnets
- Cabling for Redundancy

At this point, the system is ready to be configured. Depending on which version of software that is being run in the 2020 IMG will decide what application to load to configure the 2020 IMG. Refer to the *Installing the Software* section in the online documentation for information on installing and running the BDN EMS (software 1.x) or running the Web GUI (software 2.x).