



# NXG SYSTEM KIT

## INSTALLATION GUIDE FOR NXG-MFR CHASSIS FANS



### MODULAR IP DIGITAL VIDEO PLATFORM

STOCK #	MODEL NAME	DESCRIPTION
6780	NXG-MFR	Mainframe - 5RU Chassis; 12 Module Slots; 60 Gb Capacity Backplane with Fans & Air Filter
6781	NXG-CNTRL	Master Controller Module - Controls Entire Platform
6782	NXG-PS	Power Supply - (2) Required for Redundancy

## PRODUCT INTRODUCTION

The **NXG System Kit** is a powerful, two-way, future-proof platform that is ideal for delivering next generation video services to enterprise locations including hospitality, educational, multifamily residential, healthcare, business parks, or stadiums.

**NXG Platform Base** - Master Controller Module, Mainframe, and Power Supplies provides:

- ▶ IP routing and traffic management
- ▶ System configuration and management via a powerful Linux-based monitoring and control system
- ▶ Module interconnection via a 30 Gb high-speed backplane
- ▶ Distributes DC power to the various sections and modules via (2) fully-redundant, hot-swappable power supplies

The NXG is designed to be installed in a standard 19" rack. Up to 12 Modules, along with the required Master Controller and Power Supply Modules, can be installed into a single NXG Platform Mainframe.

## BEFORE YOU BEGIN: UNPACKING THE PLATFORM

Included with the Chassis:

- ▶ NXG Chassis (QTY=1)
- ▶ 10 blank panels (QTY=2 bags of 5 each)



### A NOTE OF CAUTION! PLEASE READ

Blank panels **MUST** be installed in all the unused slots in the chassis to ensure proper cooling and airflow.

- ▶ Anti-static wrist strap (QTY=1)



### A NOTE OF CAUTION! PLEASE READ

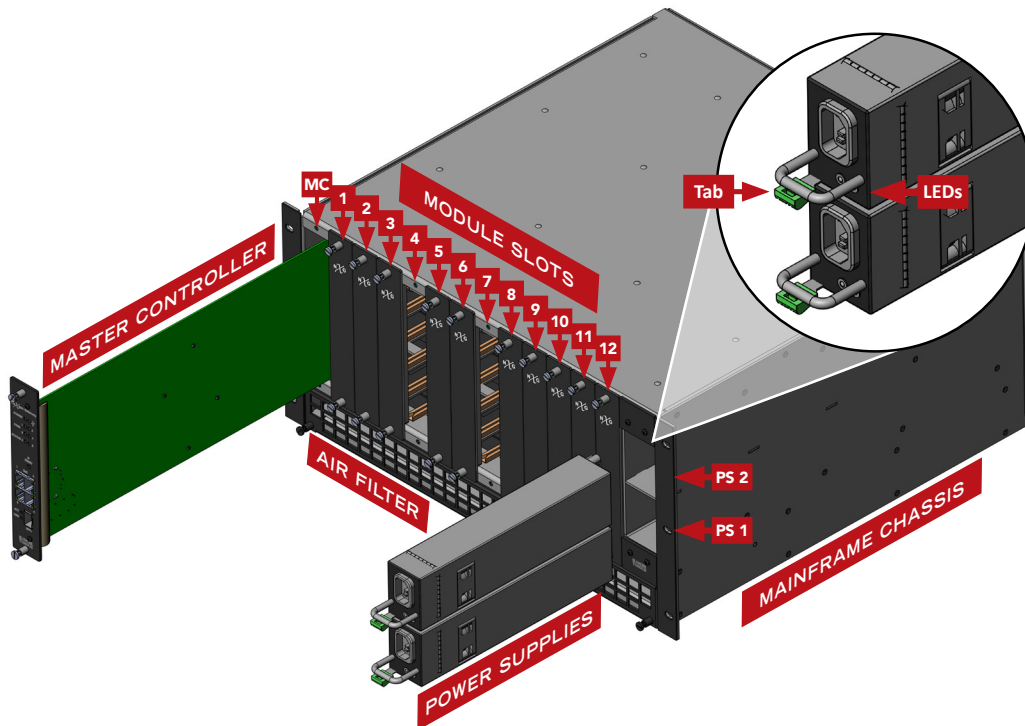
Modules are user-installed with circuit boards that have exposed parts and contacts. In order to prevent possible damage, **first** install the chassis into a grounded equipment rack, attaching the provided wrist strap to the chassis and your wrist. Once grounding is complete, you can safely remove the modules from their anti-static bags.

## STEP 1: SETTING UP THE MAINFRAME

Adequate ventilation is very important in NXG Chassis installations. The chassis airflow is from front to back. Some air movement is advisable in enclosed rack cabinets as excessive heat will shorten the life of components and individual module(s). Power supply performance will also be degraded without proper ventilation.

- 1 Mount the 5 RU **NXG Chassis** into the 19 inch rack using rack screws (not provided).
- 2 Install the **Air Filter** in the bottom of the chassis, if not installed already, and tighten the screws.

## STEP 1: SETTING UP THE MAINFRAME (CONTINUED)



## STEP 2: CONTROLLER & POWER SUPPLY INSTALLATION

- 1 Locate the **Power Supplies** (sold separately) and face each power supply module in the correct position to be inserted into in the PS 1 and PS 2 slots (shown above).

To properly install, the LEDs and green tab **MUST** be positioned towards the bottom (shown above). Slowly push the module into place until you hear a click. Once done, proceed with the second power module the same way.

Connect the AC power cord to each power supply and to an appropriate 120-240V, 50/60Hz AC power source.



### A NOTE OF CAUTION! PLEASE READ

When inserting the power modules into the chassis, the green tab **MUST** be located on the bottom left side (shown above). Slowly push the module into place until you hear a click. If installed upside down and pushed in forcefully, the modular unit(s) **MAY** become damaged.

- 2 Install the **Master Controller** (sold separately) by sliding the module into the card slot on the far left within the chassis.



### IMPORTANT

The Master Controller (MC) module **MUST** be installed in the empty slot as directed in #2. The system will not work if the MC module is installed into any other slot.

## STEP 2: CONTROLLER & POWER SUPPLY INSTALLATION (CONTINUED)

- 3 Install the appropriate input and output modules for your NXG application in any of the 12 slots. When possible space the input and output modules apart to maximize airflow.



### REMINDER

Before NXG-CCQD-24 module installation, don't forget to insert the CableCARDS into the module. Please see the NXG-CCQD-24 user manual for more information on installation.

## STEP 3: CONNECTING TO A PC/LAPTOP

### ETHERNET ACCESS:

Local or remote communication with the unit is only possible through a GUI-based menu via any standard web browser. Before you can communicate with the unit, you must configure your computer's IP address to be in the same subnet as the units default IP address. To do so, follow these steps:

- 1 Plug one end of the Ethernet cable into **Port 1** on the NXG Master Controller front-panel interface. Plug the other end of the Ethernet cable to your computer.
- 2 The factory default IP address of the NXG Master Controller management port is **172.16.70.1**. To be able to communicate with the NXG Master Controller management port, you must first change your computer's IP address.

The following steps explain how to do this for a computer with **Windows 7, 8.x, 10, or 11** operating software:

- (a) On your computer, navigate to the "Network and Sharing Center".  
*(Note: Can be found using the search box in the Start Menu or for Windows 8.x, the Start Screen)*
- (b) Once open, click on "Change Adapter Settings" on left hand side of the window.
- (c) Right-click on the "Local Area Connection", and then click on the "Properties".
- (d) A dialog box entitled "Local Area Connection Properties" will appear. In this box, double-click on the "Internet Protocol Version 4 (TCP/IPv4)".
- (e) A dialog box entitled "Internet Protocol Version 4 (TCP/IPv4) Properties" will appear. Select the "Use the following IP address" option and enter the following addresses:
  - ▶ IP address: **172.16.70.2**
  - ▶ Subnet mask: **255.255.255.0**
  - ▶ No need to enter a value for the Default Gateway.

Click **OK** to close the dialog box. Your computer is now ready to communicate with the unit.

## STEP 4: LOGIN TO THE CONTROLLER

An ethernet cable should be connected between your PC and “**Port 1**” on the Master Controller. Open a Web browser (Chrome or Firefox recommended) and type in **http://172.16.70.1** to your web browser.

You can now view and configure your NXG platform. Enter the default username and password and click **[LOG IN]**. The factory default values for the unit login are:

- ▶ **IP Address: 172.16.70.1**
- ▶ **Subnet Mask: 255.255.255.0**
- ▶ **Username: Admin** (case-sensitive)
- ▶ **Password: pass** (case-sensitive)



### PLEASE NOTE

Additional information about the unit IP and login credentials setup can be found in the user manual.

## STEP 5: BASIC CONFIGURATION

Once logged into the NXG, you will be presented with the “**System Status**” page (“**Status**” tab):

Status	Streams	System	Front Panel	Time	Notification	SNMP	IP I/O	Log	Firmware Update	
<b>Modules:</b> CC24 (1) Transcode (2) Transcode (3) IP SPTS I/O (4) Transcode (5) Transcode (6) Transcode (7) P:I IP (8) P:I QAM (9) P:I IP (10) P:I QAM (11) 32 QAM Out (12)										
<b>System Status</b>										
Slot	Description	Temperature	Modules				Status			
MC	Master Controller	83.5°F / 28.6°C 74.0°F / 23.3°C					OK			
Eth	Front Panel Ethernet	-	GbE 1	GbE 2	GbE 3	GbE 4	SFP+			
1	24 Prog CableCARD In	108.0°F / 42.2°C					OK			
2	8Ch Transcode	96.8°F / 36.0°C					OK			
3	8Ch Transcode	97.7°F / 36.5°C					OK			
4	IP SPTS In/Out	114.9°F / 45.8°C					OK			
5	8Ch Transcode	96.8°F / 36.0°C					OK			
6	8Ch Transcode	96.8°F / 36.0°C					OK			
7	8Ch Transcode	97.7°F / 36.5°C					OK			
8	Pro-Idiom for IP	127.1°F / 52.8°C					OK			
9	Pro-Idiom for QAM	119.9°F / 48.8°C					OK			
10	Pro-Idiom for IP	119.9°F / 48.8°C					OK			
11	Pro-Idiom for QAM	137.9°F / 58.8°C					OK			
12	32Ch QAM Modulator	145.0°F / 62.8°C					Error			
PS 1	Power Supply	102.2°F / 39.0°C 102.2°F / 39.0°C 77.0°F / 25.0°C 89.6°F / 32.0°C					Input Voltage: 113.5 V, Input Current: 1.2 A Output Voltage: 12.1 V, Output Current: 10.0 A Output Power: 119 W, Input Power: 140 W Fan Speed: 10560 RPM			
PS 2	Power Supply	100.4°F / 38.0°C 100.4°F / 38.0°C 77.0°F / 25.0°C 87.8°F / 31.0°C					Input Voltage: 108.5 V, Input Current: 1.1 A Output Voltage: 12.1 V, Output Current: 9.4 A Output Power: 112 W, Input Power: 118 W Fan Speed: 10464 RPM			
Fans	System Fans						Fan Speed: 2876 RPM, PWM Duty Cycle: 100%			
							Fan Speed: 3146 RPM, PWM Duty Cycle: 100%			
							Fan Speed: 2962 RPM, PWM Duty Cycle: 100%			
							Fan Speed: 2843 RPM, PWM Duty Cycle: 100%			

## STEP 5: BASIC CONFIGURATION (CONTINUED)

Go to the “**System**” tab to change the System Settings. Some settings that can be configured here are Command/Control Ethernet Settings, User Interface IP Access Restriction List, SSL Key/Certificate, and IP I/O settings for the Master Controller front-panel ports.

The screenshot displays the 'System' configuration page. Key sections include:

- Unit Operations:** Unit Reboot, Reboot button.
- Settings Configuration:** Default Unit Settings button.
- Command/Control Ethernet Settings:** Unit Name (NexGen Main #2), Unit Location (Center), Account, Contact Information, MAC Address (00:14:39:00:AE:73), IP Address (172.16.77.46), Subnet Mask (255.255.255.0), Default Gateway (172.16.77.254), DNS Primary (172.16.1.248), Secondary (172.16.1.253), SSH Access (Enable/Disable).
- User Interface IP Access Restriction List:** Configuration File (Browse...), Upload & Apply, Download Current, Disabled dropdown, and 10 IP Address Range entries (Beginning/End: 0.0.0.0).
- HTTPS SSL Key/Certificate Upload:** User-supplied SSL Key (Browse...), User-supplied SSL Certificate (Browse...), Upload buttons, and Delete User-supplied SSL Data button.
- IP I/O Ethernet Settings:** IP I/O Feature (Enabled dropdown), MAC Address (00:14:39:F0:AE:73), Front Port Allocations (Dedicate SFP+ Port dropdown), General Purpose (IP: 192.168.4.2, Subnet: 255.255.255.0, Gateway: 192.168.4.254, IGMP: IGMPv2), Dedicated Front Port (IP: 192.168.10.46, Subnet: 255.255.255.0, Gateway: 192.168.10.254, IGMP: IGMPv2), and Apply Settings button.

Click “**Apply**” in order to save the new settings.



### REMINDER

If the IP Address is changed, the procedure in **Step 4** must be repeated using the new IP address in place of the default IP address in order to reaccess the control panel.

## STEP 6: MODULE CONFIGURATION

After the hardware installation of any additional modules, go through the control panel and set up each module slot to configure your NXG application. Please refer to the user manuals of each module for in-depth configuration.

**MODULE SLOT TABS  
ACCESSED HERE**

The screenshot shows the 'System' configuration page with the 'Modules' section highlighted. The modules listed are: CC24 (1), Transcode (2), Transcode (3), IP SPTS I/O (4), Transcode (5), Transcode (6), Transcode (7), P:I IP (8), P:I QAM (9), P:I IP (10), P:I QAM (11), and 32 QAM Out (12).

## TROUBLESHOOTING

For any additional technical support issues, please send more information to us about your issue via our website at [www.blondertongue.com/support/](http://www.blondertongue.com/support/) or call us toll-free at 1-800-523-6049 between the hours of 8:00 AM and 5:00 PM (EST, UTC -5). Please refer to the operation manuals of each module for additional information.

## FILTER MAINTENANCE

The polyester element of the filter may be washed in warm soapy water, vacuumed, gently blown out or replaced. Use a mild detergent like Dawn liquid soap. The element should be completely dry before reinstallation. The element should be replaced after a maximum of **three cleanings**.



### IMPORTANT

The air filter in the chassis **MUST** be cleaned or replaced every six months to prevent particulate build-up that will reduce the cooling capability of the unit. If a unit is installed in an environment that has increased levels of dust or other airborne particles, air filter maintenance should be performed more frequently.

## CROSS-REFERENCE & HYPERLINKING USAGE

This guide may make use of hyperlinks for cross-reference linking between sections, and external hyperlinking to web addresses. This has been done to assist the reader in finding the information they are seeking in a much quicker way. In addition to hyperlinking, a Table of Contents may also make use of the bookmarking feature present in the Adobe Reader application.

## PRODUCT AND DOCUMENTATION UPDATES

The latest user documentation (PDF) and Firmware Updates can be obtained by visiting our website. Navigate to the product page by entering the full Model Name in the search field. **Firmware Updates** can also be directly accessed under the “**Support**” section of the website. If you cannot find your product model on the website, please reach out to Tech Support through our [support request form](#).

## RETURNING PRODUCT FOR REPAIR (OR CREDIT)

**A Return Material Authorization (RMA) Number is required on all products returned to Blonder Tongue, regardless if the product is being returned for repair or credit.** Before returning product, please [review our return policies](#) or [contact our service department](#) for further information.



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