



# **Dialogic<sup>®</sup> IMG 1004 Integrated Media Gateway**

## **IMG 1004 Quick Start Guide**

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<http://www.dialogic.com/warranties>

### WARNING!!!

- **Warning!** Ensure that the system is disconnected from its power source and from all telecommunications links, networks, or modem lines whenever the chassis cover is removed. Do not operate the system with the cover removed.
  - **Avertissement!** Assurez-vous que le système soit débranché de son alimentation ainsi que de toutes les liaisons de télécommunication, des réseaux, et des lignes de modem avant d'enlever le capot. Ne pas utiliser le système quand le capot est enlevé.
  - **Warnung!** Das System darf weder an eine Stromquelle angeschlossen sein noch eine Verbindung mit einer Telekommunikationseinrichtung, einem Netzwerk oder einer Modem-Leitung haben, wenn die Gehäuseabdeckung entfernt wird. Nehmen Sie das System nicht ohne die Abdeckung in Betrieb.
  - **Avvertenza!** Prima di rimuovere il coperchio del telaio, assicurarsi che il sistema sia scollegato dall'alimentazione, da tutti i collegamenti di comunicazione, reti o linee di modem. Non avviare il sistema senza aver prima messo a posto il coperchio.
  - **¡Advertencia!** Asegúrese de que cada vez que se quite la cubierta del chasis, el sistema haya sido desconectado de la red de alimentación y de todos los enlaces de telecomunicaciones, de red y de líneas de módem. No ponga en funcionamiento el sistema mientras la cubierta esté quitada.
- 
- The procedures below assume a familiarity with the general terminology associated with electronic equipment and with safety practices and regulatory compliance required for using and modifying electronic equipment.
  - The procedures below should be performed by qualified technical personnel only.
  - Unplug the equipment before performing the procedures described below. Failure to disconnect the power before opening the chassis can result in personal injury or equipment damage.
  - The power supply in this product contains no user-serviceable parts. Refer servicing to qualified technical personnel only.

## Table of Contents

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	Hardware Limited Warranty .....	3
<b>1.</b>	<b>Overview .....</b>	<b>6</b>
	Shipping Information .....	6
<b>2.</b>	<b>Connecting Power .....</b>	<b>7</b>
	Connecting AC Power .....	7
<b>3.</b>	<b>Network Connections .....</b>	<b>8</b>
	Connecting CTRL 0 Interface .....	8
	Connecting DATA 0 Interface .....	9
	Connecting TDM Signaling and Bearer Ports .....	10
<b>4.</b>	<b>Configure Pre-loaded GCEMS server .....</b>	<b>11</b>
	Update /etc/hosts and /etc/sysconfig/network files .....	11
	Create symbolic link to load system software .....	12
	Create dhcpd.conf file .....	13
	Start the services nfs, vsftpd, and dhcpd, services .....	14
	Install GCEMS software .....	15
	Starting ClientView to start Configuring Switch .....	16

## Revision History

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Revision	Release date	Notes
07-8724-03	April, 2009	<ul style="list-style-type: none"><li>• N/A</li></ul>
07-8724-04	May, 2011	<ul style="list-style-type: none"><li>• Updated Template</li><li>• Updated Dialogic Logo</li><li>• Updated Copyright</li><li>• Updated Hardware Warrantee</li><li>• Updated Procedure</li></ul>
64-1203-01	January, 2012	<ul style="list-style-type: none"><li>• Updated Copyright</li><li>• Updated Part Number to 64#</li></ul>
Last modified: January, 2012		

Refer to [www.dialogic.com](http://www.dialogic.com) for product updates and for information about support policies, warranty information, and service offerings.

## Terminology

Please be aware that the following terminology and abbreviations are used throughout this document. Please also be sure to consult the legal notice for other important details.

- When used herein, the term *IMG 1010* refers to the *Dialogic® IMG 1010 Integrated Media Gateway* product.
- When used herein, the term *IMG 1004* refers to the *Dialogic® IMG 1004 Integrated Media Gateway* product.
- When used herein, the term *GCEMS* refers to the *Dialogic® Gate Control Element Management System*.

# 1. Overview

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This IMG 1004 Quick Start Guide is an abbreviated guide which describes how power and network cabling are connected prior to configuring. For more in depth information on installation and setup, refer to the online documentation at <http://www.dialogic.com/manuals>.

## Shipping Information

Review the packing list to check that all the items listed on the packing list have been sent. Should any discrepancies exist, contact your Dialogic Representative immediately.

The original packaging should be retained in the event the system needs to be shipped for any reason. If packaging is no longer needed, both the corrugated cardboard and polyethylene foam can be recycled. See your local recycling facility for information and procedures on this.

## 2. Connecting Power

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### Connecting AC Power

The IMG 1004 is powered by an AC voltage. The AC input power must conform to the specifications in the table below. Insert one end of AC cord into rear of IMG 1004 and the other end into a grounded wall outlet, uninterruptible power supply (UPS), or surge protector.

Input	Min	Max
Vin (voltage)	90 VAC rms	264 VAC rms
Vin (Frequency)	47 Hz	63 Hz
Iin (90 VAC)		.35 amps rms
Iin (180 VAC)		.17 amps rms
Heat Dissipation		100 BTUs/hr

Complete the following steps to connect AC power to the chassis. Plug the AC power cable into a **grounded** outlet.

1. Plug AC cable into the receptacle on the AC power module.
2. Insert other end into a grounded wall outlet, uninterruptible power supply (UPS), or surge protector.
3. Press switch on the AC power module to I (On).

**Warning!** Do not attempt to modify or use the supplied AC power cord if it is not the exact type required.

### AC Power Module

Located on the rear of the IMG 1004 is an AC input power module with an integrated fuse, power switch, and standard three position female AC input connector. This connector allows the docking station to interface with all variations of AC outlets by simply using a standard power cable and compatible outlet plug.

For more information regarding AC Power, please refer to the topic located at **IMG 1004 - Installation and Setup Guide > IMG 1004 - Hardware Installation > IMG 1004 – Connecting AC Power** in the [online documentation](#).

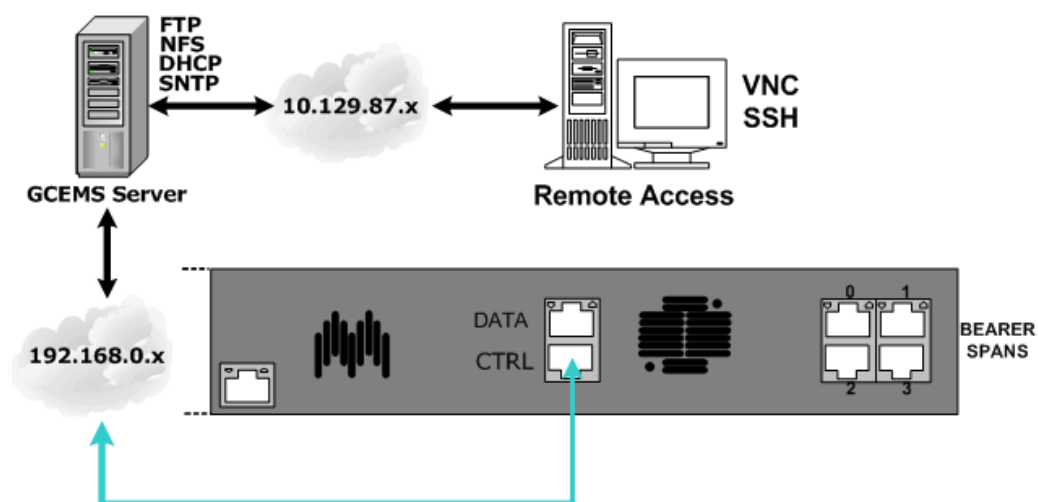
### 3. Network Connections

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#### Connecting CTRL 0 Interface

The information below will provide the user with a basic setup sequence for connecting the IMG 1004 to the GCEMS server for the purpose of downloading software, managing services, and configuring the IMG 1004 using the ClientView GUI. Located on the rear of the IMG 1004 are the network interfaces. The interface **CTRL** is a Fast Ethernet port typically dedicated to the GCEMS server for network management functions. This port is connected to the GCEMS server and is typically installed onto a private secure network.

- 1 Connect up the cables as shown in the first figure below. The figure below displays an option that can be used that allows remote access to the GCEMS server and IMG 1004.

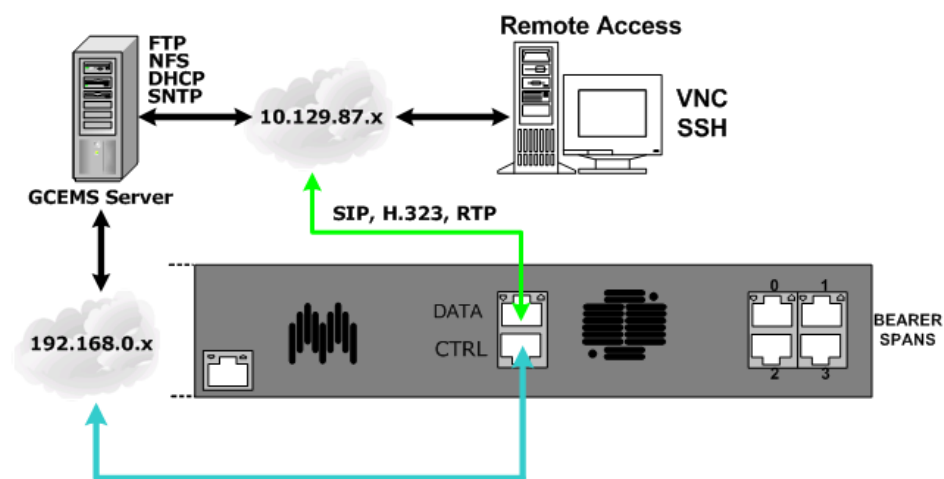




## Connecting DATA 0 Interface

The DATA interface located on the rear of the IMG 1004 is a 100 Mbit port and is dedicated to VoIP Signaling and RTP traffic. Depending on how the ports are configured, the DATA interface can be configured to be on the same secure IP network as the CTRL interface (Management Network), or can be connected to a separate public network to be used for VoIP Signaling and RTP traffic.

1. Connect up the cables as shown in the figure below. The figure below displays the DATA interface being connected to a public network.

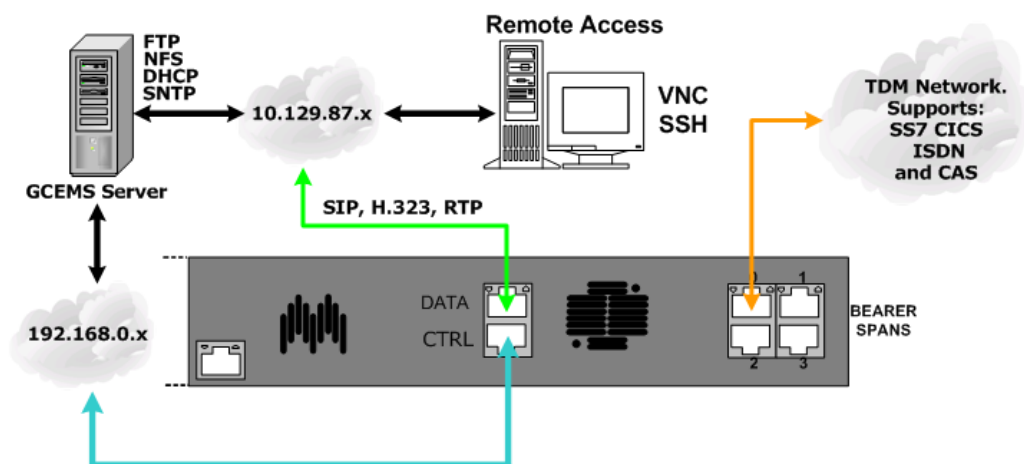


2. The DATA interface located on the rear of the IMG 1004 and is a 100 Mbit port dedicated to VoIP Bearer traffic (RTP) or SIP/H.323 signaling. Refer to the the topics under the **IMG 1004 - Installation and Setup Guide > IMG 1004 - Hardware Installation** book in the online documentation for more information on connecting to this interface.

**Note:** The IP addresses for these ports are assigned through the ClientView GUI. For more information on configuring these interfaces, refer to the IP Address and IP Network (Interface) topics in the **ClientView Pane Reference** section of the online documentation.

## Connecting TDM Signaling and Bearer Ports

The Bearer ports (Interface Offsets) 0-3 connect to a TDM network as displayed below. Each bearer interface which represents one DS1 can have TDM signaling and/or TDM Bearer traffic configured on them. The Bearer Span interfaces are typically used but not limited to SS7, ISDN, or CAS bearer traffic. TDM signaling can be configured to use the Bearer Interfaces as well. Refer to the 'T1/E1' under the **Configuration > T1/E1** book in the [online documentation](#) for more information.



## 4. Configure Pre-loaded GCEMS server

When purchasing an IMG 1004, the customer has the option of purchasing a server which is labeled the GCEMS server. This server has been pre-loaded with a version of Red Hat Enterprise Linux OS along with all the applications and services needed to start configuring the IMG 1004. If the GCEMS server was purchased through Dialogic Inc, follow the procedure below. The procedure below describes configuring the GCEMS server to operate in your specific network. The first ethernet port on the GCEMS server is preconfigured with an address of 192.168.0.100 that can be used to connect to the GCEMS server to make further changes to host configuration.

**Note:** Most commands will need to be executed as a root or super-user. Verify before entering commands that you are a root user.

### Update /etc/hosts and /etc/sysconfig/network files

1. In the /etc/hosts file, there are two entries. The first is mapped to 127.0.0.1. Do not edit this. The second is a factory default set up during configuration and testing at the factory. Using a text editor such as vi or gedit, modify the default factory settings to equal the hostname and ip address being given to the GCEMS server. See example of default file below

```
192.168.0.100    FactoryDefault    localhost.localdomain
127.0.0.1       localhost.localdomain    localhost
```

2. Edit the HOSTNAME=<hostname> line in the /etc/sysconfig/network file so the value given to <hostname> is the same hostname being modified in /etc/hosts file in previous step.

```
[excelsw@FactoryDefault ~]$ more /etc/sysconfig/network
NETWORKING=yes
HOSTNAME=FactoryDefault
```

**NOTE:** If the GCEMS server was not purchased from Dialogic, then a server must be configured with Red Hat Enterprise Linux. The GCEMS and ClientView applications use Red Hat Enterprise Linux as the operating system to run on. In the online documentation, the topics under the book **IMG 1004 - Installation and Setup Guide > IMG 1004 – Linux Red Hat Installation** display recommended GCEMS server specifications, recommended Linux Configuration and OS settings, and one example describing the installation of Red Hat Enterprise Linux onto a server. Follow these topics to install Linux on a server. Once Linux is installed, continue on with the procedure below.

**IMPORTANT:** Please read and understand the IMG 1004 technical documentation prior to performing any setup or installation procedures. The documentation can be accessed through the following site: <http://www.dialogic.com/manuals>

## Create symbolic link to load system software

To install the System Software into the IMG, the FTP Server being utilized (Usually GCEMS Server) should have one of two things to allow software to be loaded.

- A pathname to the specific software that is to be installed -or-
- Have a link generated in the ftp server that points a generic name (img1004\_id0106.bin) to a specific software file.

The procedure below describes the latter. Creating a link will allow the user to change software builds in the IMG easily. The link generated will create an association between the filename line in the dhcpd.conf file located in /etc and the latest version software being installed. The link will be created in the /home/excelsw/ftpBuilds folder. A script has been written that will create the symbolic link described above. This script was written to make it easier to change the symbolic link each time a new build is to be installed. Follow the procedure below to create the symbolic link through the lnimg script.

1. Copy the script file labeled *lnimg* located in the /opt/dialogic/common/osconfig directory and paste it into the /home/excelsw/ftpBuilds directory.
2. From the ftpBuilds run the lnimg script

```
[root@localhost]# ./lnimg
```

3. Follow the instructions and enter the appropriate *IMG 1004 Build Number* from the *Available IMG 1004 Build* files. Use the format described in the lnimg script. (1051=10.5.1, 1052=10.5.2, 1053=10.5.3).
4. The following response will be generated:

```
Link Created... img1004_id0106.bin -> img1004_ver1053123_id0106.bin
```

5. Executing the ls -la command as shown above, verifies that the link was created.

## Create dhcpd.conf file

Create the dhcpd.conf file. The IP information, codec information, and protocol information for the IMG and GCEMS server should be determined before starting the xldhcp script. Also, the MAC address of the CTRL interface can be obtained from sticker located on the rear of IMG 1004 chassis.

1. As Super User, create a dhcpd.conf file. Run the dhcpd file creation script located in the following /opt/dialogic/common/osconfig directory.

```
[root@localhost]#./xldhcp
```

2. Enter values when prompted as appropriate for your configuration. You will be prompted for the following information: [factory defaults shown in **bold**]

```
Router/Default Gateway IP Address: [192.168.0.1]
Router/Default Gateway Subnet Mask: [255.255.255.0]
Subnet IP Address: (Router/Default Gateway IP Address - 1) [192.168.0.0]
FTP Server IP Address: (Most likely this PC's IP Address) [192.168.0.100]
How many IMG systems are being configured? [1]
IMG Type: (Enter 1 if IMG 1004 or 2 IF img 1010)[1]
T1 or E1 IMG(t/e)? [t]
CODEC Profile Selection
1 = LBR (512 ch/mod) Profile 5
2 = LBR + iLBC (336 ch/mod) Profile 6
3 = LBR + iLBC + wireless (336 ch/mod) Profile 7
4 = LBR + AMR + GSM (480 ch/mod) Profile 8
[NOTE: You must have a license for wireless codecs. You must also set host flags accordingly (see Vocoder Information)]
Enter CODEC profile? [2]
IMG(CTRL0)[1] IP Address: [192.168.0.102]
Enter MAC Address: 05:06:07
IMG(CTRL0)[1] MAC Address:00:20:1c [00:20:1C:xx:xx:xx](MAC shown on IMG Label)
```

**Note:** Assign an IP address to the CTRL interface that is on the same subnet as the GCEMS server. Once this IP address is set, the GCEMS will be able to connect to and configure the IMG

3. The following is the response after all prompts are complete:

```
File dhcpd.conf created with 1 IMG's configured . . .
```

4. The file will be created in the /opt/dialogic/common/osconfig directory.
5. Move the file to the /etc directory

```
mv dhcpd.conf /etc)
```

## Start the services nfs, vsftpd, and dhcpd, services

1. As a Super User, start all the services and configure them to restart when GCEMS server is rebooted. Enter the following commands to start the nfs server.

```
#/sbin/service nfs start    (Start the nfs service)
#/sbin/service nfs status   (Verify whether nfs is running or not)
#/sbin/chkconfig nfs on     (Configure nfs service to restart after a reboot of
GCEMS)
#/sbin/chkconfig nfs --list (Verify that runlevels 3,4 and 5 are all on.)

Example:  nfs           0:off    1:off    2:on    3:on    4:on    5:on    6:off
```

2. Enter the following commands to start vsftpd service

```
#/sbin/service vsftpd start (Start the vsftpd service)
#/sbin/service vsftpd status (Verify whether vsftpd is running or not)
#/sbin/chkconfig vsftpd on   (Configure vsftpd service to restart after a reboot
of GCEMS)
#/sbin/chkconfig vsftpd --list (Verify that runlevels 3,4 and 5 are all on.)
```

3. Enter the following commands to start dhcpd service

```
#/sbin/service dhcpd start (Start the dhcpd service)
#/sbin/service dhcpd status (Verify whether dhcpd is running or not)
#/sbin/chkconfig dhcpd on   (Configure dhcpd service to restart after a reboot
of GCEMS)
#/sbin/chkconfig dhcpd --list (Verify that runlevels 3,4 and 5 are all on.)
```

4. Enter the following commands to start ntpd service

```
#/sbin/service ntpd start (Start the ntpd service)
#/sbin/service ntpd status (Verify whether ntpd is running or not)
#/sbin/chkconfig ntpd on   (Configure ntpd service to restart after a reboot of
GCEMS)
#/sbin/chkconfig ntpd --list (Verify that runlevels 3,4 and 5 are all on.)
```

5. Once these services are running and the IMG software build is available the software can be downloaded. Refer to the **IMG 1004 - Software Installation and Setup > IMG 1004 - Downloading System Software** topic in the [online documentation](#) and download the system software from the GCEMS server to the IMG.

## Install GCEMS software.

To take advantage of all new features, it is recommended that the latest version of GCEMS software be installed on the GCEMS Server. The most current software can be obtained from the Dialogic Technical Support website.

1. Go to the Dialogic Support Technical Website at <http://www.dialogic.com/support>
2. Select **Downloads**. You will require a logon username and password to access the site. (A support contract is needed to access this site.) Within this site will be two software binary files with the following format. Download the latest version of these files.

- IMG\_10.5.3.xxx.bin
- IMGUserInterface\_10.5.3.xxx.bin

**Note:** If you do not have a support contract with Dialogic, then the software supplied to you on the Software CD can be used.

3. Open a terminal on the GCEMS server and become a root/superuser by entering the command:

```
[localuser@localhost]$ su
Password: excel2
```

4. Change the mode to executable for the following files being installed. This is accomplished by executing the following commands:

```
[root@localhost]#chmod +x IMG_10.5.3.xxx.bin
[root@localhost]#chmod +x IMGUserInterface_10.5.3.xxx.bin
```

5. Install GCEMS software.

```
[root@localhost]# ./IMG_10.5.3.xxx.bin (xxx=build) (Follow prompts)
```

The GCEMS will be installed in the directory/opt/dialogic/installs/IMG\_10.5.3.xxx. At the end of the installation you will be prompted to log out and then log back in. Do not log out and back in at this time.

6. Install the IMG User Interface

```
[root@localhost]# ./IMGUserInterface_10.5.3.xxx.bin (xxx=build) (Follow prompts)
```

IMGUserInterface is installed into /opt/dialogic/installs/IMGUserInterface\_10.5.3.xxx directory.

7. At the end of the installation you will be prompted to log out. Log out as root user by entering the **exit** command.

For more information on installing GCEMS and ClientView, refer to the **IMG 1004 - Software Installation and Setup > Installing GCEMS software** topic in the online documentation.

## Starting ClientView to start Configuring Switch

Once the IMG 1004 has the system software installed, the cabling is connected, and the GCEMS server has been configured, the ClientView application needs to be started. Once started, the clientView application can be used to configure the system. Follow procedure below to start ClientView.

1. Double Click on the **IMG ClientView** icon on the desktop -or- enter the `./ClientView` command from the `/opt/dialogic/IMG/IMGUserInterface/ClientView` directory.
2. An About Dialogic ClientView box will appear. Click on the **Close** button at the bottom.
3. A Client Socket box appears and asks for username and password. Enter username and password and select OK. The default User and password are:  
 Username    admin  
 Password    admin
4. EventView and ClientView screens will appear. GCEMS and ClientView are now running.
5. Right Click on the Dialogic IMG EMS object in the ClientView tree and select **New Logical IMG**. Enter a name for this Logical Node Group.
6. Right click on The Logical IMG and select **New Physical IMG**.
7. In the object that appears, enter a name in the name field and enter the IP address given to the <CTRL 0> interface in the IP address (nn.nn.nn.nn) field. The GCEMS will now connect. Once connected, ClientView will appear like the following screen capture. The IMG 1004 is now ready to be configured using ClientView.

