INI-VG Series

Intelligent Network Interface Voice Gateway

General

The INI-VG Series (Intelligent Network Interface-Voice Gateway) is a network interface with superior Audio and Command/Control that is used for E3 Series fire alarm and voice evacuation systems. The modular design allows the INI-VG Series to be used in any type of system configuration to function as a voice network interface for any of the following:

- Fire Command Center
- Digital Audio Voice Transponder
- Analog Audio Voice Transponder
- Autonomous Control Unit (ACU) for Mass Notification
- Local Operating Console (LOC) for Mass Notification

With a Class B signaling line circuit (SLC), the INI-VG can monitor and control up to sixteen AOM-TELF telephone modules to use with the fire fighter telephones or serve as value Local Operating Consoles (LOC). In addition, it can support up to 16 AOM-2SF, signal output modules that can be used for distributed audio control.

Networked through single-mode fiber optics, multi-mode fiber optics, and/or twisted-pair wire, the INI-VG Series resides on the E3 Series and/or S3 Series network, represented as a node with fully independent control. Each INI-VG Series provides its own internal recorded message storage that operates as a redundant back-up in case another panel is no longer functional.

Each version of the INI-VG Series features a unique functionality that can operate as any of the following, depending on how each version is used with the application:

- Digital Audio Voice Transponder (INI-VGX) connects up to three main amplifiers and one back-up amplifier to control over 150 watts of audio per board.
- Analog Audio Voice Transponder (INI-VGE) connects to analog bulk amplifiers and distributes audio using 16 AOM-2SF modules.
- Fire Command Center (INI-VGC) connects hand-held microphones and main fire fighter telephones.

INI-VG Series

FEATURES & BENEFITS

- Listed under UL® Standard 864, 9th Edition
- Listed under UL Standard UL2572 for Mass Notification
- Supports a network data transfer rate at 625K baud

- Controls all communication signals and control-by-event sequences over twisted, unshielded pair of wires or fiber-optic cable
- All INI-VG Series Modules connect to a voice page microphone and fire fighter's handset

- Uses advanced Digital Signal Processor (DSP) technology that provides efficient audio compression and filtering
- Offers the following fiber-optic plug-in modules used for fiber-optic connectivity
  - FML-E3 (fiber-optic multi-mode)
  - FSL-E3 (fiber-optic single-mode)

- Supports Distributed Architecture, including Style 7 wiring configuration, that allows system components to continue normal operation with NO loss of function during single line fault conditions

- Provides Redundant Command Centers with a microphone and a fire fighter's handset which can easily be configured by adding INCCs

INI-VGC

The INI-VGC Voice Gateway Module is optimized to provide command and control functions for the INCC Command Center. The INCC serves as the point of interface between an operator and the system's audio evacuation, fire fighter intercom, and building control circuits.

A typical INCC assembly consists of the following:

- an Intelligent Network Interface-Voice Gateway (INI-VGC) Module
- one or more Addressable Switch Modules (ASM-16)
- a Voice Page Microphone (INCC-MIC)

Each INI-VGC can support up to 16 ANU-48 LED Driver Modules or ASM-16s for a total of 256 fully programmable switches and 768 LEDs that light in red, yellow, and green.

The INI-VGC occupies a single node on the E3 Broadband network and it is connected by a single, pair of twisted, unshielded wire, fiber-optic cable or any combination of the two. The INCC Command Center's INI-VGC module also provides connections for an optional fire fighter telephone handset.

The INI-VGC is a fully digital voice/tone generator using state-of-the-art Digital Signal Processing (DSP) technology to produce superior audio signals. The INI-VGC provides an output to a local speaker for message verification and testing.

INI-VGE

The INI-VGE Voice Gateway Module provides an audio interface to the bulk analog amplifiers and command and control functions for the INCC Command Center. A typical INCC assembly consists of the following:

- an Intelligent Network Interface-Voice Gateway (INI-VGE) Module
- one or more Addressable Switch Modules (ASM-16)
- a Voice Page Microphone (INCC-MIC)

Each INI-VGE can support up to 16 ANU-48 LED Driver Modules or ASM-16s for a total of 256 fully programmable switches and 768 LEDs that light in red, yellow, and green.

The INI-VGE occupies a single node on the E3 Series Classic network and is connected by a single pair of twisted, unshielded wire, fiber-optic cable or any combination of the two. The INCC Command Center's INI-VGE module also provides connections for an optional fire fighter telephone handset. The INI-VGE's one Signaling Line Circuit (SLC) loop supports the following:

- 16 remote Fire Fighter Phones
- 32 Supervised Audio Control Relays

The INI-VGE is a fully digital voice/tone generator using state-of-the-art Digital Signal Processing (DSP) technology to produce superior audio signals. The INI-VGE provides an audio output capable of driving up twenty 100 watt (AA-100) or 120 watt (AA-120) amplifiers.

INI-VGX

The INI-VGX Transponder Voice Gateway is a component of the E3 Broadband Audio Evacuation System and an optional component of the E3 Series Expandable Emergency Evacuation System. It is a multi-function module that incorporates the following:

- Software-programmable multi-channel digital audio applications.
- One Class B, Style 4 Signaling Line Circuit (SLC) supporting up to 32 addressable speaker circuits (AOM-2SF) and 16 addressable phone circuits (AOM-TELF).
- Supports up to 150 watts of audio power (using the AM-50 Series amplifiers operating at 50 watts of power @ either $25V_{RMS}$ or $70.7V_{RMS}$ output) with backup amplifier support.
- Offers a sixteen message capacity with up to 3 minute total duration per INI-VGX. The messages are easily field-configured via a laptop computer.
- Network interface using twisted, unshielded wire or fiber-optic cable.
- Local fire fighter phone riser.

The INI-VGX provides command and control for up to four AM-50 Series amplifiers, operating at 50 watts of power @ either $25V_{RMS}$ or $70.7V_{RMS}$ audio output (up to 150 W of audio may be delivered at any given time). The amplifiers are installed in a single cabinet. The INI-VGX uses advanced Digital Signal Processing (DSP) technology for audio compression and filtering. This feature allows the E3 Series Broadband System to produce superior clarity for intelligible LIVE voice paging. The background noise is automatically filtered during voice paging and fire fighter communications which increases the audibility and eliminates the need for Push-to-Talk devices.

SPECIFICATIONS

INI-VGC, INI-VGE and INI-VGX:
  Operating Voltage: 24 VDC (nominal) from the PM-9/ PM-9G Power Supply
  Operating Current: 0.150 amp. supervisory and alarm
  Operating Temperature: 32 - 120° F (0 - 49° C)
  Relative Humidity: 0 to 93% (non-condensing)
  Supervised
  Class 2 Power-Limited
  Protocol: Asynchronous with half-duplex data flow
Wiring Specifications:
INI-VG Series (Third Generation Voice Gateway and Legacy-UTP Models):
  Copper Wire: 16 to 18 AWG twisted-pair, unshielded. Up to 3,000 ft. (914.4 m) between each node.
Fiber-Optic Cable:
  FML-E3 (Multi-Mode): Up to 200 microns (optimized for 62.5/125 microns). Up to 8dB loss between each node.
  FSL-E3 (Single-Mode): Up to 1310nm (nanometer) (optimized for 9/125microns). Up to 30dB loss between nodes.

TEMPERATURE AND HUMIDITY RANGES

This system meets NFPA requirements for operation at 0 – 49°C/32 – 120°F and at a relative humidity 93% ± 2% RH (non-condensing) at 32°C ± 2°C (90°F ± 3°F). However, the useful life of the system's standby batteries and the electronic components may be adversely affected by extreme temperature ranges and humidity. Therefore, it is recommended that this system and its peripherals be installed in an environment with a normal room temperature of 15 – 27°C/60 – 80°F.

ORDERING INFORMATION

INI-VG Series (Third Generation-Voice Gateway Models):
  INI-VGC: (Command Center Voice Gateway (UTP only)
  INI-VGE: Command Center Classic Voice Gateway (UTP only)
  INI-VGX: Transponder Voice Gateway (UTP only)
Accessories:
  FML-E3: Multi-Mode Fiber-Optic Module
  FSL-E3: Single-Mode Fiber-Optic Module
INI-VG Series Legacy Models:
  1100-1321: INI-VGC-FO (Command Center Voice Gateway-fiber-optic module)
  1100-1322: INI-VGC-UTP (Command Center Voice Gateway-unshielded twisted-pair only)
  1100-1325: INI-VGE-FO (Classic Bulk Voice Gateway-fiber-optic module)
  1100-1326: INI-VGE-UTP (Classic Bulk Voice Gateway-unshielded twisted-pair only)
  1100-1323: INI-VGX-FO (Voice Transponder Gateway-fiber-optic module)
  1100-1324: INI-VGX-UTP (Voice Transponder Gateway-unshielded twisted-pair only)

STANDARDS

The INI-VG Series is designed to comply with the following standards:
UL Standards: UL 864 9th Edition
                UL 2572 for Mass Notification

AGENCY LISTINGS AND APPROVALS

These listings and approvals apply to the modules specified in this document. In some cases, certain modules or applications may not be listed by certain approval agencies, or listing may be in process. Consult the factory for the latest listing status.
UL Listed: S1869
         S1949
         2572 for Mass Notification
FM Approved: 30006578
MEA Approved FDNY: COA #:-6077
CSFM: 7165-1703:125
City of Chicago Approved: Class 1 Class 2 High Rise
City of Denver Approved
ISO 9001 Certification

For a complete listing of all compliance approvals and certifications, please visit: http://www.gamewell-fci.com/en-US/documentation/Pages/Listings.aspx

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