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User Manual

NeXgen CableCARD™ Input Module

NXG-CCQD-24

CableCARD™ QAM Input Decryptor Module
24xQAM channels

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Table of Contents

SECTION 1 – GENERAL & SAFETY INSTRUCTIONS.....	4
SECTION 2 – PRODUCT SUMMARY	5
2.1 REVISION HISTORY & REASON	5
2.2 PRODUCT APPLICATION & FEATURES.....	5
2.3 MODULE SPECIFICATION	5
SECTION 3 – CABLECARD™ AND MODULE INSTALLATION	6
SECTION 4 – CABLECARD™ AUTHENTICATION.....	7
4.1 “CABLECARD(S) > OOB” TAB	7
4.2 “CABLECARD(S) > AUTHENTICATION” TAB.....	7
4.2.1 AUTHENTICATING MEDIACIPHER ENCRYPTED CABLECARDS	8
4.2.2 AUTHENTICATING POWERKEY™ ENCRYPTED CABLECARDS.....	9
SECTION 5 – CONFIGURING THE MODULE.....	10
5.1 “CABLECARD(S) > STATUS” TAB	10
5.2 “CABLECARD(S) > SCAN” TAB.....	11
5.3 “CABLECARD(S) > LINEUP” TAB	12
5.4 “CABLECARD(S) > PROGRAM” TAB.....	13
SECTION 6 – MODULE STATUS AND GENERAL MANAGEMENT	14
6.1 “CABLECARD INPUT MODULE > STATUS” TAB	14
6.2 “CABLECARD INPUT MODULE > SYSTEM” TAB	15
SECTION 7 – FIRMWARE UPDATES	16
SECTION 8 – TROUBLESHOOTING.....	17

Section 1 – General & Safety Instructions



The STOP sign symbol is intended to alert you to the presence of REQUIRED operating and maintenance (servicing) instructions that if not followed, may result in product failure or destruction.



The YIELD sign symbol is intended to alert you to the presence of RECOMMENDED operating and maintenance (servicing) instructions.



The LIGHTNING flash symbol is intended to alert you to the presence of uninsulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electrical shock.

TO REDUCE THE RISK OF ELECTRICAL SHOCK, DO NOT REMOVE COVER FROM THIS UNIT.

NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE

NOTE TO CATV SYSTEM INSTALLER

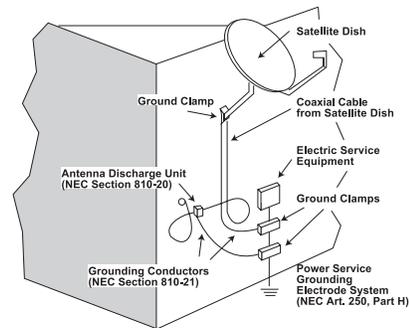
This reminder is provided to call the CATV System Installer’s attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.



You should always follow these Instructions to help ensure Against injury to yourself and damage to your equipment.

- Elevated Operating Ambient - If installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment may be greater than room ambient. Therefore, consideration should be given to installing the equipment in an environment compatible with the maximum ambient temperature per Section 2.3.
- Reduced Air Flow - Installation of the equipment in a rack should be such that the amount of air flow required for safe operation of the equipment is not compromised.
- Mechanical Loading - Mounting of the equipment in the rack should be such that a hazardous condition is not achieved due to uneven mechanical loading.
- Circuit Overloading - Consideration should be given to the connection of the equipment to the supply circuit and the effect that overloading of the circuits might have on overcurrent protection and supply wiring. Appropriate consideration of equipment nameplate ratings should be used when addressing this concern.
- Reliable Earthing - Reliable earthing of rack-mounted equipment should be maintained. Particular attention should be given to supply connections other than direct connections to the branch circuit (e.g. use of power strips).
- Read all safety and operating instructions before you operate the unit.
- Retain all safety and operating instructions for future reference.
- Heed all warnings on the unit and in the safety and operating instructions.
- Follow all installation, operating, and use instructions.
- Unplug the unit from the AC power outlet before cleaning. Use only a damp cloth for cleaning the exterior of the unit.
- Do not use accessories or attachments not recommended by Blonder Tongue, as they may cause hazards, and will void the warranty.
- Do not operate the unit in high-humidity areas, or expose it to water or moisture.
- Do not place the unit on an unstable cart, stand, tripod, bracket, or table. The unit may fall, causing serious personal injury and damage to the unit. Install the unit only in a mounting rack designed for 19” rack-mounted equipment.
- Do not block or cover slots and openings in the unit. These are provided for ventilation and protection from overheating. Never place the unit near or over a radiator or heat register. Do not place the unit in an enclosure such as a cabinet without proper ventilation. Do not mount equipment in the rack space directly above or below the unit.
- Operate the unit using only the type of power source indicated on the marking label. Unplug the unit power cord by gripping the plug, not the cord.
- The unit is equipped with a three-wire ground-type plug. This plug will fit only into a ground-type power outlet. If you are unable to insert the plug into the outlet, contact an electrician to replace the outlet. Do not defeat the safety purpose of the ground-type plug.
- Route power supply cords so that they are not likely to be walked on or pinched by items placed upon or against them. Pay particular attention to cords at plugs, convenience receptacles, and the point where they exit from the unit.

- Be sure that the outdoor components of the antenna system are grounded in accordance with local, federal, and National Electrical Code (NEC) requirements. Pay special attention to NEC Sections 810 and 820. See the example shown in the following diagram:



- We strongly recommend using an outlet that contains surge suppression or ground fault protection. For added protection during a lightning storm, or when the unit is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the lines between the unit and the antenna. This will prevent damage caused by lightning or power line surges.
- Do not locate the antenna near overhead power lines or other electric light or power circuits, or where it can fall into such power lines or circuits. When installing the antenna, take extreme care to avoid touching such power lines or circuits, as contact with them can be fatal.
- Do not overload wall outlets or extension cords, as this can result in a risk of fire or electrical shock.
- Never insert objects of any kind into the unit through openings, as the objects may touch dangerous voltage points or short out parts. This could cause fire or electrical shock.
- Do not attempt to service the unit yourself, as opening or removing covers may expose you to dangerous voltage and will void the warranty. Refer all servicing to authorized service personnel.
- Unplug the unit from the wall outlet and refer servicing to authorized service personnel whenever the following occurs:
 - The power supply cord or plug is damaged;
 - Liquid has been spilled, or objects have fallen into the unit;
 - The unit has been exposed to rain or water;
 - The unit has been dropped or the chassis has been damaged;
 - The unit exhibits a distinct change in performance.
- When replacement parts are required, ensure that the service technician uses replacement parts specified by Blonder Tongue. Unauthorized substitutions may damage the unit or cause electrical shock or fire, and will void the warranty.
- Upon completion of any service or repair to the unit, ask the service technician to perform safety checks to ensure that the unit is in proper operating condition.

Section 2 – Product Summary

2.1 Revision History & Reason

This is the first release of this manual.

2.2 Product Application & Features

Application:

The **NXG-CCQD-24 (CableCARD™ QAM Input Decryptor Module)** is part of the Blonder Tongue NeXgen Gateway (NXG) platform that decrypts HD and SD programs from a Cable or Telco TV service provider.

The **NXG-CCQD-24** input module includes multiple full-band-capture QAM tuners and supports up to four (4) CableCARDS to provide ingest of up to twenty four (24) programs from the incoming cable system. The module is capable of tuning any twenty four (24) QAM channels from 54 to 1002 MHz, and will decrypt any MediaCipher or PowerKey encryption, based upon the customer-installed CableCARDS.

Features:

- Provides CableCARD compatibility with MediaCipher and PowerKey applications
- Supports 24 programs per module (6 programs per CableCARD)
- Supports 54 to 1002 MHz input frequency range
- Provides EAS support via SCTE-18 to force tune across all channels

2.3 Module Specification

Input

QAM	<p>Connector: 1x "F" Female</p> <p>Standards: ITU-T J.83 (64 and 256 QAM)</p> <p>Tuning Range: CATV (54-1002 MHz)</p> <p>Symbol Rate: 5.3606 Msymbols/Sec (QAM 256); 5.057 Msymbols/sec (QAM 64) – Auto Detect</p> <p>Bandwidth: 6 MHz</p> <p>QAM Power Level: -15 to +20 dBmV</p> <p>Return Loss: 12 dB</p> <p>Impedance: 75 Ω</p>
CableCARD	<p>Interface: CableCARD™ Interface 2.0</p>

General

Dimensions (W x D x H):	1.15 x 15.5 x 7.0 inches (29 x 394 x 178 mm)
Power:	Via NXG Mainframe back plane
Power Consumption:	20 W
Weight:	2.0 lbs (0.9 kg)
Operating Temperature:	32 to 122 °F (0 to 50 °C)
Storage Temperature:	-13 to 158 °F (-25 to 70 °C)
Operating Humidity:	0 to 95% RH @ 35 °C max, non-condensing
Storage Humidity:	0 to 95% RH @ 35 °C max, non-condensing

Alarms/Monitoring/Control

Front Panel Indicator:	1x Status LED
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Section 3 – CableCARD™ and Module Installation

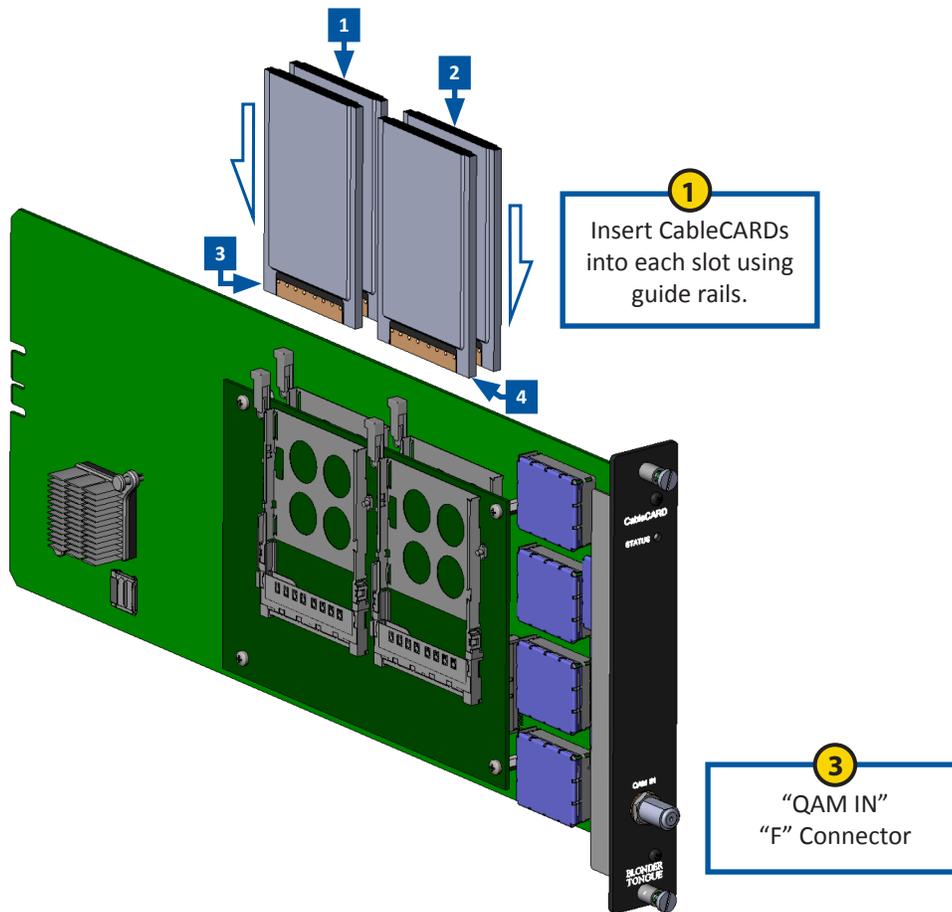
This section describes the installation of CableCARDS into the 4 slots on the NXG-CCQD-24 Module. As a reminder, all NXG modules are hot-swappable, and may be inserted or removed at any time without turning the entire platform off.

- 1 To install, insert each CableCARD into the NXG-CCQD-24 module (pin-side first) within the guide rails for each empty slot as shown below in the diagram.

When inserting the CableCARDS, slide each card in and seat it with a gentle but firm pressure until you hear a click. If you find there is resistance, pull it out and double check to make sure that the contacts are aligned on the same side as with the pins at the base of each slot.



CAUTION: Ensure that care is given to avoid forcibly inserting each card. Forcing the CableCARDS into the NXG-CCQD-24 module slots may risk damaging the pins on the host interface. This will prevent module and CableCARD from properly operating.



- 2 Install the CableCARD module into an empty slot on the NeXgen Gateway Chassis and secure with screws.
- 3 Once installed into the chassis, connect the CATV service RF COAX to the QAM Input F-connector (shown above) on front panel of the NXG-CCQD-24 module.

NOTE: When using less than 4 CableCARDS, install them in location order starting with Slot #1. See the above diagram for slot locations.

With the CableCARD modules installed, the next step is to authorize them. Due to the nature of being authorized through the cable provider, the process will take some time to complete.

Section 4 – CableCARD™ Authentication

This section describes the authentication of both MediaCipher and PowerKEY™ CableCARDS.

To begin the authentication process, login to the NeXgen Master Controller using the instructions located in the Gateway Base quick guide or user manual.

4.1 “CableCARD(s) > OOB” Tab

Click on CableCARD module and then select **OOB** (Out-of-Band). The “OOB” screen (Figure 4.1) is a “read-only” screen where the following parameters are displayed:

24 Prog CableCARD In Module:	Status	System	CableCARD(s):	Status	OOB	Authentication	Scan	Lineup	Programs
		Out-of-Band Status							
CableCARD	QAM	MPEG	FEC	SCTE55	Frequency	SNR	Power		
CableCARD 1	Locked	Locked	Locked	SCTE55-2	73.00MHz	35.6dB	3.5dBmV		
CableCARD 2	Locked	Locked	Locked	SCTE55-2	73.00MHz	35.4dB	3.5dBmV		
CableCARD 3	Locked	Locked	Locked	SCTE55-2	73.00MHz	35.4dB	3.5dBmV		
CableCARD 4	Locked	Locked	Locked	SCTE55-2	73.00MHz	35.4dB	3.5dBmV		

Figure 4.1 - “OOB” Tab

- 1 Confirm the status is set as **Locked** under the following columns: **QAM**, **MPEG**, and **FEC**. If any are not locked, it may require an adjustment of the power level to the input of the module.
- 2 The **Frequency**, **SNR**, and **Power** columns will provide read-only values.
- 3 The **SCTE55** column should indicate the following:
 1. **SCTE55-1**: DigiCipher (DCII) CableCARDS
 2. **SCTE55-2**: PowerKEY™ CableCARDS.



PLEASE NOTE: You must ask the Cable Provider to authorize your CableCARD(s) as “6 tuner DVR” (NOT STB) for multiple tuner decryption.

Some of the possible OOB frequencies are: 72.75, 73.00, 75.25, 98.25, 110.25, 104.20, 103.75, 107.25, 116.25 MHz.

4.2 “CableCARD(s) > Authentication” Tab

Select the “Authentication” tab (Figure 4.2) as shown below. Use **CableCARD Selection** to change the window information to the desired CableCARD in Slot 1, 2, 3, or 4.

CableCARD Input Module:	Status	System	CableCARD(s):	Status	OOB	Authentication	Scan	Lineup	Programs
<div style="border: 1px solid gray; padding: 5px;"> CableCARD Selection: CableCARD 1 ▼ </div>									

Figure 4.2 - “Authentication” Tab

4.2 “CableCARD(s) > Authentication” Tab (continued)

For convenience, the following chart indicates the menu option for each encryption or brand type:

CableCARD™ Menu Option	Encryption Type - Brand(s)
CableCARD Pairing™	MediaCipher - Motorola/ARRIS
CableCARD/Host ID Screen	PowerKEY™ - Scientific-Atlanta/Cisco/Technicolor SA

4.2.1 Authenticating MediaCipher Encrypted CableCARDS

To begin the Authentication process for MediaCipher CableCARDS, first select “**CableCARD Pairing(tm)**” (Figure 4.2.1). In order to properly authorize the CableCARD, you will need to supply (by writing or copy/pasting into a text file or document) the following information to the Cable Provider for each card:

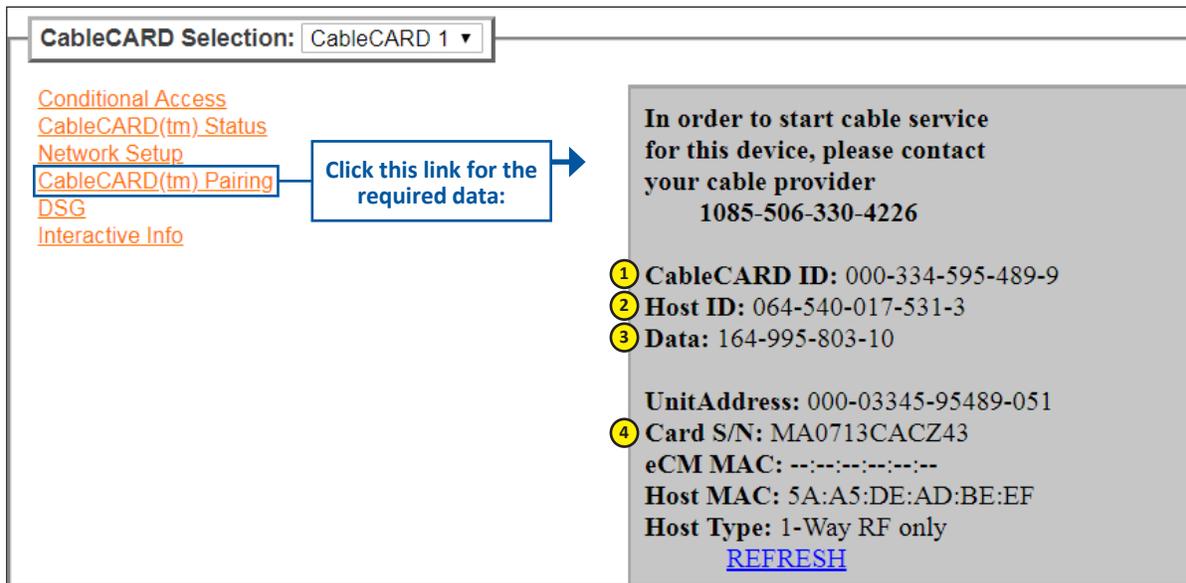


Figure 4.2.1 - “Authentication” - MediaCipher Encrypted CableCARDS

- ① **CableCARD ID** (13 characters; numeric); example: 000-334-595-489-9
- ② **HOST ID** (13 characters; numeric); example: 064-540-017-531-3
- ③ **Data number** (11 characters; numeric); example: 164-995-803-10
- ④ **Card S/N** (12 characters; alpha-numeric); example: MA0713CACZ43

After getting the CableCARDS authorized you may need to ask the Cable company to provide these following commands in the DAC (Digital Addressable Controller) for MediaCipher systems to configure CableCARD(s) with the correct channel map.

Type of commands:

Cold: Flush and Fill code. This command deletes personal settings in the CableCARD as some cards may have previous information.

INIT: Loads code, deletes personal settings and power cycles the CableCard.

HIT: Updates the channel map and services. It does not power cycle the CableCARD.

NOTE: There may be some delay for the command to go through.

4.2.2 Authenticating PowerKEY™ Encrypted CableCARDS

To begin the Authentication process for PowerKEY CableCARDS, first select "CableCARD/Host ID Screen" (Figure 4.2.2a). In order to properly authorize the CableCARD, you will need to supply (by writing or copy/pasting into a text file or document) the following information to the Cable Provider for each card:

Note: Depending on the version or age of the installed PowerKEY encrypted CableCARD, the brand name shown before each link may be different.

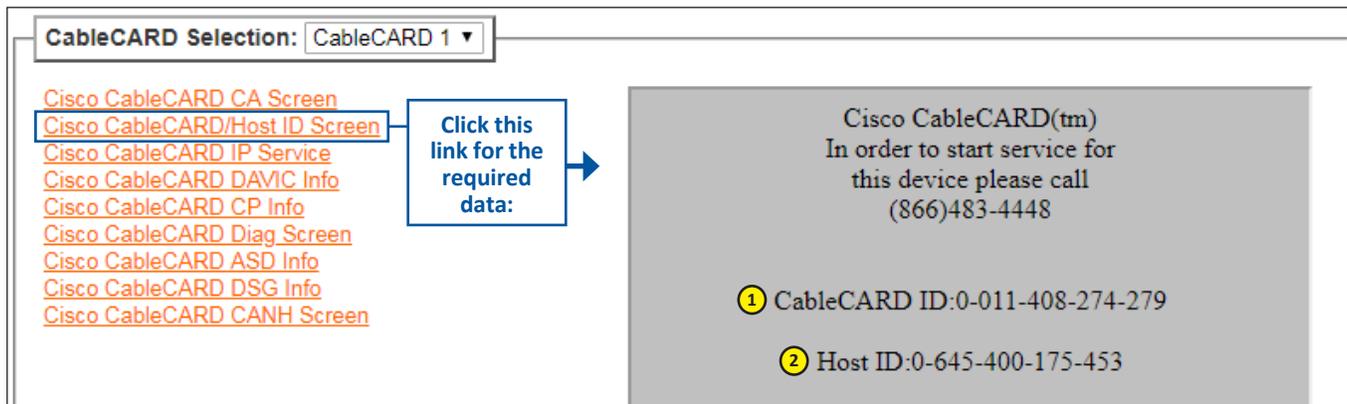


Figure 4.2.2a - "Authentication" - PowerKEY Encrypted CableCARDS

- ① CableCARD ID (13 characters; numeric); example: 0-011-408-274-279
- ② HOST ID (13 characters; numeric); example: 0-645-400-175-453

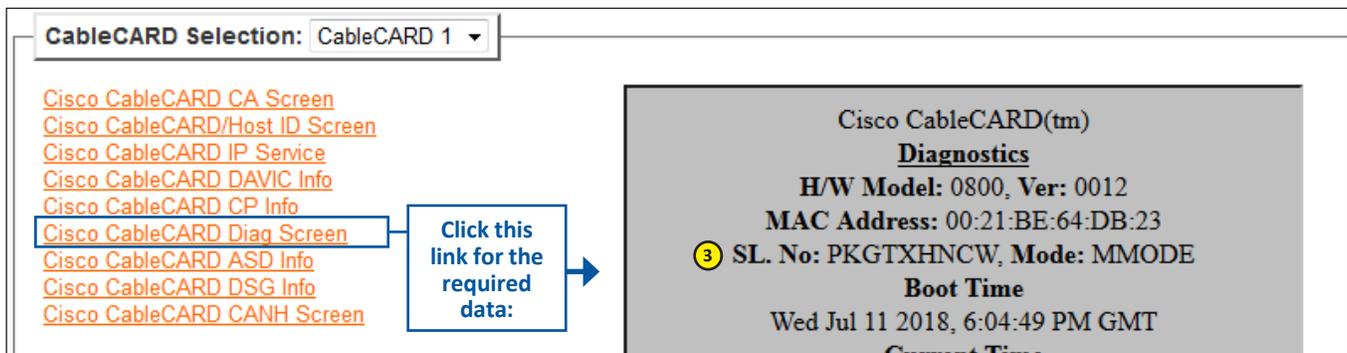


Figure 4.2.2b - "Authentication" - PowerKEY Encrypted CableCARDS

Next, select "CableCARD Diag Screen" (figure 4.2.2b) and write down (or copy/paste) the following value:

- ③ SL No (9; alpha-numeric); example: PKGTXHNCW

After getting the CableCARDS authorized you may need to ask the Cable company to send these commands by the DNCS (Digital Network Control System) for PowerKEY systems to configure CableCARD(s) with correct channel map.

Type of Commands:

RESET CLIENT NVM - Resets NVM (Non-Volatile Memory) to default values

DHCT INSTANT HIT - Resets DHCTs (Digital Host Communication Terminal) with their Entitlement Management Messages (EMMs). EMMs are encrypted packets of information that the DNCS uses to supply secured service authorizations to DHCTs.

The CableCARD(s) may require deletion of all device and hosting information from the DNCS and then repeating the DHCT REFRESH and/or DHCT HIT commands through the DNCS. If so, obtain the unique CableCARD ID and Host ID numbers using the above instructions for the service provider Billing system.

Section 5 – Configuring the Module

5.1 “CableCARD(s) > Status” Tab

The “CableCARD(s) > Status” tab (Figure 5.1a) is a read-only screen and displays the status of each installed CableCARD.

24 Prog CableCARD In Module: Status		System	CableCARD(s): Status		OOB	Authentication	Scan	Lineup	Programs	
CableCARD	Valid/Auth/Active	OOB	Status		Utilized		Tuners		SNR	dBmV
							Locked			
CableCARD 1					✓	✓	✓	✓	✓	✓
CableCARD 2					✓	✓	✓	✓	✓	✓
CableCARD 3					✓	✓	✓	✓	✓	✓
CableCARD 4					✓	✓	✓	✓	✓	✓

Figure 5.1a - “CableCARD(s) > Status” Tab

- 1 **Valid/Auth/Active:** indicates the authorization status of each card. Once the CableCARD(s) have been authorized, the column cells will show as green and pairing has been complete.
- 2 **OOB:** indicates locked or unlocked status for each CableCARD as well as the Out-of-Band frequency.
- 3 **Status and Utilized:** when clicked, shows you the tuned channel program that the CableCARD tuner (numbered 1-6) is receiving.
- 4 **Locked:** indicates the locked or unlocked status for each tuner.
- 5 **SNR:** indicates the Signal-to-Noise Ratio (SNR) for each tuner.
- 6 **dBmV:** indicates the power level for each tuner.



Figure 5.1b - Signal-to-Noise Status Range



Figure 5.1c - Power Level Status Range

When each cell is clicked, the section below the status table will open to the relevant areas as shown in the examples below:

Refresh Collapse All Expand All

CC CableCARD 1

- Valid: Yes
- Authenticated: Yes
- Activated: Yes
- OOB
 - MPEG Lock: Locked
 - QAM Lock: Locked
 - FEC Lock: Locked
 - SCTE55: SCTE55-2
 - Frequency: 73.00MHz
 - SNR: 35.4dB
 - Power: 3.9dBmV
- Tuner 1
- Tuner 2
- Tuner 3
- Tuner 4
- Tuner 5
- Tuner 6

Refresh Collapse All Expand All

CC CableCARD 1

- Valid: Yes
- Authenticated: Yes
- Activated: Yes
- OOB
- Tuner 1
 - Tuned Channel: WPIXH (Virtual Channel: 711)
 - MPEG Lock: Locked
 - QAM Lock: Locked
 - FEC Lock: Locked
 - Frequency: 525.00MHz
 - SNR: 35.1dB
 - Power: 2.0dBmV
 - Scrambled: No
 - Decryption: Bypassed
 - Bitrate: 12.822 Mb/S
- Tuner 2
- Tuner 3

5.2 “CableCARD(s) > Scan” Tab

The “CableCARD(s) > Scan” tab (Figure 5.2) allows the user to scan the programs on each installed CableCARD, providing a count of all Authorized programs available in the Service Provider's channel lineup.

24 Prog CableCARD In Module: Status System		CableCARD(s): Status OOB Authentication		Scan	Lineup	Programs
CableCARD	Current Authorized*	Scan	Progress	Found	Status	
CableCARD 1	258 <input checked="" type="checkbox"/>	<input type="button" value="Start"/>	<div style="width: 0%;"></div>	258	-	
CableCARD 2	270 <input checked="" type="checkbox"/>	<input type="button" value="Start"/>	<div style="width: 0%;"></div>	270	-	
CableCARD 3	259 <input checked="" type="checkbox"/>	<input type="button" value="Start"/>	<div style="width: 0%;"></div>	259	-	
CableCARD 4	251 <input checked="" type="checkbox"/>	<input type="button" value="Start"/>	<div style="width: 0%;"></div>	251	-	

Note: Updating of the Current Authorized channel count may be delayed following a scan or deletion.

Figure 5.2 - “CableCARD(s) > Scan” Tab

Before Scan:

- Under the **Scan** column, select for each CableCARD to begin the scanning process.

Note: The live video that utilizes programs from the CableCARD will be interrupted once a scan has begun on it.

During Scan:

- The **Progress** column shows the total progress of the scan through a progress bar. 
- The **Found** column updates the count of found channels as the scan progresses through the lineup.
- The **Status** column indicates which channel is being currently scanned:

Currently scanning: HBOC (Virtual Channel: 303)

After Scan:

- Under the **Current Authorized** column, the total count of Authorized programs will be populated here **after** a scan has completed.

Note: Clicking under this column will reset the counter to zero in order to do another scan but will not interfere with the live stream.

5.3 “CableCARD(s) > Lineup” Tab

The “CableCARD(s) > Lineup” tab (Figure 5.3a, Figure 5.3b, and Figure 5.3c) is a read-only screen. A search function is provided in order to easily look up both Authorized and Unauthorized programs. The full lineup can also be downloaded through this screen.

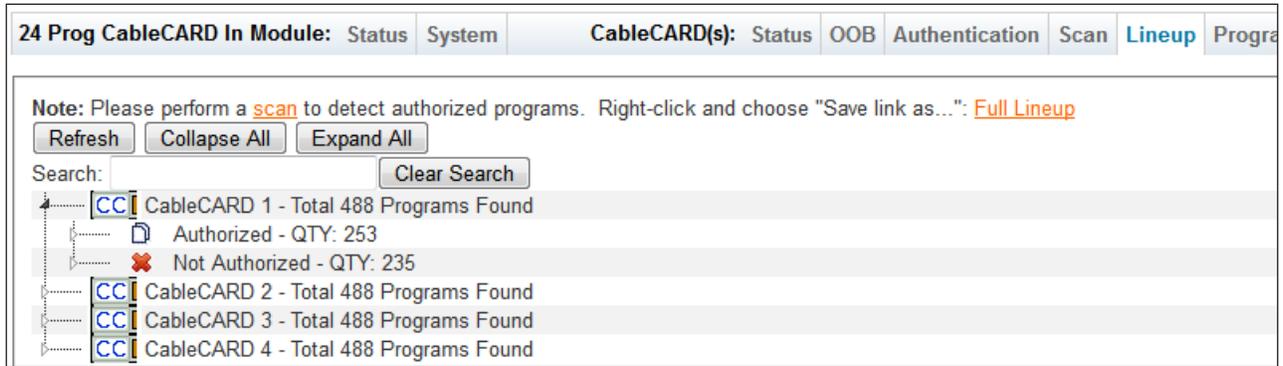


Figure 5.3a - “CableCARD(s) > Lineup” Tab



Figure 5.3b - “CableCARD(s) > Lineup” - Expanded CableCARD Authorized Program List

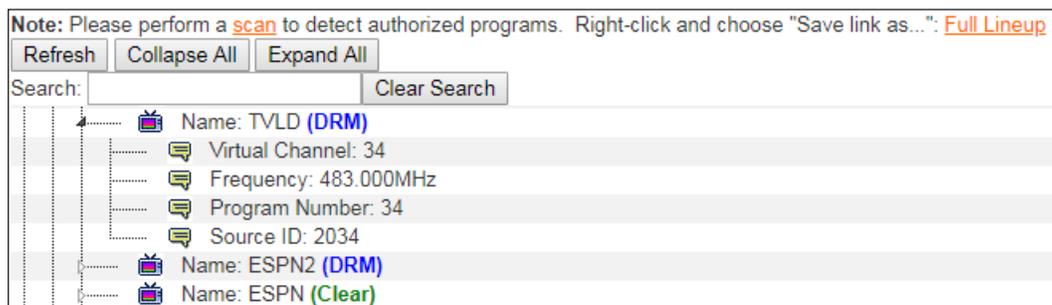


Figure 5.3c - “CableCARD(s) > Lineup” - Expanded Authorized Program Information

5.4 “CableCARD(s) > Program” Tab

The “CableCARD(s) > Program” tab (Figure 5.4) is a read and write screen which shows all Authorized programs available for selection and allows a user to remove or add into the system for further output processing.

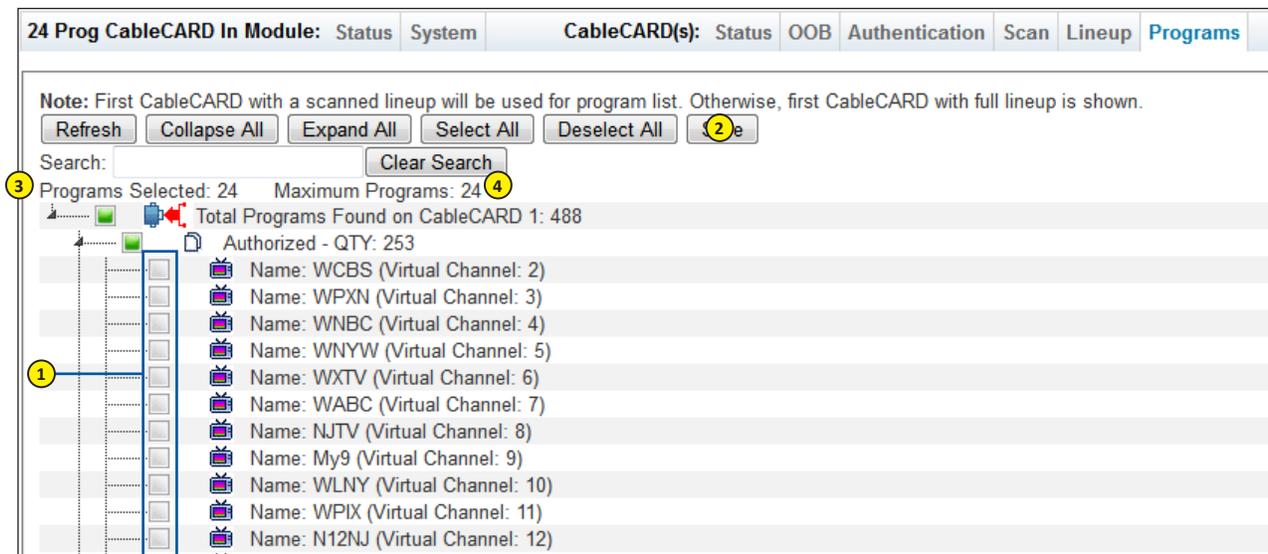


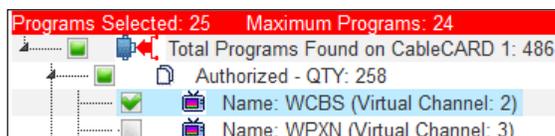
Figure 5.4 - “CableCARD(s) > Program” Tab

- 1 To add or remove to the program list, check the box () next to each program (up to 24 max. per module with 4 CableCARDs installed).
- 2 Click the button to apply the changes.

Underneath the search field, the following information is shown:

- 3 **Programs Selected:** show how many programs have been selected.
- 4 **Maximum Programs:** indicates how many total programs are allowed (up to 24 max. per module with 4 CableCARDs installed).

NOTE: If the number of programs selected goes over the maximum programs, the line will be highlighted in red as shown below:



Section 6 – Module Status and General Management

6.1 “CableCARD Input Module > Status” Tab

The “CableCARD Input Module > Status” tab (Figure 6.1) is a “read-only” screen which displays the general health and module information at a glance. The information is provided as a quick way to monitor the module or assist with troubleshooting issues that may arise.

Status	Streams	System	Time	Notification									Log	Firmware Update	
Modules: CableCARD (1) CableCARD (2) IP MPTS In (3) IP SPTS I/O (4) Slot 5 EPG (6) EAS Proc (7) Slot 8 P:I IP (9) P:I QAM (10) Slot 11 32 QAM Out (12)															
24 Prog CableCARD In Module: Status System CableCARD(s): Status OOB Authentication Scan Lineup Programs															
Status															
		① Status												OK	
		② Temperature												110.5°F / 43.6°C	
Information															
		③ Model Number												NXG-CCQD-24	
		④ Serial Number												2018070529	
		⑤ Software Version												1.0.0.0_20181106	
		⑥ Backplane Firmware Version												1.19	
		⑦ Slot Location												1	

Figure 6.1 - “CableCARD Input Module > Status” Tab

In the section entitled “**Status**”, the following parameters about the module health are displayed:

① **Status:** Indicates the current status of the module. Status Messages:

Ok - No issues at the current time

Error - One or more errors have occurred. Check system log for more information on error(s).

② **Temperature:** Indicates the current temperature of the module.

In the section entitled “**Information**”, the parameters shows the following module-specific information:

③ **Model Number:** Indicates the model number of the module installed.

④ **Serial Number:** Indicates the serial number of the module installed.

⑤ **Software Version:** Indicates the software version of the module. To update software, please see Section 6.3.

⑥ **Backplane Firmware Version:** Indicates the backplane firmware version for this module. Backplane version is only needed for tech support and software debugging.

⑦ **Slot Location:** Indicates the slot location on the platform chassis where the module is currently installed into.

6.2 “CableCARD Input Module > System” Tab

The “CableCARD Input Module > System” tab (Figure 6.2) allows the user to manage the module and its settings through the following controls:

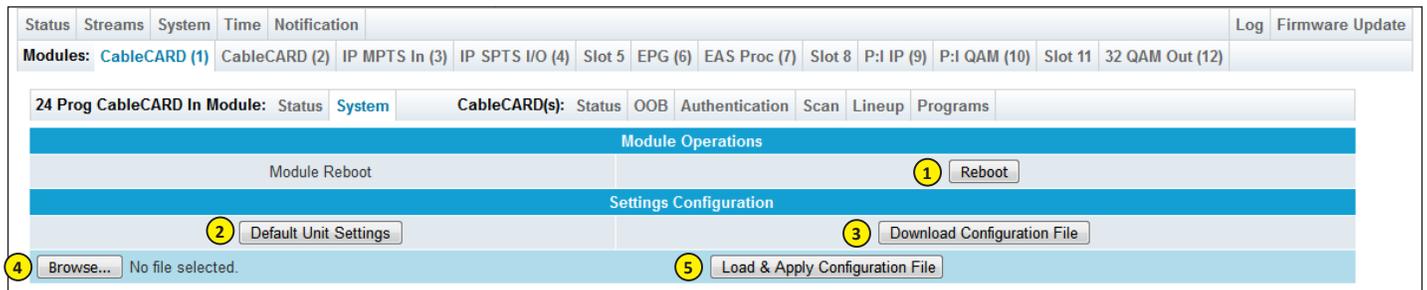


Figure 6.2 - “CableCARD Input Module > System” Tab

Module Operations

1 **Module Reboot:** Click the **Reboot** button in order to reboot the module.

Settings Configuration

2 **Default Unit Settings** Resets the module back to the factory defaults.

3 **Download Configuration File** Downloads the current module configuration file.

4 **Browse...** No file selected. Browse and select a configuration File.

5 **Load & Apply Configuration File** After choosing a file, click this to load and apply the configuration file.

Section 7 – Firmware Updates

The “Firmware Update” tab (Figures 7a, 7b, 7c, and 7d) is part of the Master Controller Module interface, and is used for all installed modules. It is located on the right side of the main menu allowing the user to review currently installed firmware versions and provides a quick and easy way to apply any new updates.

The screenshot shows the 'Firmware Update' tab interface. At the top, there are navigation tabs: Status, Streams, System, Time, Notification, Log, and Firmware Update. Below these are module counts: CableCARD (1), CableCARD (2), IP MPTS In (3), IP SPTS I/O (4), Slot 5, EPG (6), EAS Proc (7), Slot 8, P:I IP (9), P:I QAM (10), Slot 11, and 32 QAM Out (12). The main content area is divided into two sections. The first section, 'Firmware Update Files', contains a 'Browse...' button and an 'Upload File' button. The second section, 'Firmware Update Control and Status', is a table with the following data:

Module	Firmware Version	Update Control	Status
Master Controller (NXG-CNTRL)	1.0.2.0_20181022	<input type="button" value="Update"/>	<input type="text"/>
24 Prog CableCARD In (NXG-CCQD-24)	1.0.0.0_20181106	<input type="button" value="Update"/>	<input type="text"/>
24 Prog CableCARD In (NXG-CCQD-24)	1.0.0.0_20181106	<input type="button" value="Update"/>	<input type="text"/>
IP MPTS In (NXG-IP-MPTS)	1.0.1.0	<input type="button" value="Update"/>	<input type="text"/>
IP SPTS In/Out (NXG-IP)	1.0.3.0	<input type="button" value="Update"/>	<input type="text"/>

Figure 7a - “Firmware Update” Tab

- 1 Check “Firmware Version” to ensure you have the latest firmware. To determine if a new firmware update has been released, please go to our website at: (www.blondertongue.com/page/resources/tech-support/firmware-updates/)

Click the “Download Firmware Updates” link and then scroll down to the “NeXgen Gateway” folder to view the NXG module folders.

Note: There is a check of the file name versus module ID to eliminate a user inadvertently updating any modules with incorrect files. Multiple module updates can be performed simultaneously after uploading the files.

- 2 Under the “Firmware Update Files” section, the user can use and to select and send the module update file(s) into the NXG Platform. See a view of the file when uploaded to the platform as shown below on Figure 7b.

The screenshot shows the 'Firmware Update Files' section with a file uploaded. The file name is 'NXG-CCQD-24 Update File:' and the version is '1.0.0.0 20181106'. There is a close button (X) next to the file name.

Figure 7b - File when uploaded

- 3 Update the Firmware version by clicking the button. The update status and progress will show under the “Status” columns. Below are the firmware updates as they appear while in-progress (Figure 7c) and upon completion (Figure 7d). After the update is complete, the user **MUST** reboot the module to finish applying the updates.

Note: After clicking the “Update” button, please allow a few seconds for the file to load.

The screenshot shows the 'Firmware Update Control and Status' table with the following data:

24 Prog CableCARD In (NXG-CCQD-24)	1.0.0.0_20181106	<input type="button" value="Update"/>	Updating System Files <input type="text" value=""/>
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Figure 7c - Update In Progress

- 4 Once the update progress is complete, the user **MUST** click the button (as shown on Figure 7d) in order to apply and finalize the update.

The screenshot shows the 'Firmware Update Control and Status' table with the following data:

24 Prog CableCARD In (NXG-CCQD-24)	1.0.0.0_20181106	<input type="button" value="Reboot"/>	Update Complete <input type="text" value=""/>
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Figure 7d - Completed Update



When firmware updates are complete, the user can remove the loaded file by clicking the button shown on Figure 7b next to the “Upload File” button under “Firmware Update Files”.

Section 8 – Troubleshooting

For technical support please contact us at 1-800-523-6049 between the hours of 8am and 5pm EST.

Please refer to the operation manuals of each module for additional information.

NOTES

Extended Warranty Program

STANDARD TERMS & CONDITIONS OF THE EXTENDED WARRANTY

A. THE EXTENDED WARRANTY AGREEMENT (EWA)

If during the period following the expiration of the Blonder Tongue Manufacturers' Standard Warranty (Copy Included) the products which constitute the subject matter of the extended warranty, manifest any manufacturing or similar such defects then Blonder Tongue shall at its option repair or replace the product. It is emphasized that the extended warranty is in effect an extension of the Blonder Tongue Warranty and covers the items stipulated in Paragraph B to the exclusion of the terms in Paragraph C of this agreement. Eligibility to purchase EW is limited to 90 days following initial shipment on selected products of sufficient value.

The product/products included in this extended warranty agreement are listed in the invoice that accompanies the EWA. Term of the extension will be _____ year(s). Purchase Order is required for extended warranty coverage.

B. WHAT IS COVERED?

1. If a product has been determined to have failed, which falls within the Terms & Conditions of this EWA, Blonder Tongue Inc. may at its sole discretion repair, modify or replace its component parts that are defective at 100% coverage for parts and labor.
2. A loaner unit may be available on request; PO required.
3. Product is manufactured by Blonder Tongue.
4. Extended warranty period is up to and not to exceed 24 months and sold in increments of 12 months. Order # 9981 for 1 year and #9982 for 2 year extensions.
5. Return of repair or replaced product shipping costs for ground shipments.
6. Firmware upgrades at no charge with automatic notification.

C. WHAT IS NOT COVERED?

1. The warranty does not cover any defects caused by foreign objects /connection errors .
2. Use other than by the customer at the declared address appearing in this document.
3. Failure by the end user to comply with the manufacturers' instructions for installation, maintenance or use.
4. The use of accessories which have not been approved by Blonder Tongue.
5. The application and/or use of any incorrect or abnormal electrical supply to the product.
6. Any defect in wiring or electrical connections which does not form part of the product at the time of the original purchase.
7. Neglect, misuse, or willful abuse of the product.
8. Any repairs or attempted repairs of the product by any person other than Blonder Tongue Service Department.
9. Any modification of the product by any person other than Blonder Tongue Service Department.
10. Fire, flood, war, civil disturbance, industrial action, acts of God or any other causes beyond the reasonable control of Blonder Tongue.
11. Any defect caused by lightning strike or power surges.
12. Shipping costs to return products to Blonder Tongue for warranty service.
13. Blonder Tongue will not in any circumstances be liable for any consequential loss or damages suffered by the customer whether directly or in directly related defect in the product to the extent permissible by law.
14. Repairs may not be effected without prior authorization from Blonder Tongue Laboratories.

D. GENERAL

1. The customer shall notify Blonder Tongue Laboratories in writing within ten days of any change of his or her address.
2. Customer must provide original **purchase receipt** and **serial number** to initiate extended warranty coverage.
3. The fee paid for the warranty is not refundable under any circumstances unless cancelled within seven days of purchase.
4. The customer shall take all reasonable precautions to maintain the product is maintained in good working order.
5. The warranty contract ceases to exist if the product is replaced or a credit is given to the customer. Any monies paid for the warranty contract are forfeited and not refundable. This is only applicable when the product is out of the manufacturer's warranty.
6. The extended warranty period as stated on the Extended Warranty Agreement shall be the governing period notwithstanding any additional supplier warranty on specific components.
7. The warranty shall in no way effect the terms and conditions of the sale agreement in terms of which the customer bought the product.
8. The extended warranty is limited to the terms and conditions herein contained
9. No agreement, varying, adding to, amended, deleting, or cancelling this warranty shall be effective unless given in writing (email is acceptable) and signed by or on behalf of both parties.
10. The cost of the extended warranty is 8% of the purchase price for a 1 or 2 year extension beyond the Blonder Tongue standard warranty. e.g. A product price of \$1000 will be \$80 for the 1st year (12 mos) and additional \$80 for 2 year (24 mos) extension for a total of \$160.
11. Warranty product return postage paid to: Blonder Tongue Laboratories, Inc.

Attn: Warranty Service Dept.
1 Jake Brown Road
Old Bridge, NJ 08857

Contact Blonder Tongue at 800-523-6049 ext. 555 to order extended warranty service.

Limited Warranty

Seller will at its sole option, either repair or replace (with a new or factory reconditioned product, as Seller may determine) any product manufactured or sold (or in the case of software, licensed) by Seller which is defective in materials or workmanship or fails to meet the applicable specifications that are in effect on the date of shipment or such other specifications as may have been expressly agreed upon in writing: (i) for a period of one (1) year from the date of original purchase for all stock hardware products (other than those specifically referenced herein below having a shorter warranty period); (ii) for a period of one (1) year from the date of original purchase, with respect to all MegaPort™, IPTV products, test equipment and fiber optics receivers, transmitters, couplers and integrated receiver/distribution amplifiers; (iii) for a period of one (1) year from the date of original purchase (or such shorter period of time as may be set forth in the license agreement specific to the particular software being licensed from Seller) with respect to all software products licensed from Seller (other than Core Product Software) that is (a) developed for a specific function or application, (b) complimentary to and does not function without the Core Product Software, and (c) listed with a specific model number and stock number in Seller's Price List ("**Non-Core Software**"); (iv) for a period of ninety (90) days from the date of original purchase, with respect to non-serialized products and accessories, such as parts, sub-assemblies, splitters and all other products sold by Seller (other than Core Product Software and Refurbished/Closeout Products) not otherwise referred to in clauses (i) through (iii) above. The warranty period for computer programs in machine-readable form included in a hardware product, which are essential for the functionality thereof as specifically stated in the published product specifications ("**Core Product Software**") will be coincident with the warranty period of the applicable hardware product within which such Core Product Software is installed.

Software patches, bug fixes, updates or workarounds do not extend the original warranty period of any Core Product Software or Non-Core Software.

Notwithstanding anything herein to the contrary,

(i) Seller's sole obligation for software that when properly installed and used does not substantially conform to the published specifications in effect when the software is first shipped by Seller, is to use commercially reasonable efforts to correct any reproducible material non-conformity (as determined by Seller in its sole discretion) by providing the customer with: (a) telephone or e-mail access to report non-conformance so that Seller can verify reproducibility, (b) a software patch or bug fix, if available or a workaround to bypass the issue if available, and (c) where applicable, replacement or damaged or defective external media, such as CD-ROM disk, on which the software was originally delivered;

(ii) Seller does not warrant that the use of any software will be uninterrupted, error-free, free of security vulnerabilities or that the software will meet the customer's particular requirements; and the customer's sole and exclusive remedy for breach of this warranty is, at Seller's option, to receive (a) suitably modified software, or part thereof, or (b) comparable replacement software or part thereof;

(iii) Seller retains all right, title and interest in and to and ownership of all software (including all Core Product Software and Non-Core Software) including any and all enhancements, modifications and updates to the same; and

(iv) in some cases, the warranty on certain proprietary sub-assembly modules manufactured by third-party vendors and contained in Seller's products, third party software installed in certain of Seller's products, and on certain private-label products manufactured by third-parties for resale by Seller, will be of shorter duration or otherwise more limited than the standard Seller limited warranty. In such cases, Seller's warranty with respect to such third-party proprietary sub-assembly modules, third-party software and private-label products will be limited to the duration and other terms of such third-party vendor's warranty, if any. In addition, certain products, that are not manufactured by Seller, but are resold by Seller, may carry the original OEM warranty for such products, if any. The limited warranty set forth above does not apply to any product sold by Seller, which at the time of sale constituted a Refurbished/Closeout Product, the limited warranty for which is provided in the following paragraph.

Seller will at its sole option, either repair or replace (with a new or factory-reconditioned product, as Seller may determine) any product sold by Seller which at the time of sale constituted a refurbished or closeout item ("**Refurbished/Closeout Product**"), which is defective in materials or workmanship or fails to meet the applicable specifications that are in effect on the date of shipment of that product or fails to meet such other specifications as may have been expressly agreed upon in writing between the parties, for a period of ninety (90) days from the date of original purchase. Notwithstanding the foregoing, in some cases the warranty on certain proprietary sub-assembly modules manufactured by third-party vendors and contained in Seller products, third party software installed in certain of Seller's products, and on certain private-label products manufactured by third-parties for resale by Seller will be of shorter duration or otherwise more limited than Seller limited warranty for Refurbished/Closeout Products. In such cases, Seller's warranty for Refurbished/Closeout Products constituting such third party proprietary sub-assembly modules, third party software, and private-label products will be limited to the duration and other terms of such third-party vendor's warranty, if any. In addition, notwithstanding the foregoing, (i) certain Refurbished/Closeout Products that are not manufactured (but are resold) by Seller, may carry the original OEM warranty for such products, if any, which may be longer or shorter than Seller's limited warranty for Refurbished/Closeout Products. All sales of Refurbished/Closeout Products are final.

To obtain service under this warranty, the defective product, together with a copy of the sales receipt, serial number if applicable, or other satisfactory proof of purchase and a brief description of the defect, must be shipped freight prepaid to Seller at the following address: One Jake Brown Road, Old Bridge, New Jersey 08857.

This warranty does not cover failure of performance or damage resulting from (i) use or installation other than in strict accordance with manufacturer's written instructions, (ii) disassembly or repair by someone other than the manufacturer or a manufacturer-authorized repair center, (iii) misuse, misapplication or abuse, (iv) alteration, (v) exposure to unusual physical or electrical stress, abuse or accident or forces or exposure beyond normal use within specified operational or environmental parameters set forth in applicable product specifications, (vi) lack of reasonable care or (vii) wind, ice, snow, rain, lightning, or any other weather conditions or acts of God.

OTHER THAN THE WARRANTIES SET FORTH ABOVE, SELLER MAKES NO OTHER WARRANTIES OR REPRESENTATIONS OF ANY KIND, EXPRESS OR IMPLIED, AS TO THE CONDITION, DESCRIPTION, FITNESS FOR A PARTICULAR PURPOSE, MERCHANTABILITY, OR AS TO ANY OTHER MATTER, AND SUCH WARRANTIES SET FORTH ABOVE SUPERSEDE ANY ORAL OR WRITTEN WARRANTIES OR REPRESENTATIONS MADE OR IMPLIED BY SELLER OR BY ANY OF SELLER'S EMPLOYEES OR REPRESENTATIVES, OR IN ANY OF SELLER'S BROCHURES MANUALS, CATALOGS, LITERATURE OR OTHER MATERIALS. IN ALL CASES, BUYER'S SOLE AND EXCLUSIVE REMEDY AND SELLER'S SOLE OBLIGATION FOR ANY BREACH OF THE WARRANTIES CONTAINED HEREIN SHALL BE LIMITED TO THE REPAIR OR REPLACEMENT OF THE DEFECTIVE PRODUCT F.O.B. SHIPPING POINT, AS SELLER IN ITS SOLE DISCRETION SHALL DETERMINE. SELLER SHALL IN NO EVENT AND UNDER NO CIRCUMSTANCES BE LIABLE OR RESPONSIBLE FOR ANY CONSEQUENTIAL, INDIRECT, INCIDENTAL, PUNITIVE, DIRECT OR SPECIAL DAMAGES BASED UPON BREACH OF WARRANTY, BREACH OF CONTRACT, NEGLIGENCE, STRICT TORT LIABILITY OR OTHERWISE OR ANY OTHER LEGAL THEORY, ARISING DIRECTLY OR INDIRECTLY FROM THE SALE, USE, INSTALLATION OR FAILURE OF ANY PRODUCT ACQUIRED BY BUYER FROM SELLER.

All claims for shortages, defects, and non-conforming goods must be made by the customer in writing within five (5) days of receipt of merchandise, which writing shall state with particularity all material facts concerning the claim then known to the customer. Upon any such claim, the customer shall hold the goods complained of intact and duly protected, for a period of up to sixty (60) days. Upon the request of Seller, the customer shall ship such allegedly non-conforming or defective goods, freight prepaid to Seller for examination by Seller's inspection department and verification of the defect. Seller, at its option, will either repair, replace or issue a credit for products determined to be defective. Seller's liability and responsibility for defective products is specifically limited to the defective item or to credit towards the original billing. All such replacements by Seller shall be made free of charge f.o.b. the delivery point called for in the original order. Products for which replacement has been made under the provisions of this clause shall become the property of Seller. Under no circumstances are products to be returned to Seller without Seller's prior written authorization. Seller reserves the right to scrap any unauthorized returns on a no-credit basis. Any actions for breach of a contract of sale between Seller and a customer must be commenced by the customer within thirteen (13) months after the cause of action has accrued. A copy of Seller's standard terms and conditions of sale, including the limited warranty, is available from Seller upon request. Copies of the limited warranties covering third-party proprietary sub-assembly modules and private-label products manufactured by third-parties may also be available from Seller on request. **(Rev 1021)**