



# SYSTEM DESIGN GUIDE

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## OFFICE BUILDING

Qt® X and NPX™

Open office plans are the new normal in many buildings, fueled not only by cost-efficiency but also by the idea that being in a shared space nurtures a collaborative approach between co-workers. However, this results in fewer sound blocking and absorptive materials being used in construction. Lower or non-existent partitions, hard or glass surfaces, and thinner walls and doors all lead to increased noise levels and most importantly decreased speech privacy, making it difficult to have private conversations or effective interactions with customers over the phone.

Lack of speech privacy is the number one concern of employees in open office environments<sup>1</sup>. Distracting conversations, frequent interruptions, and concern about private conversations being overheard all have a negative effect on worker productivity and job satisfaction. Sound masking is a low-cost option for creating acoustical environments that both reduce distractions and increase speech privacy. By introducing unobtrusive background sound to reduce the intelligibility of other people's speech, sound masking makes it easier for employees to focus on the tasks at hand.

<sup>1</sup> Center for the Built Environment, University of Sydney

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Qt X is an ideal solution for sound masking, paging, and background music in office environments. The power of Qt X lies in its ability to adapt to virtually any architectural scenario. The only platform on the market today that seamlessly supports both direct and indirect sound masking distribution, Qt X uses software-based virtual zones that allows the architecture to dictate the sound masking approach instead of the technology. Simply choose the right type of sound masking distribution (direct or indirect) for different areas; Qt X can intermix sound masking approaches throughout a facility. The result is a consistent and comfortable ambient sound throughout the space.

In this office example, a zone of indirect loudspeakers could be deployed in the engineering area above the ceiling while the remaining zones could use direct emitters that point downward. Digital audio and control data can be transmitted over the network either via AVB or Dante®, and all Qt X sound masking processors integrate easily with a fire alarm system's contact closure. Best of all, only a single networked sound masking processor needs to be connected to the fire panel for the entire system to be integrated.

To streamline operation, system controls are available via a secured web interface, allowing adjustments to be made from anywhere. Features such as soft start scheduling facilitates occupant acclimation to a sound masked environment, improving comfort for employees. Advanced scheduling gives end users the ability to adapt levels throughout the day to maintain both comfort and speech privacy effectiveness.

The PoE-powered NPX paging stations provide full convenience paging functionality with Qt X sound masking systems via simple category cable connections. Available with gooseneck or handheld microphones, NPX paging stations support up to 16 software-configurable paging priority levels as well as stored message playback (up to 10 messages). All models are equipped with push-to-talk (PTT) buttons with active page status indicators, while the gooseneck models include a page latch button for hands-free paging.

Qt X can interface with third party devices through its robust API and can be managed via SageVue™, Biamp's web-based monitoring platform. Qt X supports granular access via password-protected user roles as well as industry standard security protocols such as 802.1X to ensure system integrity.

## BENEFITS FOR INTEGRATORS

- Sound masking, paging, and background music in a single platform
- Supports both direct emitters and indirect loudspeakers
- Adaptable to any architectural scenario
- Software-based virtual zones for easy system changes
- NPX paging stations provide full convenience paging functionality coupled with plug-and-play simplicity
- Control and media transport using either AVB or Dante
- Configure and control the system through dedicated software, web interface, and/or front panel control
- Compliant with modern network infrastructure requirements including a PoE+ model for in-plenum deployment (no special power needs)
- Easily expandable to accommodate growth and changes in functionality



## EQUIPMENT LIST

Product	Function
Qt X 300	Sound masking processor with two analog audio inputs for audio distribution from paging stations and/or background music sources. Controls up to three virtual zones of Qt emitters.
Qt X 800	Sound masking processor with two analog audio inputs for audio distribution from paging stations and/or background music sources. Controls up to eight virtual zones of direct emitters or indirect loudspeakers.
NPX G1100	Network-based convenience paging station with gooseneck microphone. Supports up to 16 paging priority levels and playback of pre-recorded messages.
NPX H1040	Network-based convenience paging station with handheld microphone. Supports up to 16 paging priority levels and playback of pre-recorded messages.
DS1357 Loudspeaker	Indirect loudspeaker for use with Qt X 800/805 sound masking processors well-suited for paging and BGM applications.
DS1320 Emitter	Direct emitter for use with Qt X 800/805 sound masking processors well-suited for paging and BGM applications.
Qt Active Emitter	Direct emitter for use with Qt X 300/600 sound masking processors well-suited for paging and BGM applications.

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