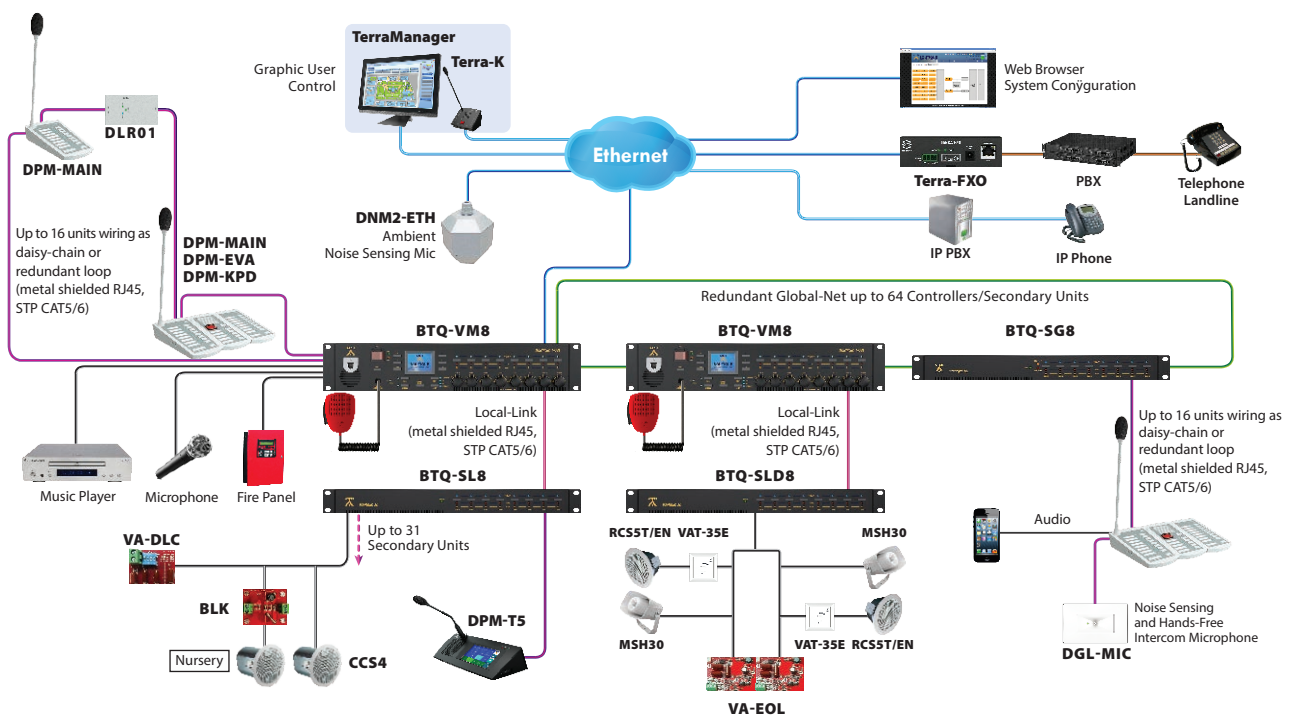**EN54 Certified**

# BTQ-SG8



## PAVA Secondary Global Unit, 8 Zones

The BTQ-SG8 PAVA secondary global unit is not only an extension unit for BTQ-VM4/8 PAVA controller but can also work independently without the BTQ-VM4/8. Up to 64 BTQ-VM4/8 or BTQ-SG8 can be networkable by full-redundancy-loop global-net via CAT5/6 cable (max. length 100m between units), multi-mode (2 km) or single-mode (20 km) ÿbre optic, even longer distance upon request.

The BTQ-SG8 is capable of handling 1000W speaker load per zone and 2000W max. per unit. It extends the number of input and output contacts available in the system, including 9 monitored EVAC inputs, which can be programmed to trigger either by dry contact or voltage, logic control inputs and 8 relay control outputs (conÿgured by web browser). The two digital interfaces can connect up to 8 paging consoles or remote units for each, and be wired in a daisy chain or redundant loop. It is also equipped with a USB port for message or music ÿles playing. In accordance with EN 54-16 requirement, all BOUTIQUE system components and peripherals are monitored from paging microphones to loudspeaker lines. The speaker lines are monitored for short, open circuit and leakage. In addition, multiple volume attenuators can be installed on a monitored speaker lines without loopback cable. The BTQ-SG8 is also an eco-friendly product with extremely low power consumption (4W) during standby mode.

The system can easily setup from the LCD panel of BTQ-VM4/8, the advanced settings can be accessed by web browser such as volume, PEQ, audio routing, monitor and control, event and bell scheduler, paging with priority management (1~99 priority level) etc. Furthermore, the BOUTIQUE contains with fully digital audio mixing and internal message storage for up to 90 minutes, USB interface to play G.711, G.722, G.726, G.727, MP3 and WAV ÿles.

## APPLICATION EXAMPLE

# BTQ-SG8

## PAVA Secondary Global Unit, 8 Zones

## FEATURES

- Both background music playing and paging can be simultaneously proceeded
- Easy integration with Terracom and IP-PBX via SIP protocol
- IP based music streaming and paging over LAN/WAN
- Extremely low power consumption during standby mode (4W)
- Multiple volume attenuators can be installed on a monitored speaker lines without the need for a loopback cable. For branching speaker lines using the VA-EOL module, please order the "EOL driver" version of BTQ unit such as BTQ-VMD/SGD/SLD controller/secondary unit, in order to provide more power to drive the VA-EOL module.

### LED INDICATORS

- **Front**
  - 8 zone selected buttons and LEDs
  - 8 zone EVAC LEDs
  - 8 zone alert/page LEDs
  - Power LED
- **Back**
  - 2 global-net port LEDs

### INTERCONNECTIONS

- **Back**
  - 24 VDC normal power input
  - 24 VDC backup power input
  - 9 monitored EVAC inputs
  - 8 speaker zone(A/B) outputs
  - 8 relay control outputs
  - 8 monitored logic control inputs
  - 2 digital ports for paging console
  - 1 fault relays & 1 EVAC relay output
  - AMP IN 1/2
  - AMP OUT 1/2 (100V)
  - 1 set of global-net port (optional)
  - 1 Ethernet port
  - 1 USB 2.0 for conÿguration backup and message/music ÿle
  - 24 VDC output
  - RS232 for third party control
  - Device ID DIP switch

## CERTIFICATIONS AND APPROVALS

| | | |
|---|---|---|
| Europe | Voice Alarm | EN 54-16 (1438-CPR-0947) |
| Europe | CE/EMI | EN 55032 |
| Europe | CE/EMC | EN 55020 IEC 61000-4-2 IEC 61000-4-4 |
| USA | Safety | UL 60065 (Pending) |

## ELECTRICAL

- DC power input: 21 VDC ~ 29 VDC
- Power consumption
  - Full power: 15W
  - Standby mode: 4W

## AUDIO CHARACTERISTICS

- A/D-D/A bit resolution: 24 bit
- Sampling rate: 48 kHz
- Frequency response: 20 Hz ~ 20 kHz (±1 dB) @ 0 dBu
- THD+N: < 0.01 % @ 0 dB gain, 4 dBu (1 kHz) in
- EIN: < -80 dBu @ 0 dB gain
- SNR: > 80 dB
- Maximum output level: 17 dBu
- Crosstalk: > 93 dB @ 0 dB gain, 0 dBu (10 kHz) in
- Output impedance: 30 ohm

## WATTAGE CAPACITY

- 1000W per zone/2000W (max.) per unit

## NETWORK

- Max. global-net units: 64
- Max. distance between global-net units: 100m (CAT5/6), 2 km (multi mode ÿber optic) and 20 km (single mode ÿber optic)
- Max. remotes units
  - Daisy-chain wiring
    - 16 DPM sets (DPM-MAIN + EVA + KPD) for each remote port
    - 32 DPM sets (DPM-MAIN + EVA + KPD) for 2 remote ports
  - Redundant loop: 16 DPM sets (DPM-MAIN + EVA + KPD)
- Max. DPM sets (MAIN + EVA + KPD)
  - Max. 16 DPM sets
    - 1 DPM-MAIN attaches 1 DPM-EVA and 14 DPM-KPD
    - 1 DPM-MAIN attaches 15 DPM-KPD
  - Max. 128 keys for each DPM set
  - Connection via °a t cable
- Max. communication distance between BTQ-SG8 and remote unit: 250m (shielded RJ45 connector, STP CAT5/6)

  * The distance of cable length will directly aﬀect the quantity and power requirement of remote unit.

  1. The longer the cable is, the less power the BTQ-SG8 can supply to the remote units.

  2. The more the remote units has cascaded in daisy-chain/redundant loop, the less power the BTQ-SG8 can supply to the remote units.

  For example, if the cable length between the BTQ-SG8 and DPM-MAIN is within 120m, the DPM-MAIN can be powered by BTQ-SG8. If the cable length is beyond 120m, please connect the DLR01 digital loop repeater and PSU65-27 27VDC power adapter, ensuring the control signal and power supply of DPM-MAIN units are enough. To know the max. distance between BTQ-SG8 and DPM-MAIN unit(s) and the max. distance which the DPM-MAIN can be powered by DLR01 unit, please see BOUTIQUE user manual for details.

## LOUDSPEAKER OUTPUTS

- Number of zones: 8
- Number of loudspeaker lines: 16, A/B speaker lines per zone

## EVAC INPUTS

- Voltage mode
  - Maximum voltage: 72 VDC
  - Active voltage: 18 VDC ~ 72 VDC
  - Inactive voltage: < 0.8 VDC
- Contact mode
  - Non-isolated analogue interfaces with internal pull-up to +5V by 10k ohm
  - Monitored analogue contact thresholds
    - Faulty-open circuit: > 2.7 VDC
    - Inactive voltage: 2 ~ 2.5 VDC
    - Active voltage: 1.35 ~ 1.7 VDC
    - Faulty-short circuit: < 0.6 VDC

## RELAY OUTPUTS

- Maximum voltage: 100 VDC
- Maximum current: 0.5A

## MECHANICAL

- Dimensions (W x H x D): 437 x 44 x 260 mm (17.2 x 1.7 x 10.2 inch)
- Weight: 2.6 kg (5.7 lbs)
- Mounting: 19'' 1U rack
- Colour: RAL 7016

## ENVIRONMENTAL

- Operating temperature: -5 ºC ~ +55 ºC (+23 ºF ~ +131 ºF)
- Storage temperature: -40 ºC ~ +70 ºC (-40 ºF ~ +158 ºF)
- Relative humidity: 20% to 95%
- Air pressure: 600 to 1100 hPa
- Heat dissipation: 51 BTU/hr

# BTQ-SG8

## PAVA Secondary Global Unit, 8 Zones

### Ordering Information

| Model No. | Step 1 | Step 2 | Step 3 | Step 4 | Step 5 | Step 6 | Description of Model |
|---|---|---|---|---|---|---|---|
| BTQ-VM | EOL Driver | Number of Zone | 250W/500W | Wall Mount/ Rack Mount | Global Net Card | Region | PAVA Controller |
| BTQ-SG | | 8 | N/A | N/A | | N/A | PAVA Secondary Global Unit |
| BTQ-SL | | | | | N/A | | PAVA Secondary Local Unit |

### EOL Driver

| BTQ-VM | BTQ-SG | BTQ-SL | | |
|---|---|---|---|---|
| ✔ | ✔ | ✔ | | None |
| ✔ | ✔ | ✔ | D | EOL Driver |

### Number of Zone

| BTQ-VM | BTQ-SG | BTQ-SL | | |
|---|---|---|---|---|
| ✔ | – | – | 4 | 4 Zone |
| ✔ | ✔ | ✔ | 8 | 8 Zone |

### 250W / 500W

| BTQ-VM | BTQ-SG | BTQ-SL | | |
|---|---|---|---|---|
| ✔ | – | – | 25 | 250W |
| ✔ | – | – | 50 | 500W |

### Wall Mount or Rack Mount

| BTQ-VM | BTQ-SG | BTQ-SL | | |
|---|---|---|---|---|
| ✔ | – | – | None | Rack Mount Type |
| ✔ | – | – | W1 | Wall Mount Type(Amp x 1) |
| ✔ | – | – | W2 | Wall Mount Type(Amp x 2) |

### Global Net Card

| BTQ-VM | BTQ-SG | BTQ-SL | | |
|---|---|---|---|---|
| ✔ | ✔ | – | | None |
| ✔ | ✔ | – | RR | RJ45(A)-(B) |
| ✔ | ✔ | – | MR | Fiber Multi Mode(A)-RJ45(B) |
| ✔ | ✔ | – | SR | Fiber Single Mode(A)-RJ45(B) |
| ✔ | ✔ | – | RM | RJ45(A)-Fiber Multi Mode(B) |
| ✔ | ✔ | – | RS | RJ45(A)-Fiber Single Mode(B) |
| ✔ | ✔ | – | MM | Fiber Multi Mode(A)-(B) |
| ✔ | ✔ | – | SS | Fiber Single Mode(A)-(B) |

### Region

| BTQ-VM | BTQ-SG | BTQ-SL | | |
|---|---|---|---|---|
| ✔ | – | – | | 220~240 Vac,+48VDC Power,Amp Out 100V |
| ✔ | – | – | D | -48VDC Power Only, Amp Out 100V (for BTQ-VM 250W AMP only, N/A for BTQ-VMW1/VMW2) |
| ✔ | – | – | U | 100~120 Vac,+48VDC Power,Amp Out 70V |
| ✔ | – | – | T | 100~120 Vac,+48VDC Power,Amp Out 100V |

### Copper Pillar

| CP-PILLAR 15 | Copper pillar 15 mm x 50 |
|---|---|
| CP-PILLAR 35 | Copper pillar 35 mm x 50 |

**Model Examples**
- BTQ-SG8: PAVA Secondary Global Unit,8Zone
- BTQ-SGD8: PAVA Secondary Global Unit,8Zone,EOL Driver
- BTQ-SGD8RS: PAVA Secondary Global Unit,8Zone,EOL DRV,N-RJ/FS

**Note**
When purchasing the network card, please note the copper pillar is not shipped with the network card, please order copper pillar if necessary.

\* To assemble the netcard to BTQ-VM, the copper pillar 35 mm x 2pcs are needed.

\* To assemble the netcard to BTQ-SG8, the copper pillar 15 mm x 2pcs are needed.