

QtPro® System Layout Guidelines for Standard Qt® Emitters

1 • DETERMINE THE NUMBER OF ZONES

A single zone can range from 100 ft² (10 m²) (e.g. conference room) to 12,000 ft² (1100 m²) (e.g. call center).

Large open areas, small private areas, corridors, and other transitional areas require separate zones.

Areas with different sound masking levels, or paging and music capability, require their own zone.

An area with different ceiling heights or ceiling types may require multiple zones. Learn more at cambridgesound.com/design.



TIP:

Cambridge Sound Management employs a team of layout designers, field engineers, and acousticians to help determine proper placement and zoning. They can be reached at designteam@cambridgesound.com.

2 • CALCULATE THE NUMBER OF EMITTERS

Emitters are installed in a grid pattern determined by ceiling height.

CEILING HEIGHT	EMITTER GRID SPACING
Less than 8' 5" (2.6 m)	8' by 8' (2.4 m x 2.4 m)
8' 6" to 11' 6" (2.6-3.5 m)	10' by 10' (3 m x 3 m)
11' 7" and above (3.5 m +)	12' by 12' (3.6 m x 3.6 m)

Open Office Calculations

Use the formula below to calculate the number of emitters required.

FORMULA	EXAMPLE
$\frac{(\text{Square feet / meters})}{(\text{Emitter Grid Spacing})^2} \times 1.03 = \text{Emitters Required}$	$\frac{3327 \text{ 309m}}{10 \times 10 \text{ 3} \times \text{3}} \times 1.03 = 35 \text{ Emitters Required}$

Private Office Calculations

OFFICE SIZE	Up to 180ft ² (Up to 16 m ²)	180-260ft ² (16 - 24 m ²)	260-340ft ² (24-31 m ²)	340-420ft ² (31-39 m ²)	420-500ft ² (39-46 m ²)
EMITTERS	2	3	4	5	6

3 • SELECT A QtPRO® CONTROL MODULE

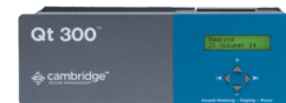
One zone

- Up to 120 emitters
- Covers approximately 12,000ft² (1100 m²)



Three zones

- Up to 360 emitters
- Covers approximately 36,000ft² (3500 m²)
- Network Accessible



Six zones

- Up to 720 emitters
- Covers approximately 72,000ft² (7000 m²)
- Network Accessible



TIP:

Easily scale sound masking by adding multiple QtPro control modules and the Qt Command Center for larger multi-floor facilities or multi-building campuses.

4 • CONSIDER ACCESSORIES

Qt Room Control

- Available for small spaces
- Volume control for up to 8 emitters



Popular Mounting Options

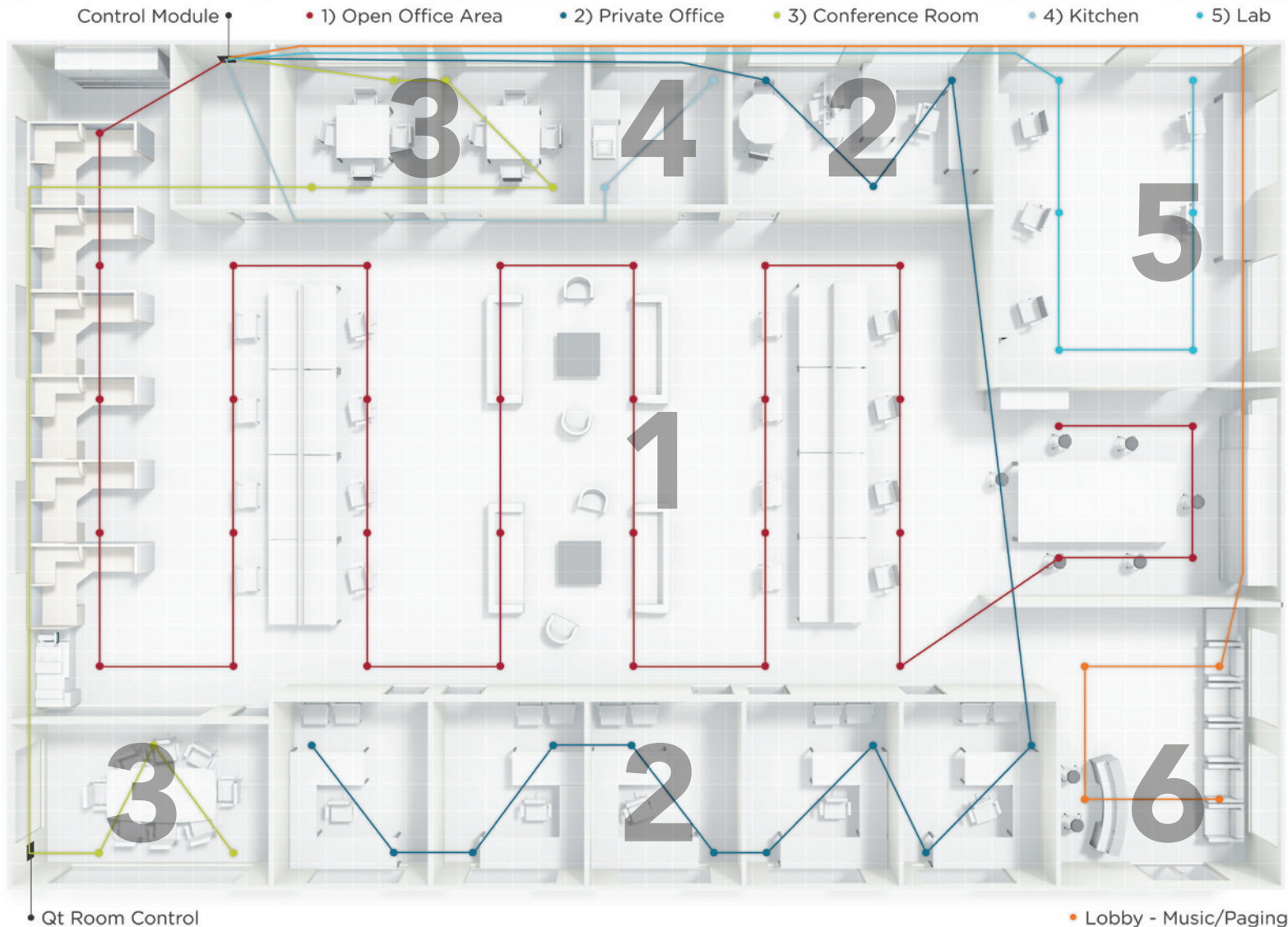
- Drywall Mount - Mounts emitter directly into the ceiling
- Universal Bracket- Mounts emitter to wall and ceiling materials and rotates in 45-degree increments



5 • FOLLOW INSTALLATION BEST PRACTICES

- Each zone can support a maximum of 120 devices (using 2 runs of 60 emitters or Qt Room Control devices).
- Each run can support up to 1,000 feet (304 m) of cable.
- Emitters should be installed no closer than 2 feet (.6 m), and no more than half the emitter spacing distance to any wall, column, or other structure.
- Emitters can be moved up to 2 feet (.6 m) in any direction.
- Emitters must be at least 6 feet (1.8 m) and no more than 12 feet (3.6 m) from surrounding emitters.
- Emitters are connected in a daisy chain fashion using 8 conductor Category UTP plenum rated cabling with RJ45 terminations.
- Adjustable emitters can be changed -3, -6, or -9 dB to lower volume.

QtPro® Sound Masking Zone Wiring for Standard Qt® Emitters



SPACE SPECIFICATIONS

- 5,294 ft² (492 m²) total
- 3327 ft² (309 m²) open office
- 10' (3 m) ceiling height
- 6 zones – open and closed office space with music/paging

EQUIPMENT USED

- Qt 600 Control Module
- 65 Qt Emitters
- CAT-3 Cables and RJ-45 Connectors
- 1 Qt Room Control

FOUR CHANNEL DISTRIBUTION

