# C4000 SERIES

IP-Based Paging and Audio Distribution

## SYSTEM FEATURES

### Administration/Staff
#### FEATURES

- NQ-ZPMS Zone Paging Mic Station support
- iOS and iPadOS support
- Microsoft Active Directory and LDAP Support
- Enterprise-wide Event Management From Single Interface (i.e, Remote Calendar Control)
- All Call Paging
- Emergency All Call Paging
- District-Wide All Call
- District-Wide Emergency All Call
- Zone Paging
- Unlimited number of Paging Zones
- Unlimited simultaneous paging calls
- Multi-facility paging/announcements
- Location Monitoring (Modes: Spy, Whisper, Barge)
- Web-based GUI Dashboard (Audio, Alarms, Announcements, Calling, Paging, Tones)
- Web-based GUI Directory Menus for Announcements, Alarms, Paging Zones, Stations, Tones
- Web User Interface: SIP Client (softphone) - allows calls, paging, etc., from Web UI
- Executive override to access intercom paths
- Admin can override others and interrupt page
- Admin Groups: "Emergency" admin group
- Admin Phone Menus: Alarms, Announcements, Zone Paging, Tones, and Routines
- Direct select rooms from VoIP admin phone
- Multi Station Page Exclusion (Ability to turn off paging into an area as needed, e.g., for testing, mtg's, etc.)

### Networked Audio Power Amplifier Support
#### FEATURES

- Gen2 Amplifier Support (NQ-A2xxx-G2/NQ-A4xxx-G2)
- 4-Ch. x60W, x120W, and x300W models available
- 2-Ch. x60W, x120W, and x300W models available
- Public Address Mixer/Amplifiers NQ-PA120/240/600
- Integrated Pro-Audio Digital Signal Processing
- Enhanced DSP Controls
- 40W PoE+ Plenum-Rated Amplifier Module with Line Output
- 20W PoE+ Plenum-Rated Amplifier Module with Line Output

### Audio Distribution & Announcement
#### FEATURES

- Sound Masking S/W Feature option
- Tablet Based Zone Volume and Audio Distribution Control
- Unlimited Announcement Files
- Upload and Manage WAV & MP3 Announcement Files
- Audio Program Control via DTMF - Admin Phone (i.e., Can turn on or off from phone)
- Toggle Music Sources On/Off
- GUI-based Program Distribution
- Playlists (with easy title drag-n-drop capability)
- Music Import and Management
- Automatic Playlist Creation from USB Stick (Places all music files into a single playlist)
- Record Announcements from an Admin Phone or Web UI
- Separate Zone Volume Controls for Paging vs. Audio Distribution
- Audio Distribution to multiple zones simultaneously
- Integrated streaming Internet radio (airable)
- Integrated commercially-licensed streaming music service (SoundMachine)
- Scheduled Audio from any source (airable Radio, SoundMachine, Playlists, and Line-Input)
- Recurring Scheduled Announcements
- Targeted Announcements to any specified zone(s)
- Pink noise and white noise tones to assist with setting-up paging zone volumes

BOGEN®

## Traditional Intercom*
### FEATURES

- Unlimited System Capacity
  (limited only by system licensing)

- Always an Answer (Calls can be put into admin groups so call will always be answered.)

- Intercom Call-in (From classroom call switch)
  (requires optional system licensing)

- Unlimited Simultaneous Intercom Calls
  per Facility (limited only by system licensing)

- Priority Paging Mic (ability to have external Mic for emergency page)

- Unlimited Program Channels

- Unlimited Number of Class of Service (CoS) Profiles

- Unlimited Paging, Time, and Audio Zones
  (limited only by system licensing)

- Emergency Call-in (Emergency calls from classroom ring with special ring & alert) (limited only by system licensing)

- Call Assurance Audio File plays in room to confirm call (Analogous to Call Assurance LED)

- 3 Call Priorities for Call Switch (Normal, Urgent, Emergency)

- Relay Input to trigger Events or Routines

- Relay Driver Output Controls (Used to control events, e.g., open door, turn on lights, etc.)

- Emergency Call from Normal Call Switch (If call is in progress, it can be escalated to emergency status)

- Transfer Call from Room Speaker to Room Phone (Call to ceiling speaker can be dropped to the phone or privacy)

- Change/Modify Preannounce Tone

- Create Text-To-Speech Based Announcements (Optional)

- Legacy Analog Amplifier Support

- Analog Speaker Support (8-ohm / 25V / 70V)

- Analog Call Switch Support (CA15C)

- Digital Call Switch Support (NQ-E7020 / NQ-E7020-G2)

- Page Stacking / Queuing (requires optional system licensing)

- Ambient Noise Sensing (requires one or more NQ-GA10P paired with a ANS500M)

\* Intercom calling and associated features are optionally licensed

## Event Schedules & Management
### FEATURES

- 72-Hour Backup Tone Schedule

- Powerful, Innovative Web-based Scheduling Interface

- Activate a Routine in Conjunction with a Scheduled Event

- Execute Any Routine Action when a selected schedule is activated

- Conditional Execution of Routine Actions based on User-Supplied Statements/Parameters

- Scheduled Volume Level changes via Routines

- Master Clock Capability

- Unlimited Number of Holiday Schedules (Ability to change Event Schedules so that tones and bells don't disturb surrounding areas when business is closed)

- Ability to Sync External Master Clock with I/O Contact Closure

- NTP Server Support (Ability to act as or sync to an external NTP Server)

- Unlimited Schedules (Restricted Edit & View by User Role)

- Unlimited Scheduled Events

- Ability to Import/Export Holiday Schedules

- Monthly Calendar Views

- Tones: Generate/Create Tones, Upload Tones, Manage Tones

## IP Speaker Support
### FEATURES

- Digital Call Switches (NQ-E7020 and NQ-E7020-G2))

- VoIP Ceiling Speaker w/Talkback (NQ-S1810CT and NQ-S1810CT-G2)

- VoIP Wall Baffle Speaker w/Talkback
  (NQ-S1810WT and NQ-S1810WT-G2)

- CAN Bus Device Support (e.g., NQ-E7020 DCS)

- PoE Plenum-Rated VoIP Intercom Module (NQ-GA10P)
  (Turns any 8-ohm speaker into a VoIP talkback speaker)

- PoE Plenum-Rated VoIP Intercom Module with HDMI output (NQ-GA10PV) (Turns any 8-ohm speaker into a VoIP talkback speaker and HDMI-capapble TVs/monitors into combo clock/message displays)

## Configuration & Maintenance
### FEATURES

- System Controller with pre-installed OS & C4000 application software
- Embedded Nyquist DHCP Server Support
- Ability to Create a Self-Signed Bogen Root SSL Certificate
- Automatic server software and firmware check & download
- Wizard-Based System Setup & Configuration (when using the NQ-SYSCTRL Nyquist System Controller)
- Web GUI Programming and Diagnostics (Ability to program and test from anywhere)
- Log File Viewing and Export (Server and System)
- Web GUI Station Status (Real-time status of VoIP devices)
- System Backup/Restore
- Automated/Scheduled System Backup
- GUI-based System Status (Current operations displayed on Dashboard)
- Monitoring of Server Status via SNMP
- Unlimited Definitions of Users, Roles, and Permissions
- Software Adjustable Paging Zone Volume
- Device & Station Supervision (with Dashboard Notifications and Email Alerts)
- Automatic update of Appliance Firmware (to match server S/W version)

## I/O Related Equipment
### FEATURES

- Networked Matrix Mixer Pre-Amp with Pro-Audio DSP (NQ-PO100) (External MIC, AUX, & Digital Audio Support)
- Networked I/O Controller (NQ-E7010) (8 Inputs/8 Outputs per I/O Controller)

## IP Phone Support
### FEATURES

- VoIP LCD Display Admin/Staff Phone (NQ-T1000)
- Support for third party ATA devices for FXO and FXS connections with custom configurations for FXS operation features like Off-Hook Ring Down
- Nyquist Bogen Staff Phone-LCD Display (NQ-T2000) and
- Nyquist Zone Paging Microphone Station (NQ-ZPMS)

## Security & Safety
### FEATURES

- Backup paging via NQ-T1100 Admin Phones and NQ-ZPMS Zone Paging Mic Station
- Check-in status displayed via GA10PV driven monitor
- Automatic Failover option for Nyquist Server
- Clock / Messaging Display capability with NQ-GA10PV
- Alert Filters to display specific Emergency Alert System (EAS) events on the video displays connected to the NQ-GA10PV
- Routines (allows automatic launching of a sequence of actions that the Nyquist system executes as a result of a manual input or "triggering" system event. Routines can support your crisis plans for situations such as school lockdown, weather events, or emergency evacuation.
- Expanded Routine API Parameters for 3rd Party Integrations
- Enhanced Routine API Authentication
- Multi-facility Routines
- Emergency Check-In feature that can be used for lockdowns
- Pop-up of a room's video feed via the Maps view (using standard camera URLs)
- Optional password protection for all-call paging, emergency all-call paging, multi-site paging, facility paging, zone paging, alarms, and tones.
- Play Pre-Recorded Message with Contact Closure (via NQ-E7010 I/O Controller program logic)
- Speed-Dial Access to Common System Features (Used to make system easy to use for Administrators)
- Output Contact Closure Puts System Into Page Exclusion mode (via NQ-E7010 I/O Controller program logic)
- Output Contact Closure Triggers an External Event (via output relay control on the NQ-E7010 I/O Controller)
- Input Contact Closure Triggers an Internal Event (via NQ-E7010 I/O Controller program logic)
- Call Recording and Playback (911, Emergency, Normal)
- Emergency Page with Pre-Programmed Messages (WAV, MP3) (ex. "There is a Fire Emergency, please exit building, this is not a drill.")
- Interactive Map-Based Paging and Intercom (hierarchical drill-down views of multiple maps - including across multiple facilities)
- Text-to-Speech Based Announcements (optional feature) (Copy & paste-in complex emergency notifications and instructions)
- Routines API to Integrate with Security/Access Control Systems (optional feature)

- Voice-Prompted Features (via embedded IVR functionality) (Users are instructed as to what the next step should be)
- Intercom Access from IP Phone System (SIP ATA or Tie-Line interface to IP-PBX)
- Voice-Prompted Call Forwarding Status (via embedded IVR functionality)
- Call Monitoring (Modes: Spy, Whisper, Barge, non-DISA)
- Call Detail Recording: Display, Manage, and Export (No limit to record count)
- Call or Page via Mobile Device: SIP Client Application
- Call or Page via Mobile Device: Web UI
- SIP Trunking to PSTN/Cloud or IP-PBX
- SIP trunk management to include PBX Connection access
- SIP Trunk can be used to register Nyquist with an iPBX as a SIP endpoint
- Allow Intercom Calls to Route to PBX Extensions via SIP Trunk
- 911 Call Alerts: Notifications sent to Web UI and Admin Phones with option to monitor call
- 911 Dial Through (Provisioned via CoS allows any authorized station to direct dial 911)
- Walking CoS
- Trunk Queuing (Searches for first available outside line/trunk)
- Unlimited Number of Admin and/or Staff Phones (limited only by system licensing)
- Analog PSTN Trunk Support (Requires use of DAHDI cards or an FXO Gateway)
- Unlimited Number of Simultaneous Talk Paths (limited only by system licensing)
- Architectural Room Numbers and Names Displayed on Web UI and Admin devices

- Off-Site Call Transfer (Transfer calls to phone numbers outside of the system)
- Routing to an External Number (Provisioned via CoS)
- Route selected call priorities (e.g., Emergency) to an external number (Provisioned via CoS)
- Remote Call Pickup (Ability to answer a phone from anywhere in the building/facility)
- Voice Mail (Assignable to any station via CoS)
- Analog Intercom Access from a PBX (via FXO or FXS ports)
- Voicemail Message Waiting Indication Light (on all Bogen VoIP phones)
- Call Forwarding (Automatically sends calls to another station on the system)
- Callback Request with associated Callback Request Indicator
- DID Call Routing (Direct inward line routes to office phone)
- DISA Call Routing (Allows direct inward station access from outside the system)
- Security DISA Call Routing (Allows direct inward station access from outside the system using a passcode)
- Password Protected Access to Admin Phone Features
- Ability to Place Normal or Emergency Calls
- Dial Out to PSTN/PBX (requires optional DAHDI FXO cards or ATA FXO ports)
- Receive Outside Calls (PSTN/PBX)
- Analog Telephone (aka 2500 Set) Support (via 3rd-party 24-port FXS VoIP Gateway integration)

* Intercom calling and associated features are optionally licensed