
**Johnson
Controls**



T-Gen2 OWS



T-Gen2 60W/120W Occupant Warning System Extended Sales Presentation

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- T-Gen2 Overview and 60W / 120W Amplifiers
- 4100ESI Mounting Options
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AS 4428.16:2015 Product Grades

Grade 3



- Single Evacuation Zone
- Building height 8 floors max
- Multiple protected outputs
- May be controlled and powered by fire panel
- Optional emergency PA and zone paging
- Typically small buildings where only a signal evacuation zone is required.

Similar to T-GEN with new requirements

Grade 2



- Multiple Evacuation Zones
- Building height 8 floors max
- Protected outputs
- Phased evacuation
- May be controlled and powered by fire panel
- Emergency PA
- Optional zone paging
- Typically medium sized buildings where more than 1 evacuation zone is required.

Entirely new

Grade 1



- Multiple Evacuation Zones
- Building height no restriction
- Phased evacuation
- Individual zone controls
- Individual tones / messages / PA /BG music per zone
- Zone paging
- Optional fire warden phone system
- Typically larger buildings with more than 8 floors or large areas such as a shopping centre.

Similar to QE90 with new requirements

T-Gen2

- The VIGILANT T-Gen2 is an Emergency Warning System (EWS) that generates emergency warning tones and messages for occupant warning, where a full EWCIE to AS 1670.4 is not required.
- The T-Gen2 comprises of 60W or 120w amplifier cards, 100V speaker line, digitized speech messages plus optional grade 3 user interface.
- The T-Gen2 is typically installed in, powered and activated by a fire panel such as the VIGILANT MX1, SIMPLEX 4100ESi or 3rd party panels.



Grade 3 User interface



MX1 with T-gen2

Main Features of both 60W & 120W T-Gen2

- Designed to comply with AS 4428.16 and NZS 4512:2010
- Pre-recorded Alert and Evacuate messages
- Digital storage of tones / messages (up to 2 minutes)
- Optional additional storage of non-emergency messages on micro SD card
- 1 x Audio Output (headphones / external amp)
- Power Save Mode on Mains Fail – disables background audio
- Link selectable earth fault monitoring
- Direct microphone connection for optional PA Mic

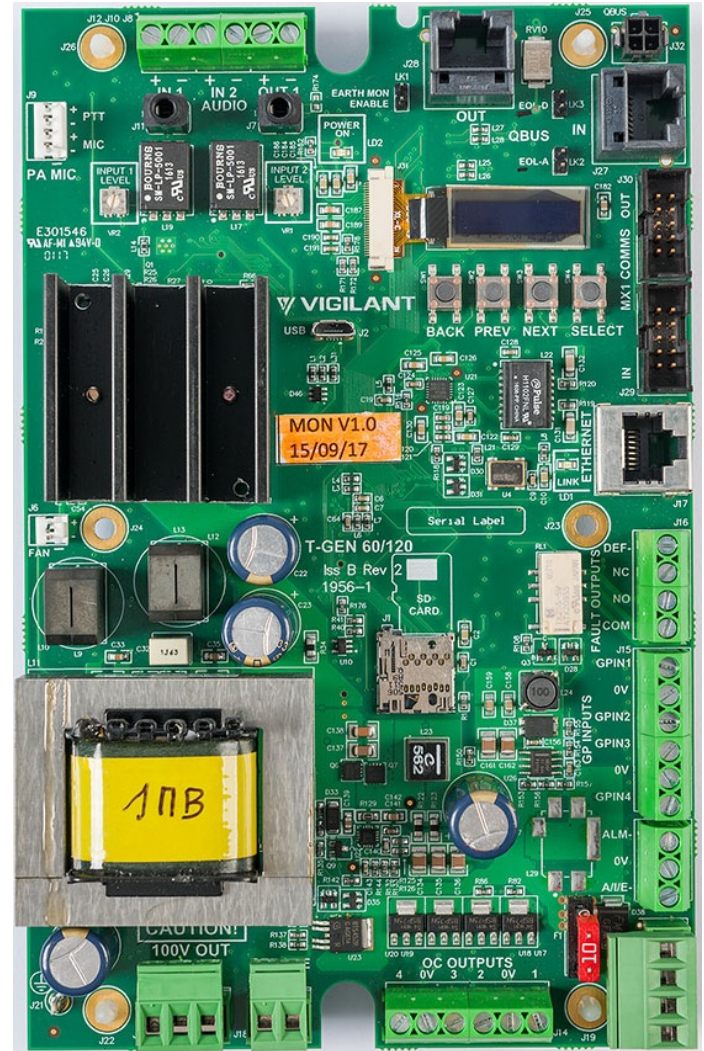
Main Features of both 60W & 120W T-Gen2 continued

- Supports up to 4 paging areas with 100V Switching Modules
- Supports optional Grade 3 User Interface & supervised Microphone
- 1kHz sinewave Test Tone with adjustable volume level
- Programmable priority between inputs and message playing
- Programmable sequencing of messages / tones for signalling
- Adjustable volume for each message and input
- On-site recording of messages

FP1115 T-Gen 60

Features:

- Size : 125 x 195 x 55mm, 0.65kg
- Same footprint and mounting holes as a T-Gen50 for easy upgrades
- 2 operating modes:
 - Constant 60 watt power output over full supply voltage range
 - T-Gen 50 Mode where power reduces with voltage supply
- 3.0A current draw at 60W output



FP1116 T-Gen 120

Features specific to the 120W version are:

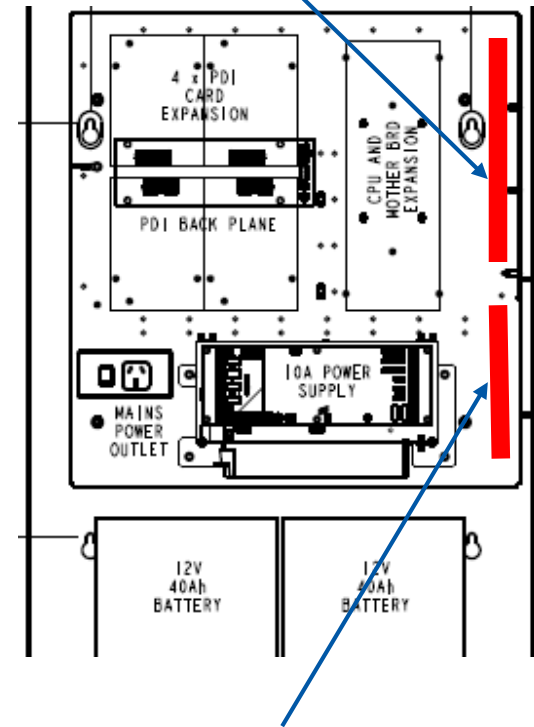
- Size : 125 x 195 x 110mm, 1.5kg
- Same footprint as a T-Gen50 but deeper
- Mounts on 3 x MX Loop Card bracket footprint
- 2 operating modes
 - Constant 120 watt power output over supply voltage range
 - T-Gen 50 Mode where power reduces with voltage supply
- 6.0A current draw at 120W output



T-Gen2 Mounting Options in 15U 4100ESi

- The 15U Compact 4100ESi Panel (FP1045) supports a single T-Gen 60
- One FP1117 100V Switching Module or FP1118 100V Splitter Module
- The 8U window or solid door expansion cabinets accommodate additional T-Gen60, T-gen120 or Switching / Splitter modules.

4100ESi 15U T-Gen 60 mounting position

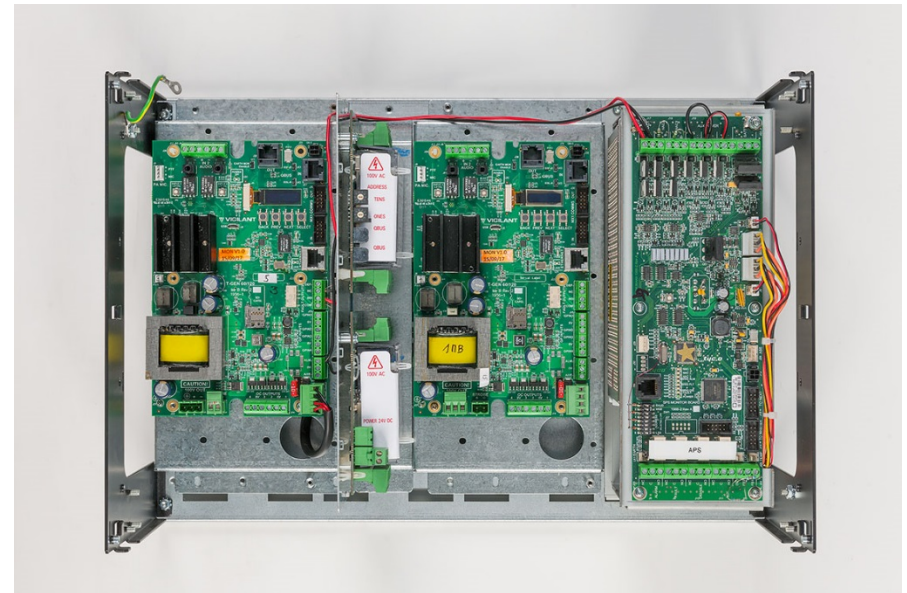


4100ESi 15U 100V Switching or Splitter Module mounting position

Mounting Options in Larger 4100ESi Panels

- The 28U/40U 4100ESi PDI bays support.
 - Two FP1119 PDI T-Gen2 mounting brackets with a T-Gen 60 or T-Gen 120 on each.
 - 2 x 100V Switching or Splitter Modules.
 - One APS Power Supply to provide power.
- Other combinations are possible.

4100ESi PDI bay with T-Gen2 parts fitted and APS PSU



Mounting Options in 15U and 8U MX1

The 15U *MX1* supports:

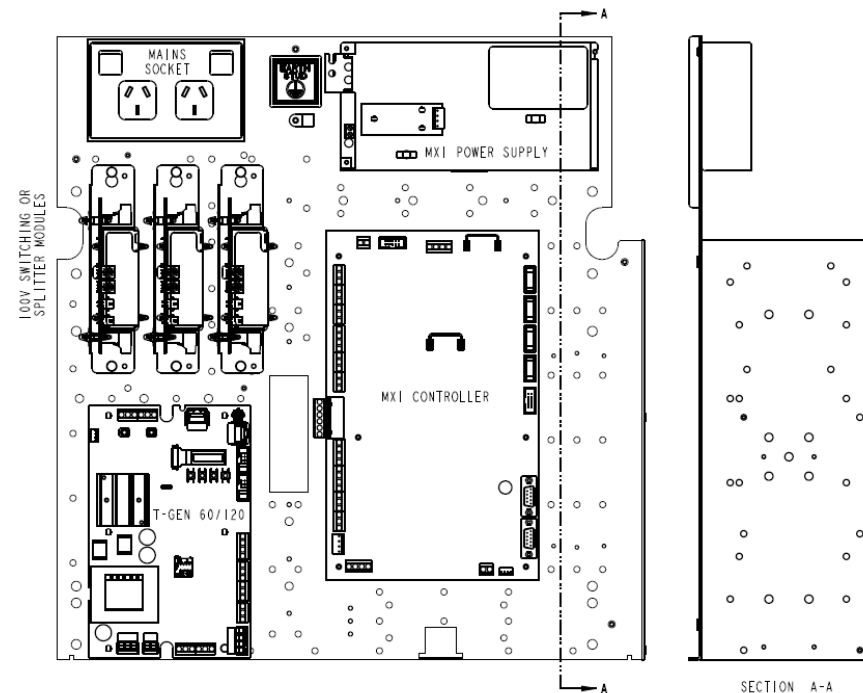
- T-Gen 60 on the gearplate LHS or RHS or T-Gen 120 on the LHS
- FP1121 3U User Interface with T-Gen 60 or FP1122 3U User Interface
- 100V Switching/Splitter Modules in the MX Loop Card positions.

8U *MX1* panel supports

- Single T-Gen 60 or T-Gen 120

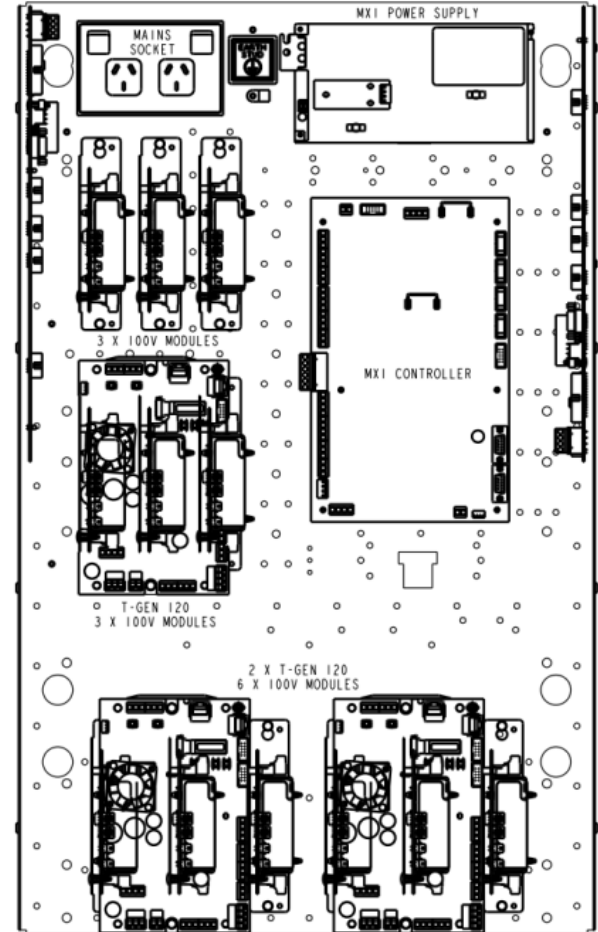
Empty 8U cabinet & *MX1* Gearplate

- T-Gen 60, T-Gen120 and 100V Splitter/Switching Modules,

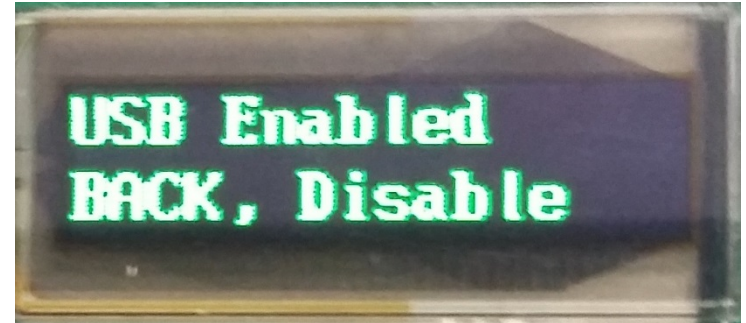
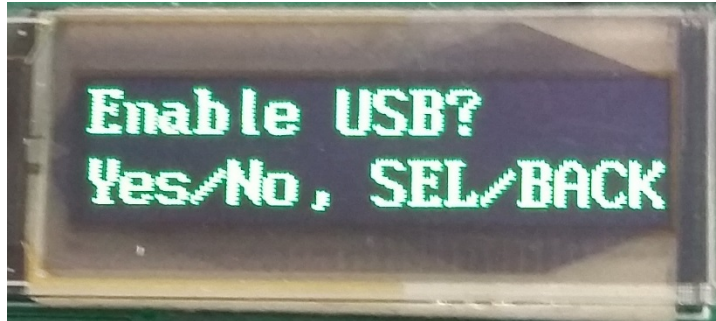


Mounting Options in BTO MX1 Cabinets

- The BTO *MX1* cabinets (28U/40U) can fit up to 3 x T-Gen 60 or T-Gen 120 units
- A number of 100V Switching or Splitter Modules
- The FP1121 3U Door complete with a T-Gen 60, or the FP1122 3U User Interface
- In BTO panels multiple PSUs can be fitted to power T-Gens.



T-Gen2 OLED



- The T-gen2 on board O-LED Display makes fault diagnostics easy
- Simple to use default configurations can be selected for fast set up

Grade 3 User Interface



The Grade 3 User Interface is a 19 inch 3U assembly optionally capable of 4 zone paging when combined with a 100V Switching Module

- Available in 3 options
 - Grade 3 Door fitted with T-Gen 60 amplifier – for Vigilant panels
 - Grade 3 User Interface doors only which wire to T-Gen 60 or T-Gen120 amplifiers. Available in grey for Vigilant and black for Simplex panels
- Can be fitted to 3rd party cabinets that use 19inch rack mounting

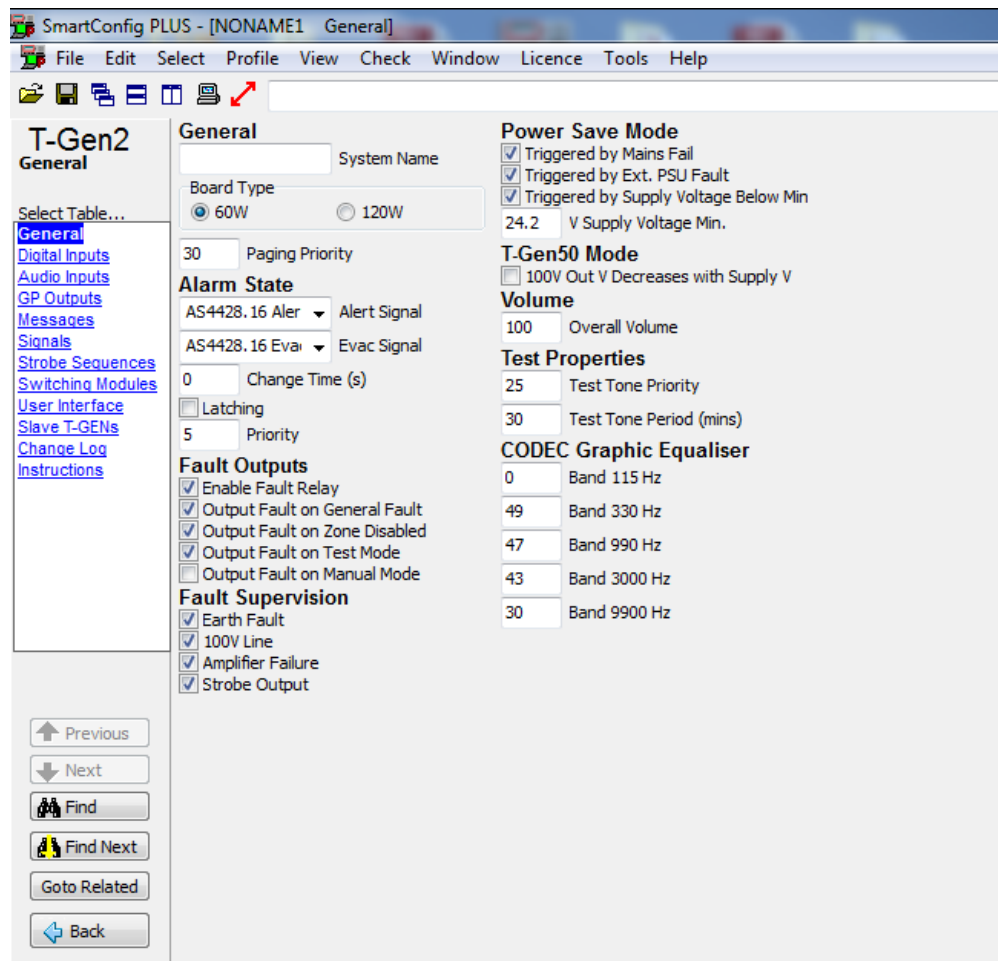
Grade 3 User Interface Features

- Alert, Evacuate, Speech and Disable controls and indications for a single evacuation zone.
- 4 Area paging buttons
- Auto/Manual controls
- 2 programmable buttons for playing messages
- Test Mode to observe operation with no sounds/strobes activated
- Alarm simulation in Test Mode
- Silence Warning – one button press to silence operation
- Silence buzzer
- LED test
- Fault indicators
- Microphone for Emergency Speech or Area Paging functions
- Talk indicator for showing when microphone

SmartConfig V2.7.0.0

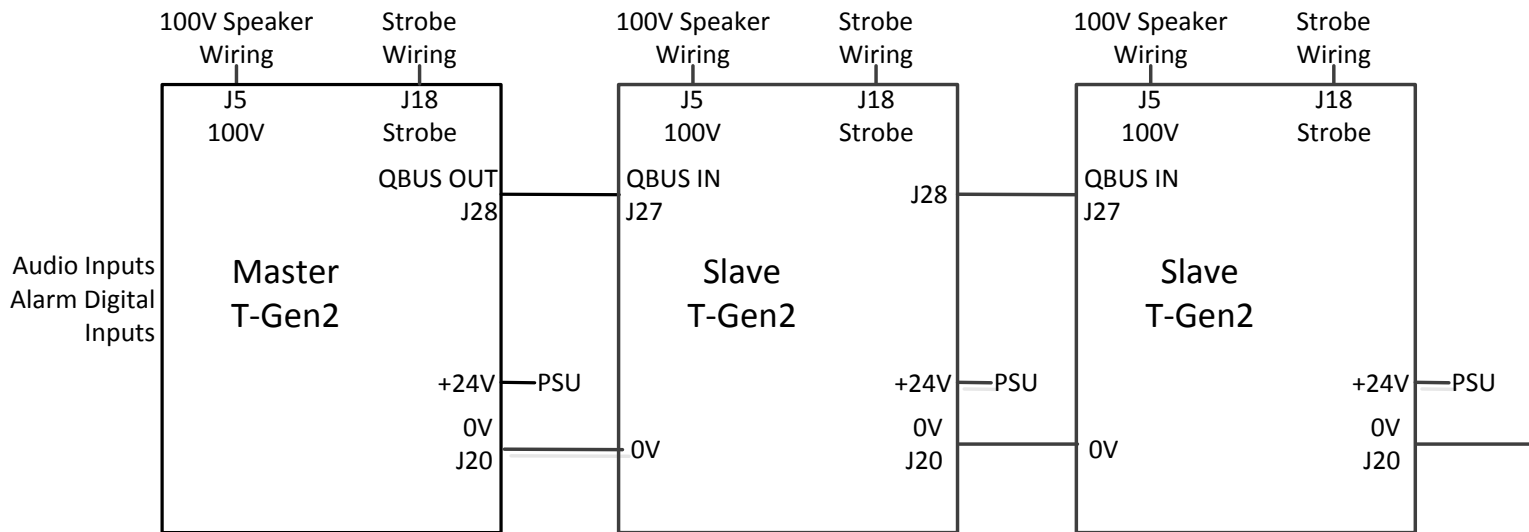
SmartConfig can also be used to configure the T-Gen2

- Built-in Help menu (F1 key) and Instructions page
- Data Transfer is via a Micro USB cable
- Configurations can be written to or read from the T-Gen2



T-Gen2 Slave Connection

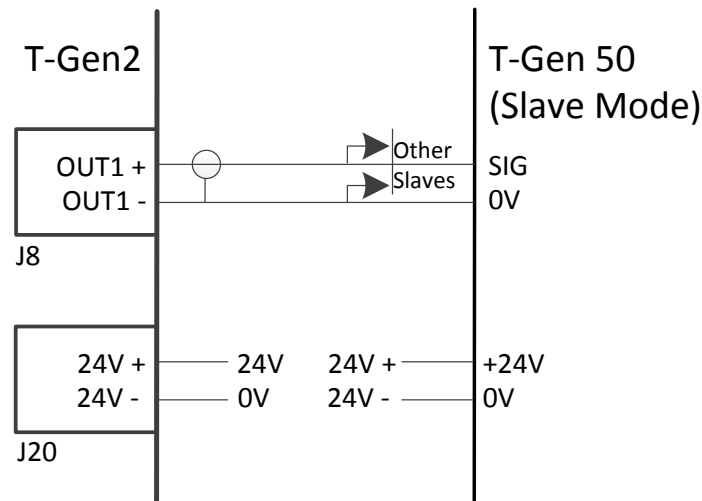
A Master T-Gen2 can be connected to up to 9 Slave T-Gen2 amplifiers (60W or 120W) to provide additional power output. (Grade 3 requires all to operate in unison as 1 zone)



T-Gen2 Master to T-Gen 50 Slave Connection

A Master T-Gen2 can be connected to existing T-Gen 50 Slaves. This could be useful if the extra features of the T-Gen2 are required, such as extra messages and tones.

Note: The T-Gen2 cannot be used as a Slave to a T-Gen 50 Master
The T-Gen2 should be configured to run in T-Gen 50 Mode



100V Splitter Module

VIGILANT T-Gen2



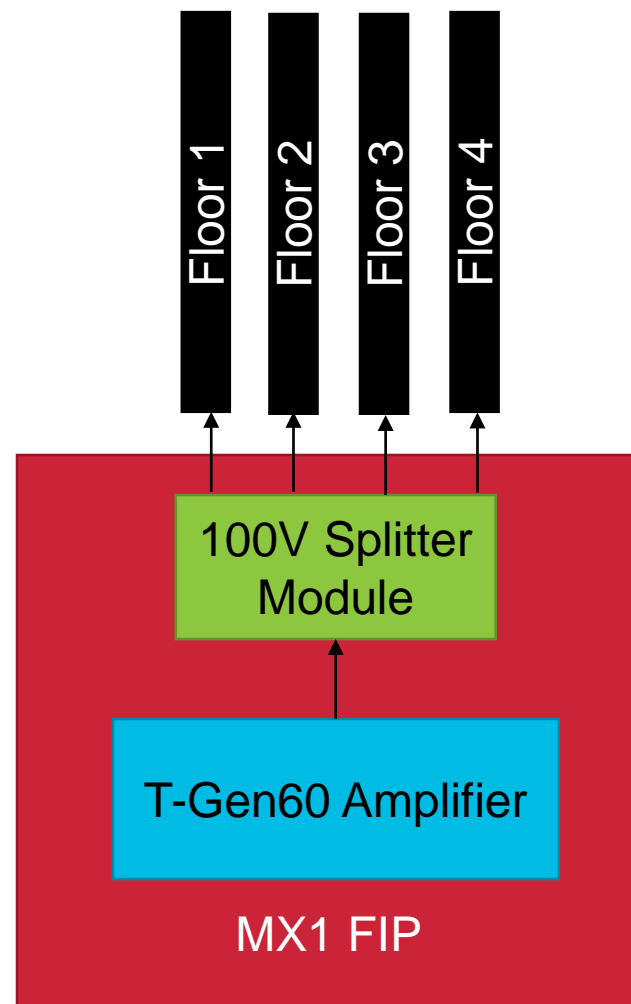
100V Splitter Module

- Splits a 100V speaker output into four 100V speaker circuits, each with its own supervision for open or short circuit faults
- Each output is automatically isolated on short circuit, providing an ideal solution for speaker circuit independence between floors.
- Suitable to use with T-Gen60, T-Gen120, T-GEN 50, QE90 and most other 100V amplifiers.
- Up to 100W per output to 120W combined on all 4.



100V Splitter Module Features

- 4 x 100V Speaker outputs with individual open/short circuit supervision
- Capable of single (56k EOL) or dual 100k EOL branch wiring on each output.
- Automatic disconnection of shorted outputs
- Daisy-chain modules together for multiple outputs
- Fault signaled via 100V input line to T-Gen or QE90, on board LEDs and independent fault relay.
- Designed to comply with AS 4428.16, ActivFire listing – pending



100V Splitter Module Mounting Options

- 100V Splitter Module includes all cabling to wire & hardware to mount in an MX1 fire panel or T-Gen2 8U/18U BOWS
- Can be fitted to Simplex 28U/40U 4100ES / ESi panels using an FP1120 module bracket
- Usable in 3rd party panels or with 3rd party amplifiers



FP1120 with 2 x Splitters mounted in Simplex 4100ES PDI bay

100V Switching Module

VIGILANT T-Gen2



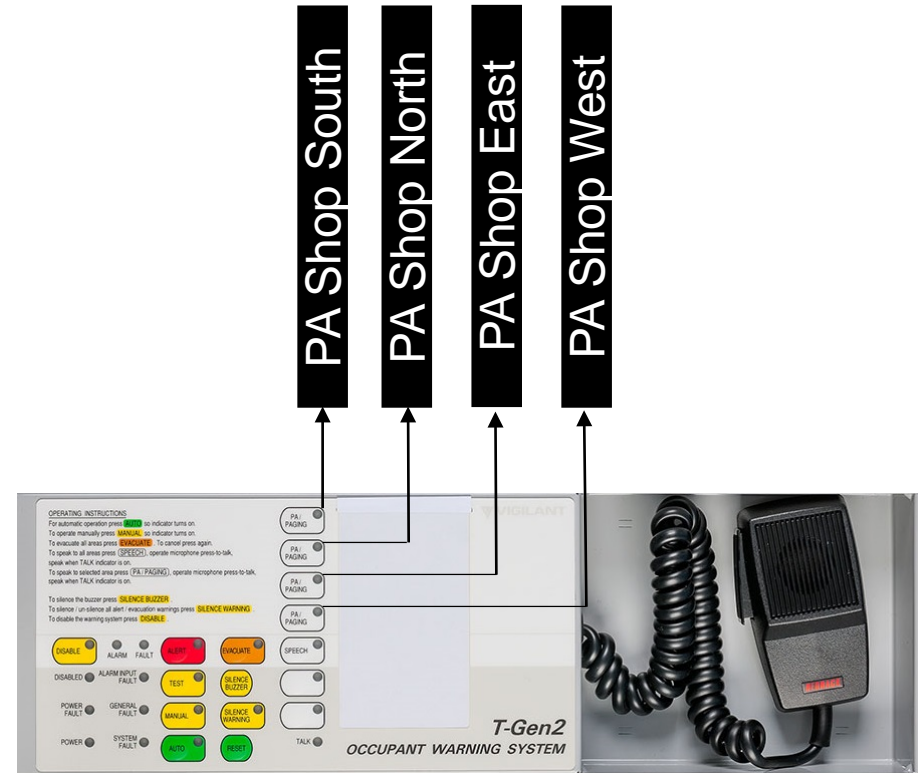
100V Switching Module

- Splits the T-Gen2's 100V speaker output into four 100V speaker circuits, each with its own supervision for an open or short circuit fault
- Each output can be disconnected from the 100V feed, allowing the T-Gen2 to control which outputs receive the audio signal, ideal for area paging
- Each output is automatically isolated on short circuit providing an ideal solution for speaker independence between floors



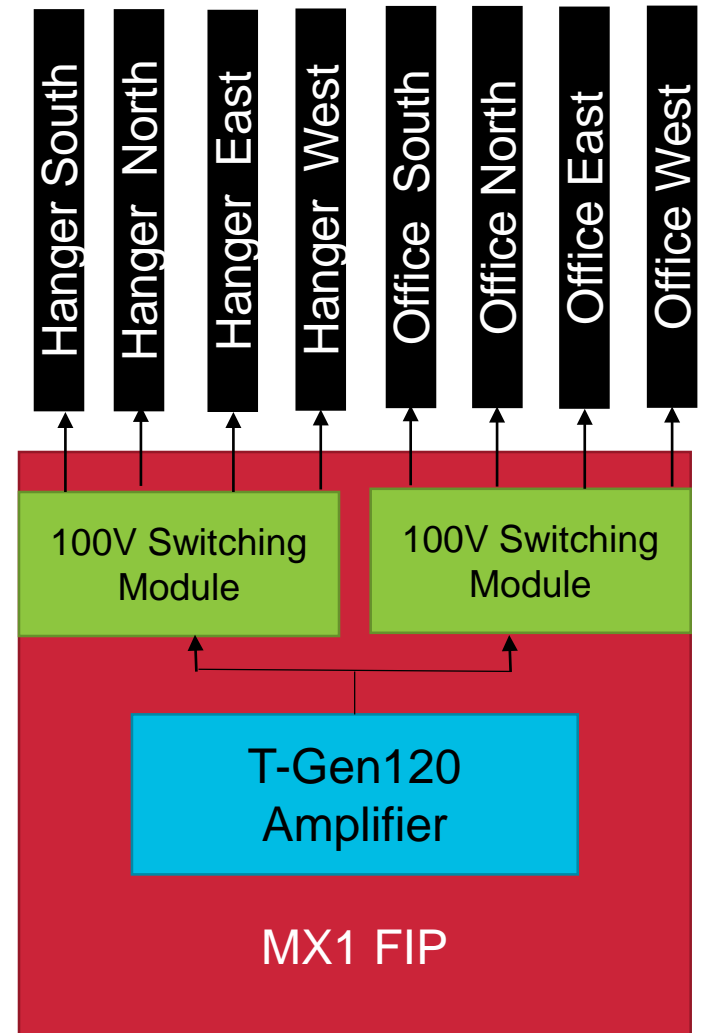
100V Switching Module Features

- 4 x 100V Speaker outputs with individual open/short circuit supervision
- Capable of single (56k EOL) or dual 100k EOL branch wiring on each output
- Automatic disconnection of shorted outputs
- Each output controllable by T-Gen2 for area paging
- Suitable for T-Gen60 or T-Gen120 amplifiers



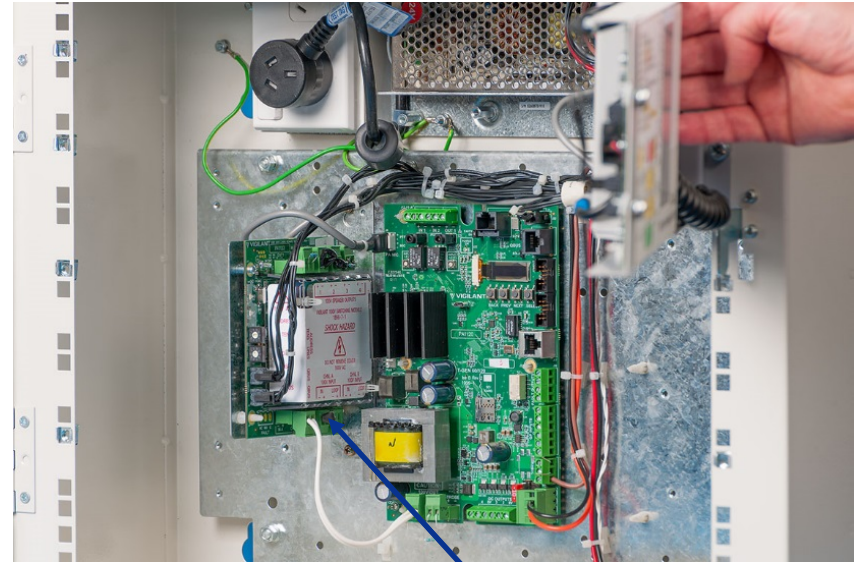
100V Switching Module Features - Continued

- Demountable screw connectors
- Fault conditions reported to the T-Gen2 amplifier OLED display and on board LEDs
- Daisy-chain modules together for multiple outputs
- Multiple outputs configurable to provide 1-4 areas of PA paging
- Designed to comply with AS 4428.16 ActivFire listing – pending



100V Switching Module Mounting Options

- 100V Switching Module includes all cabling to wire & hardware to mount in an MX1 fire panel or T-Gen2 8U/18U BOWS
- Can be fitted to Simplex 28U/40U 4100ES / ESi panels using an FP1120 module bracket



FP1117 Switching Module mounted in 8U BOWS

Building Occupant Warning Systems (BOWS)

VIGILANT T-Gen2



Building Occupant Warning System

The VIGILANT T-Gen2 BOWS is a self-contained Grade 3 Emergency Warning System (EWS) with a supervised 100V speaker line and digitised speech messages and is available in 2 models:

- FP1136 8U, 60W
- FP1137 18U, 120W



18U Cream Wrinkle Cabinet

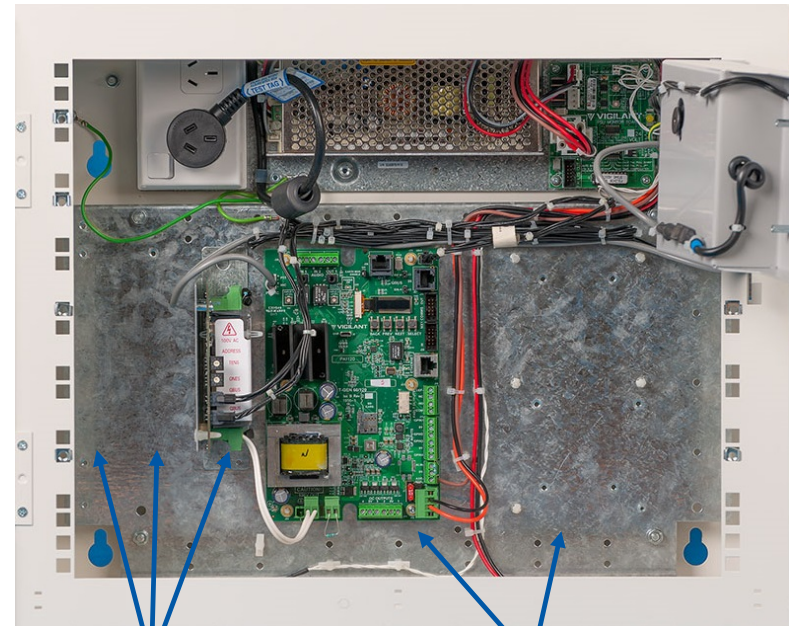


8U Titania Cabinet

8U Building Occupant Warning Panel

- Built-in PSU - 5A
- Contains 60W D-class amplifier
- Expandable to 2 x T-Gen60
- Accommodates up to 3 x Splitter or Switching modules
- Space for 2 x 12V 17Ahr batteries

8U BOWs Internal mounting



Splitter Module locations

T-Gen60 locations

18U Building Occupant Warning Panel

- Built-in PSU - 12A
- Contains 120W D-class amplifier
- Accommodate one additional T-Gen120 or T-Gen60 amplifier
- Supports up to 8 x Splitter or Switching modules
- Space for 2 x 12V 75Ahr batteries



Building Occupant Warning panel Features

- Designed to comply with AS 4428.16 ActivFire Approval pending
- Two user-programmable buttons use to generate local warning messages, drills or tests
- Controls for Test, Silence Warning, Silence Buzzer, Reset
- Interface options for alarm trigger or fault output
- Optional Zone disable button

8U BOWS programmable buttons



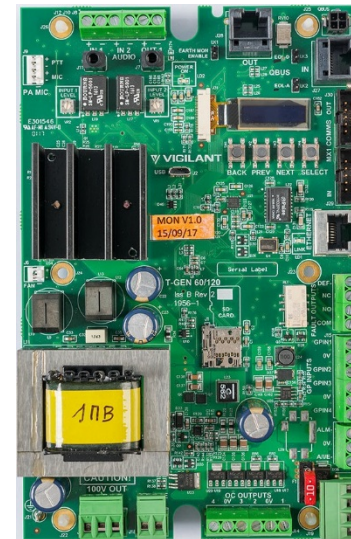
Building Occupant Warning System

Each are fitted with:

- Grade 3 user interface and PA microphone
- Programmable configuration and messages and additional storage for extra messages or tones via microSD card
- 2 Audio line inputs, 6 general purpose inputs and 4 Open Collector outputs
- 24V 2A Supervised Strobe output



Grade 3 User interface fitted to 8U and 18U BOWs



T-Gen60 comes fitted to 8U BOWs

Remote Paging Console

A BOWS zone paging console can be used to provide optional remote zone paging for a BOWS or standalone T-Gen2, configured with a 100V Switching module.

Paging console interfaces via a CAT5e cable with a maximum distance of 300m to a Audio Switcher module

Audio Switcher is powered by the BOWS or fire panel 24V PSU

The logo for REDBACK, featuring the word "REDBACK" in a stylized, bold, sans-serif font with a red-to-yellow gradient. The letters are slightly shadowed to give a 3D effect.

A 4488 Paging Console

A 4489 Audio Switcher



T-Gen2 Customer Benefits

T-Gen2 Item	Feature	Customer Benefits
T-Gen2	60W or 120W D-Class Amplifiers	High quality audio and 2 modes of operation to suit PSU load
T-Gen2	Additional storage via micro SD card	Storage and activation of site customisable non-emergency messages
Grade 3 User Interface	Controls for PA, Test, Silence Warning, Silence Buzzer, Reset	Easy to use colour coded controls, and customisable slip in labels
Grade 3 User Interface	Programmable configuration, user buttons and messages	Customise local warning messages, drills or tests
T-Gen2 OLED	Fault diagnostics and site setup	Reduces fault investigation time and provides quick set up options.

T-Gen2 Customer Benefits

T-Gen2 Item	Feature	Customer Benefits
Splitter and Switching Module	Can daisy chain multiple modules together and each output is short circuit independent	Lower hardware cost for multiple speaker circuits in zones
100V Switching Module	Switchable 4 way outputs	Customise up to 4 PA paging areas
100V Splitter Module	Can be installed with most amplifiers to a load of 120W	Use to retrofit existing sites
BOWS	Programmable configuration, user buttons and messages	Customise local warning messages, drills or tests.
BOWS	Expandable by adding extra T-Gen2 and Splitter / Switching Modules	Accommodate larger sites or site expansion