

**EQUIPMENT SPECIFICATION**

**GAI-TRONICS**

**RED ALERT® HANDSFREE EMERGENCY AND ASSISTANCE COMPACT TELEPHONE PRODUCTS**

**(ANALOG AND VOIP)**

**EQUIPMENT SPECIFICATION**

**GAI-TRONICS RED ALERT® EMERGENCY AND ASSISTANCE**

**COMPACT TELEPHONES**

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**EQUIPMENT SPECIFICATION**

**GAI-TRONICS RED ALERT® EMERGENCY AND ASSISTANCE**

**COMPACT TELEPHONES**

**1.0.0 Scope and Intent**

This specification identifies and details GAI-TRONICS’ RED ALERT compact emergency and assistance telephones, accessories, and peripherals necessary to provide two-way, emergency and/or non-emergency communications. Each analog telephone shall provide two-way communications via connection to any conventional, analog telephone network. Each VoIP telephone shall be considered an “end device”, designed for installation into an existing SIP compatible VoIP network and shall offer the same two-way communication performance.

Unless specified otherwise, emergency telephone products specified herein shall comply with the Americans with Disabilities Act (ADA) in both physical and operational characteristics.

Note: All IP servers, hubs, power supplies, and other active VoIP system/network devices shall be the responsibility of others.

All supporting documentation mentioned in this specification (literature and manuals) shall be capable of being located on the GAI-TRONICS Website: [www.gai-tronics.com](http://www.gai-tronics.com)

**2.0.0 Seller Warranties**

* 1. the Seller warrants the satisfactory and successful operation of all equipment furnished under this specification at the ratings, under the conditions, and for the type of service specified herein.
	2. Goods manufactured by the seller are warranted to be free from defects in material and workmanship until one year after the date of shipment. Equipment supplied by but not manufactured by the seller shall be subject to the original equipment manufacturer’s standard warranty.

**3.0.0 Workmanship**

All work shall be performed in accordance with the best modern practice in design, manufacture, and fabrication of all material and apparatus by this specification, notwithstanding any omission from the specifications or drawings.

**4.0.0 Material and Construction**

All materials used in the construction of the specified emergency telephone products shall be new and selected as the best available for the intended purpose, considering long life and best engineering practices. Factors of safety shall be used throughout the design. Only heavy-duty industrial components rated to operate within the temperature ranges and other environmental conditions specified in Paragraph 7 shall be used.

* 1. **Installation**
	2. Analog Compact Emergency and Assistance Telephones

The specified Analog Compact Emergency and Assistance Telephone products shall be line-powered and shall operate with a minimum line current of 24 mA. Telephones shall be designed for connection to the following networks via standard telephone or Cat5/6 wire pairs:

* Central Office (C.O.) line to the Public Switched Telephone Network (PSTN)
* 24 V dc or 48 V dc analog station port of a Private Branch Exchange (PBX), Private Automatic

Branch Exchange (PABX), or Key Service Unit (KSU).

A dedicated telephone line shall be required for each telephone. Equipment and wiring shall be installed by the Purchaser. Telephones shall be suitable for operation in temperatures between -20° C and +60° C.

* 1. VoIP Compact Emergency and Assistance Telephones

The specified VoIP telephone products shall be design for installation on an existing ethernet network and shall provide an RJ45 connection to that network. These telephones are intended to be connected to a SIP-compatible PBX or server for internal (within the network) and external (outside the network) dialing. Equipment and wiring shall be installed by the Purchaser. Telephones shall be suitable for operation in temperatures between -20° C and +60° C.

The specified VoIP telephone products shall provide dial-up (autodial or manual), two-way communications over 10/100 BaseT Ethernet (RJ45) network. The system shall provide Call Control/Set-up Signaling via Signal Initiated Protocol (SIP), RFC3261.

All telephone models shall include security-type mounting screws to limit vandalism and access to telephone electronics.

If required, seller shall provide technical guidance during installation and/or testing, via telephone, at no additional charge. After installation is completed, the Seller shall be prepared to perform a checkout of the system. If required by the buyer, a seller-provided factory technician shall visit the job site to assist with system layout and design (pre-sale) or to make necessary adjustments and instruct the operating and maintenance personnel on the proper use and care of the system (post-sale). Charges for these on-site services shall be on a per diem basis (including travel time), plus all expenses on a cost-plus basis.

**6.0.0 Operation and Maintenance Instructions**

All equipment requiring continued interaction, service, or support shall be provided with complete operation (user) and maintenance (service) manuals. All available documentation shall be packaged with the equipment, included with associated application software, and/or readily accessible via the seller’s/manufacturer’s website.

* 1. **Environmental Conditions**

Equipment shall be suitable for use in designated environmental conditions per the appropriately listed performance specification.

* 1. **Equipment Operation**
	2. General

All Compact Emergency and Assistance Telephones shall provide handsfree operation after initial call activation. Telephones equipped with a HELP pushbutton shall be capable of being programmed to autodial a minimum of three different telephone emergency telephone numbers. These shall include a primary telephone number and two “rollover” telephone numbers. The HELP pushbutton shall be red, designed for “palm activation”, and shall be located on the front of the telephone. The pushbutton’s associated labeling shall state the word “HELP” and shall be permanently affixed to the front panel of the telephone. The “HELP” label shall include Braille lettering of the same word. Activation of this pushbutton shall cause the telephone to automatically dial a pre-programmed number (address) for emergency communications. Emergency call operation shall take precedence over non-emergency call operation.

Telephones equipped with a non-emergency pushbutton shall be capable of being programmed to autodial a min three different non-emergency telephone numbers. These shall include a primary telephone number and two “rollover” telephone numbers. The non-emergency pushbutton’s associated labeling shall state the word “ASSISTANCE” silk-screened to the front panel. Activation of either pushbutton shall cause the telephone to automatically dial a pre-programmed number (address) for non-emergency communications. Emergency call operation shall take precedence over non-emergency call operation.

If an emergency or assistance call cannot connect to the primary telephone number (i.e., a busy signal or no answer), the emergency telephone shall automatically dial the first rollover number. If the first rollover number is busy or no answer, the telephone shall automatically dial the second rollover telephone number. The number of call attempts shall be programmable. If rollover numbers are not required by system operation, simply not programming the two rollover numbers shall cause the emergency telephone to continuously ring the primary telephone number until redirected by the telephone system head-end, or the call is abandoned. Telephones equipped with a CALL push button shall be capable of accessing the network dial tone and calling a number dialed via an integral keypad.

Telephones equipped with keypad operation shall be activated via an “off hook” pushbutton and a 12-button keypad. A black activation button labeled “CALL” shall provide dial tone access, allowing the user to utilize the keypad to manually dial a desired number (address) for standard, hands-free telephone operation.

The Compact Emergency and Assistance telephones shall be capable of receiving incoming calls by manually pressing a button or by automatically answering the call. When answering automatically, the telephone shall be capable of generating a splash/notification tone or signal identifying the telephone as being in audio monitor mode of operation.

Disconnecting a call shall be capable of being performed via:

* Manual or remote disconnect of an emergency call
* Manual or remote disconnect of a non-emergency call
* Automatic disconnect

All specified Compact Emergency and Assistance Telephone models shall be provided with tamper-resistant security screws to prevent undesired access to the equipment electronics and shall include:

* Brushed stainless-steel front panel with cold-rolled steel dust cover
* Silk-screened pushbutton identification
* Non-tactile, autodial pushbuttons
* Integral speaker and microphone
* Moisture-resistant keypad (if equipped)
* Conformally-coated PCBA
	1. Analog Compact Emergency and Assistance Telephones

Analog Compact Emergency Telephones shall be offered in the following configurations:

* Single-button Autodial, Emergency
* Single-button Autodial, Assistance
* Two-button Autodial, Emergency & Assistance
* Call with Keypad (standard telephone operation)

Each Analog Compact Emergency and Assistance Telephone shall minimally be capable of being configured locally (at each telephone), remotely via a separate telephone, or remotely via centrally located software. Programmable configuration options shall minimally include:

* Pre-programmed auto-dial telephone numbers
* Call termination method (automatic or manual)
* Call attempts
* Maximum call duration
* Answering options

Each Analog Compact Emergency and Assistance Telephone shall be capable of transmitting an identification code for the purpose of identifying the calling source location. This transmitted code shall be in DTMF format and shall be transmitted only upon receiving a DTMF prompt from the called party. This location code shall be displayed on a customer provided DTMF decoder or head end equipment display (attendant console).

All specified Analog Compact Emergency and Assistance Telephones shall be capable of providing two (2) separate, isolated, solid-state switch outputs, each rated at 125 mA @ 48 V dc. Each output shall be programmable for field-selected uses, one of which shall be capable of direct connection to an L.E.D. strobe to provide solid-state activation control when the telephone is in use. These controls shall typically be removed when the call is disconnected but shall be capable for being programmed for a timed duration after the call has disconnected.

Each Analog Compact Emergency and Assistance Telephone shall include a front panel L.E.D. that flashes when the call is in progress and automatically glows steady when the call is connected. This L.E.D. shall extinguish when the call disconnects. This operation shall be required for ADA compliance.

All specified Analog Compact Emergency and Assistance Telephones shall be capable of being monitored from a central PC that hosts dedicated software designed for monitoring operation. Data shall be reported or made available via polling or call-in protocol. Said software shall be designed and provided by the emergency and assistance telephone manufacturer. Reported faults shall include:

* Line Integrity
* Microprocessor Health
* Stuck Buttons
* Microphone/Speaker Circuit Fault
* Line Interrupt (power failure)
* Low Battery (Voice Annunciation option only)
	1. VoIP Compact Emergency and Assistance Telephones

VoIP Compact Emergency and Assistance Telephones shall be offered in the following configurations:

* Single-button Autodial, Emergency
* Two-button Autodial, Emergency & Assistance
* Call with Keypad (standard telephone operation)

In addition to operational characteristics specified in Section 8.1.0., all VoIP Compact Emergency and Assistance Telephones shall provide standard DTMF, ring, and dial comfort tones. Each telephone shall include the following additional features/capabilities:

* Real-time alarm reporting via SNMP, syslog, or dedicated monitoring software
* Power-over-Ethernet (PoE) compatible
* Configurable via web page, serial link, or download
* Two, programmable volt-free contact outputs (rated at min. 5A @ 250V ac / 30 V dc)
* Direct peer-to-peer dialing (point-to-point)
* Multicast capability, up to eight addresses

All Specified VoIP Compact Emergency and Assistance Telephones shall include an integral microphone and speaker for handsfree operation. An L.E.D. indicator shall be provided to signal when the call has been received. This L.E.D. shall be labeled “Call Received When Lit”.

Specified VoIP equipment shall provide dial-up (automatic or manual), two-way communications over 10/100 BaseT Ethernet (RJ45) network. The system shall provide Call Control/Set-up Signaling via Signal Initiated Protocol (SIP), RFC3261.

All specified VoIP and WiFi Telephones shall meet the following technical requirements:

**Codes and Audio:** G.711 A-Law G.711 µ-Law G.722 G.729 G.723.1 MP-MLQ G.723.1 ACELP; Codec preference sequence, DTMF in band/out of band (RFC2883), configurable comfort tones (nation specific)

**Call Set-up Protocol:** Session Initiation Protocol (SIP), RFC3261 compliant

**WiFi Network (when required):** IEEE 802.11 a/b/g/n; Static IP provisioning or DGCP STUN client

**Security:** Password protected

**Reliability:** MTBF of greater than 50,000 hours, using MIL-HDBK-217F Notice 2

**Quality of Service:** Priority of IP Packets according to TOS and DiffServ VLAN Priority according to IEEE8021.p/802.1q.

**Configuration/IP Address:** Via configuration file or on-board password protected web page server; Static IP address or Dynamic Host Configuration Protocol (DHCP)

**Monitoring:** Automatic fault reporting via SNMP or Syslog messaging; Real-time over TCP/IP proprietary Syslog Application; Scheduled reporting via system polling by central PC software

**Update Server:** Configuration and Firmware update via TFTP

**Redundancy:** Supports up to 4 SIP proxys

**Time/Date:**  Simple Network time protocol with time zone and daylight saving; date format – European / U.S.

All specified VoIP Compact Emergency and Assistance Telephones shall be capable of reporting connection and equipment faults via SNMP, the Syslog, or by being monitored from a central PC that hosts dedicated software designed for monitoring operation via polling or call-in protocol. Said software shall be designed and provided by the emergency and assistance telephone manufacturer. Reported faults, at minimum, shall include:

* **Configuration Error** –Signal that the configuration file currently used by the unit has one entry errors which have been ignored.
* **Cold Reset** – Signal the unit has been reset due to a power cycle (failure)
* **Warm Reset** – Signal the unit has reset due to an internal software command or error
* **Keypad Error** – Signal that a key has remained pressed for the entire usage period
* **Register Fail** – Signal a failure to register with the Proxy server for a period in excess of the usage period
* **Audio Path Test** - Signal a failure in the microphone/speaker operation

VoIP Compact Emergency and Assistance Telephones shall provide dial-up (autodial), two-way communications over 10/100 BaseT Ethernet (RJ45) network. The system shall provide Call Control/Set-up Signaling via Signal Initiated Protocol (SIP), RFC3261.

**9.0.0 Field Wiring**

Power shall be provided to each VoIP telephone device via 24V min., 53V max. dc or IEEE Compliant Power-Over-Ethernet (PoE), over spare pairs only. Telephones shall draw a maximum of 12W.

VoIP network cable shall comply with Cat5 or Cat5e UTP Static IP provisioning or DHCP STUN client standards and connect to each VoIP Telephone via RJ45 connector.

All local analog audio and power wiring shall conform to the specific equipment’s installation instructions and local and national codes.

**10.0.0 Analog Compact Emergency and Assistance Telephones**

10.1.0 Analog Compact Single-button, Flush-mount Analog Emergency Telephone

10.1.1 Description

The Compact Single-button, Flush-mount Emergency Telephone described in this section shall be designed for flush mounting on any flat surface, in a suitable tower, or in a suitable enclosure that allows surface mounting and shall be suitable for indoor or outdoor use. It shall comply with Sections 1.0.0 (Scope and Intent), 5.1.0 (Installation), and 8.0.0 (Equipment Operation) of this specification.

10.1.2 Interconnection

Interconnecting wiring shall be limited to 600 Ohm telephone audio pairs, output control pairs (2), and power supply wiring for applicable options. All external cabling shall be entered through the enclosure per the manufacturer’s installation instructions. All wiring shall be terminated inside the telephone via screw terminals.

10.1.3 Performance Specification

This Compact Single-button, Flush-mount Analog Emergency Telephone shall meet the following performance and physical specifications:

**Electrical/Audio**

Audio output……... 1 kHz tone @ 87 ± 3 dB SPL @ 1 meter with 40 mA loop current

Battery Voltage (tip and ring) 24 V dc or 48 V dc

Phone line requirements Loop start, central office (CO), or

 analog station port (PBX, PABX, or KSU)

Minimum loop current 24 mA (35 mA recommended)

(2) Auxiliary outputs (Isolated solid-state switch) 48 V dc @ 125 mA

 28 VRMS ac @ 80 mARMS

Signaling DTMF 100 ms tone

Memory Non-volatile EEPROM

**Mechanical**

Operating temperature range −4º F to +140º F (−20º C to +60º C)

Relative humidity to 95%, no condensation

**Construction**

Panel ................................................................................. 14-gauge, type 304 brushed stainless steel

Back box........................................................ 16-gauge cold-rolled steel with black polyurethane finish

**Dimensions**

Panel ............................................................................... 8.5 H × 6.5 W inches (215 × 165.1 mm)

Back box (depth from mounting surface)............................................................ 2.37 inches (60.2 mm)

Panel cutout ................................................................. 7.75 H × 5.75 W inches (193.6 × 146.1 mm)

Weight 5 lbs. (2.3 kg)

**Approval Standards**

Safety of Information Technology Equipment UL/CSA 60950

Enclosures for Electrical Equipment UL 50, Type 3R

47 CFR Part 68

Certification Number US: ADGTE05BGTC2010

Ringer Equivalence Number .5B

Network connection (USOC) RJ11

IC Information (Canada)

IC Certification Number 882B-GTC 2010

Ringer Equivalence Number .5B

Connection Method CA11A

10.1.4 Peripheral Equipment and Accessories

The following peripheral equipment, options, and accessories shall be offered in support of the Compact Single-button, Flush-mount Analog Emergency Telephone:

**L.E.D. Strobe,**  as referenced in section 12.1.0 of this specification.

**Strobe Mounting Assembly** shall be offered for pole or wall mounting the L.E.D. Strobe.

**Security Screwdriver** shall be offered to permit installation, access, and removal of the Emergency and Assistance telephones.

**Compact Free-standing Tower,**  as referenced in section 12.2.0 of this specification.

**Compact Free-standing Pedestal,**  as referenced in section 12.3.0 of this specification.

**Compact Surface Mount Enclosure**, as referenced in section 12.4.0 of this specification.

**Pole Mounting Kit** shall be designed to allow mounting of the Compact Surface Mount Enclosure to a pole with a maximum diameter of 4-inches.

**Telephone Management Application Software,**  as referenced in section 12.5.0. of this specification.

10.1.5 Equipment Manufacturer and Model Numbers

The Compact Single-button, Flush-mount Analog Emergency Telephone shall be GAI-TRONICS RED ALERT® Model No. **397-001FS**. Options, peripherals, and accessories shall be GAI-TRONICS model numbers, specified as:

* **540-001** 120 V ac, L.E.D. Strobe Assembly with constant-on feature
* **541-001** 12-24 V dc, L.E.D. Strobe Assembly with constant-on feature (programmable)
* **4115A** Strobe Assembly Mounting Kit
* **233-001** Security Screwdriver
* **234FS** Series Compact Free-standing Tower, including L.E.D. Strobe Assembly with constant-on feature
* **234FSB** Series Compact Free-standing Pedestal
* **238-001FS** Surface Mount Enclosure (brushed stainless steel) to provide surface mounting of a compact flush-mount emergency telephone
* **231-001FS** Pole Mounting Kit for compact surface mount enclosure
* **12509-042** Telephone Management Application (TMA) software
	1. Compact Single-button, Flush-Mount Analog Assistance Telephone

10.2.1 Description

 The Compact Single-button, Flush-Mount Analog Assistance Telephone described in this section shall be designed for flush mounting on any flat surface, in a suitable tower, or in a suitable enclosure that allows surface mounting and shall be suitable for indoor or outdoor use. It shall comply with Sections 1.0.0 (Scope and Intent)5.1.0 (Installation) and 8.0.0 (Equipment Operation) of this specification.

10.2.2 Interconnection

Interconnecting wiring shall be limited to 600 Ohm telephone audio pairs, output control pairs (2), and power supply wiring for applicable options. All external cabling shall be entered through the enclosure per the manufacturer’s installation instructions. All wiring shall be terminated inside the telephone via screw terminals.

10.2.3 Performance Specification

This Compact Single-button, Flush-mount Analog Assistance Telephone shall meet the following performance and physical specifications:

**Electrical/Audio**

Audio output 1 kHz tone @ 87 ± 3 dB SPL @ 1 meter with 40 mA loop current

Battery Voltage (tip and ring) 24 V dc or 48 V dc

Phone line requirements Loop start, central office (CO), or

 Analog station port (PBX, PABX, or KSU)

Minimum loop current 24 mA (35 mA recommended)

(2) Auxiliary outputs (Isolated solid-state switch) 48 V dc @ 125 mA

 28 VRMS ac @ 80 mARMS

Signaling DTMF 100 ms tone

Memory Non-volatile EEPROM

**Mechanical**

Operating temperature range −4º F to +140º F (−20º C to +60º C)

Relative humidity to 95%, no condensation

**Construction**

Panel ................................................................................. 14-gauge, type 304 brushed stainless steel

Back box........................................................ 16-gauge cold-rolled steel with black polyurethane finish

**Dimensions**

Panel ....................................................................................... 8.5 H × 6.5 W inches (215 × 165.1 mm)

Back box (depth from mounting surface)............................................................ 2.37 inches (60.2 mm)

Panel cutout ..................................................................... 7.75 H × 5.75 W inches (193.6 x 146.1 mm)

Weight 5 lbs. (2.3 kg)

**Approval Standards**

Safety of Information Technology Equipment UL/CSA 60950

Enclosures for Electrical Equipment UL 50, Type 3R

47 CFR Part 68

Certification Number US: ADGTE05BGTC2010

Ringer Equivalence Number .5B

Network connection (USOC) RJ11

IC Information (Canada)

IC Certification Number 882B-GTC 2010

Ringer Equivalence Number .5B

Connection Method CA11A

10.2.4 Peripheral Equipment and Accessories

The following peripheral equipment, options, and accessories shall be offered in support of the Compact Single-button, Flush-Mount Analog Assistance Telephone:

**L.E.D. Strobe,**  as referenced in section 12.1.0 of this specification.

**Strobe Mounting Assembly** shall be offered for pole or wall mounting the L.E.D. Strobe.

**Security Screwdriver** shall be offered to permit installation, access, and removal of the Emergency and Assistance telephones.

**Compact Free-standing Tower,**  as referenced in section 12.2.0 of this specification.

**Compact Free-standing Pedestal,**  as referenced in section 12.3.0 of this specification.

**Compact Surface Mount Enclosure**, as referenced in section 12.4.0 of this specification.

**Pole Mounting Kit** shall be designed to allow mounting of the Compact Surface Mount Enclosure to a pole with a maximum diameter of 4-inches.

**Telephone Management Application Software,**  as referenced in section 12.5.0 of this specification.

10.2.5 Equipment Manufacturer and Model Numbers

The Compact Single-button, Flush-mount Analog Assistance Telephone shall be GAI-TRONICS RED ALERT® Model No. **397-001ADFS**. Options, peripherals, and accessories shall be GAI-TRONICS model numbers, specified as:

* **540-001** 120 V ac, L.E.D. Strobe Assembly with constant-on feature
* **541-001** 12-24 V dc, L.E.D. Strobe Assembly with constant-on feature (programmable)
* **4115A** Strobe Assembly Mounting Kit
* **233-001** Security Screwdriver
* **234FS** Series Free-standing Tower, including L.E.D. Strobe Assembly with constant-on feature
* **234FSB** Series Free-standing Pedestal
* **238-001FS** Surface Mount Enclosure (brushed stainless steel) to provide surface mounting of a compact flush-mount emergency telephone
* **231-001FS** Pole Mounting Kit for compact surface mount enclosure
* **12509-042** Telephone Management Application (TMA) software

10.3.0 Compact Dual-button, Flush-mount Analog Emergency Telephone

10.3.1 Description

The Compact Dual-button, Flush-mount Analog Emergency Telephone described in this section shall be designed for flush mounting on any flat surface, in a suitable tower, or in a suitable enclosure that allows surface mounting and shall be designed for indoor or outdoor use. It shall comply with Sections 1.0.0 (Scope and Intent), 5.1.0 (Installation) and 8.0.0 (Equipment Operation) of this specification. The Compact Emergency Telephone shall be designed for dual, single push button autodial activation. One push button shall be intended for Emergency operation and the other push button shall be intended for Assistance (non-emergency) operation. Each button shall be appropriately labeled for the intended operation. Both operations shall provide the user handsfree communications following initial telephone line connection.

10.3.2 Interconnection

Interconnecting wiring shall be limited to 600 Ohm telephone audio pairs, output control pairs (2), and power supply wiring for applicable options. All external cabling shall be entered through the enclosure per the manufacturer’s installation instructions. All wiring shall be terminated inside the telephone via screw terminals.

10.3.3 Performance Specification

This Compact Dual-button, Flush-mount Analog Emergency Telephone shall meet the following performance and physical specifications:

**Electrical/Audio**

Audio output 1 kHz tone @ 87 ± 3 dB SPL @ 1 meter with 40 mA loop current

Battery Voltage (tip and ring) 24 V dc or 48 V dc

Phone line requirements Loop start, central office (CO), or

 Analog station port (PBX, PABX, or KSU)

Minimum loop current 24 mA (35 mA recommended)

(2) Auxiliary outputs (Isolated solid-state switch) 48 V dc @ 125 mA

 28 VRMS ac @ 80 mARMS

Signaling DTMF 100 ms tone

Memory Non-volatile EEPROM

**Mechanical**

Operating temperature range −4º F to +140º F (−20º C to +60º C)

Relative humidity to 95%, no condensation

**Construction**

Panel ................................................................................. 14-gauge, type 304 brushed stainless steel

Back box........................................................ 16-gauge cold-rolled steel with black polyurethane finish

**Dimensions**

Panel ....................................................................................... 8.5 H × 6.5 W inches (215 × 165.1 mm)

Back box (depth from mounting surface)............................................................ 2.37 inches (60.2 mm)

Panel cutout ..................................................................... 7.75 H × 5.75 W inches (193.6 x 146.1 mm)

Weight 5 lbs. (2.3 kg)

**Approval Standards**

Safety of Information Technology Equipment UL/CSA 60950

Enclosures for Electrical Equipment UL 50, Type 3R

47 CFR Part 68

Certification Number US: ADGTE05BGTC2010

Ringer Equivalence Number .5B

Network connection (USOC) RJ11

IC Information (Canada)

IC Certification Number 882B-GTC 2010

Ringer Equivalence Number .5B

Connection Method CA11A

10.3.4 Peripheral Equipment and Accessories

The following peripheral equipment, options, and accessories shall be offered in support of the Compact Dual-button, Flush-mount Analog Emergency Telephone:

**L.E.D. Strobe,**  as referenced in section 12.1.0 of this specification.

**Strobe Mounting Assembly** shall be offered for pole or wall mounting the L.E.D. Strobe.

**Security Screwdriver** shall be offered to permit installation, access, and removal of the Emergency and Assistance telephones.

**Compact Free-standing Tower,**  as referenced in section 12.2.0 of this specification.

**Compact Free-standing Pedestal,**  as referenced in section 12.3.0 of this specification.

**Compact Surface Mount Enclosure**, as referenced in section 12.4.0 of this specification.

**Pole Mounting Kit** shall be designed to allow mounting of the Compact Surface Mount Enclosure to a pole with a maximum diameter of 4-inches.

**Telephone Management Application Software,**  as referenced in section 12.5.0. of this specification.

10.3.5 Equipment Manufacturer and Model Numbers

The Compact Dual-button, Flush-mount Analog Emergency Telephone shall be GAI-TRONICS RED ALERT® Model No. **396-001FS**. Options, peripherals, and accessories shall be GAI-TRONICS model numbers, specified as:

* **540-001** 120 V ac, L.E.D. Strobe Assembly with constant-on feature
* **541-001** 12-24 V dc, L.E.D. Strobe Assembly with constant-on feature (programmable)
* **4115A** Strobe Assembly Mounting Kit
* **233-001** Security Screwdriver
* **234FS** Series Free-standing Tower, including L.E.D. Strobe Assembly with constant-on feature
* **234FSB** Series Free-standing Pedestal
* **238-001FS** Surface Mount Enclosure (brushed stainless steel) to provide surface mounting of a compact flush-mount emergency telephone
* **231-001FS** Pole Mounting Kit for compact surface mount enclosure
* **12509-042** Telephone Management Application (TMA) software

10.4.0 Compact Call Push Button and Keypad, Flush-mount Analog Access Telephone

10.4.1 Description

The Compact Call Push Button and Keypad, Flush-mount Analog Access Telephone described in this section shall be designed for flush mounting on any flat surface, in a suitable tower, or in a suitable enclosure that allows surface mounting and shall be designed for indoor or outdoor use. It shall be designed for standard analog telephone line operation and shall include a “call” pushbutton for access to dial tone and an integral Braille keypad for dialing. After initial activation and line use, pressing the call pushbutton a second time shall enable the caller to place additional calls without disengaging the telephone line.

10.4.2 Interconnection

Interconnecting wiring shall be limited to 600 Ohm telephone audio pairs, output control pairs (2), and power supply wiring for applicable options. All external cabling shall be entered through the enclosure per the manufacturer’s installation instructions. All wiring shall be terminated inside the telephone via screw terminals.

10.4.3 Performance Specification

The Compact Call Push Button and Keypad, Flush-mount Analog Access Telephone shall meet the following performance and physical specifications:

**Electrical/Audio**

Audio output 1 kHz tone @ 87 ± 3 dB SPL @ 1 meter with 40 mA loop current

Battery Voltage (tip and ring) 24 V dc or 48 V dc

Phone line requirements Loop start, central office (CO), or

 Analog station port (PBX, PABX, or KSU)

Minimum loop current 24 mA (35 mA recommended)

(2) Auxiliary outputs (Isolated solid-state switch) 48 V dc @ 125 mA

 28 VRMS ac @ 80 mARMS

Signaling DTMF 100 ms tone

Memory Non-volatile EEPROM

**Mechanical**

Operating temperature range −4º F to +140º F (−20º C to +60º C)

Relative humidity to 95%, no condensation

**Construction**

Panel ................................................................................. 14-gauge, type 304 brushed stainless steel

Back box........................................................ 16-gauge cold-rolled steel with black polyurethane finish

**Dimensions**

Panel ....................................................................................... 8.5 H × 6.5 W inches (215 × 165.1 mm)

Back box (depth from mounting surface)............................................................ 2.37 inches (60.2 mm)

Panel cutout ..................................................................... 7.75 H × 5.75 W inches (193.6 x 146.1 mm)

Weight 5 lbs. (2.3 kg)

**Approval Standards**

Safety of Information Technology Equipment UL/CSA 60950

Enclosures for Electrical Equipment UL 50, Type 3R

47 CFR Part 68

Certification Number US: ADGTE05BGTC2010

Ringer Equivalence Number .5B

Network connection (USOC) RJ11

IC Information (Canada)

IC Certification Number 882B-GTC 2010

Ringer Equivalence Number .5B

Connection Method CA11A

10.4.4 Peripheral Equipment and Accessories

The following peripheral equipment, options, and accessories shall be offered in support of the Compact Call Push Button and Keypad, Flush-mount Analog Access Telephone:

**Security Screwdriver** shall be offered to permit installation, access, and removal of the Emergency and Assistance telephones.

**Compact Free-standing Tower,**  as referenced in section 12.2.0 of this specification.

**Compact Free-standing Pedestal,**  as referenced in section 12.3.0 of this specification.

**Compact Surface Mount Enclosure**, as referenced in section 12.4.0 of this specification.

**Pole Mounting Kit** shall be designed to allow mounting of the Compact Surface Mount Enclosure to a pole with a maximum diameter of 4-inches.

**Telephone Management Application Software,**  as referenced in section 12.5.0 of this specification.

10.4.5 Equipment Manufacturer and Model Numbers

The Compact Call Push Button and Keypad, Flush-mount Analog Access Telephone shall be GAI-TRONICS RED ALERT® Model No. **392-001FS**. Options, peripherals, and accessories shall be GAI-TRONICS model numbers, specified as:

* **233-001** Security Screwdriver
* **234FS** Series Free-standing Tower, including L.E.D. Strobe Assembly with constant-on feature
* **234FSB** Series Free-standing Pedestal
* **238-001FS** Surface Mount Enclosure (brushed stainless steel) to provide surface mounting of a compact flush-mount emergency telephone
* **231-001FS** Pole Mounting Kit for compact surface mount enclosure
* **12509-042** Telephone Management Application (TMA) software

**11.0.0 VoIP Compact Emergency and Assistance Telephones**

11.1.0 Compact Single-button, Flush-mount VoIP Emergency Telephone

11.1.1 Description

The Compact Single-button, Flush-mount VoIP Emergency Telephone described in this section shall be designed for flush mounting on any flat surface, in a suitable tower, or in a suitable enclosure that allows surface mounting and shall be suitable for indoor or outdoor use. It shall comply with Sections 1.0.0 (Scope and Intent), 5.2.0 (Installation) and 8.0.0 (Equipment Operation) of this specification.

11.1.2 Performance Specification

The Compact Single-button, Flush-mount VoIP Emergency Telephone shall meet the following performance and physical specifications:

**Electrical**

Power: . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . …. Power-over-Ethernet, 802.3af compliant (via RJ45),

 or External power supply 24-53 V dc, 200 mA, a

 separate, isolated supply must be provided for each

 telephone.

Power consumption . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 12 Watts, max.

Microphone . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .. . . . . . . . . . . . . . . . . . . . . . . . …Electret

**Inputs**

Push Buttons (as applicable) . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Emergency Autodial

**Outputs**

Programmable Output (2) Contact Rating. . . . . . . . . . . . . . . . 5 A @ 250V ac/30 V dc (resistive load)

**Controls**

External (as applicable). . . . . . . . . . . . . . . . . . . . . .. . . . . . . . . . . . . . . . . . . . . . … push-button inputs

Internal . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Speaker volume, mic bias, reset switch

**Indicators**

External . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .Call received L.E.D.

Internal . . . . . . . . . . . . . . . . . . . . . . . . . . .. . . . . . . . . . . . . . . . . . . Power, Heartbeat & EACT L.E.D.s

Audio output . . . . . . . . . . . . . . . . . . . . . . . . . . . . …… 90 dB SPL or greater @ 0.5.meters (@ 1KHz)

Call Diversion . . . . . . . . . . . . . . . . . . …. . . . . . . . . . . . . . . . . .Configurable call list Numbers or URIs

 (max 20 entries) with comfort tones,

 diverts to next in list if the call fails

**Mechanical**

Mounting . . . . . . . . . . . . . . . . . . . . . . . . . . . .Flush-mounting in appropriate vessel or surface cut-out,

Electrical Connections . . . . . . . . . . . . . .. . . . . . . . . . . . . . . . . . . . . . . . . . . . RJ45 and Terminal block

Front Panel . . . . . . . . . ……………………….. . . . ………14-gauge, type 304 brushed stainless steel;

 8.5 H x 6.5 W inches (215 x 165.1 mm)

Back Box (depth from mounting surface). . . . . . . . . . . . . . . . 16-gauge CRS with black polyurethane

 finish (2.37 inches / 62.0 mm D)

Cut-out Dimensions. . .. . . . . . . . . . . . . . . . . . . . . . . . . . 7.75 H x 5.75 W inches (193.6 x 146.01 mm)

Net Weight . . . . . . . . . . .. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .. . . . . . . . . . . . 5 lbs. (2.3 kg)

Keypad (if included). . . . . . . . . . . . . . . . . . . .. . . . . . . . . . . . . . . . . . . . . . . Braille, chrome plated zinc

# Environmental

Temperature Range

 Operating . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .. . . . . . -4º F to + 140º F (-20º C to +60º C)

 Storage . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .. . . . . . . . . . . . . . . . . . . . -40º C to +70º C

Weatherproof Rating . . . .. . . . . . . . . . . . . . . . . . . . . . . . . ……………… . . . . . . . . . . . . . . . . Type 3R

Humidity . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Up to 95% non-condensing

Printed Circuit Board. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Conformal Coated

**Approval Standards**

Compliance to Standards . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . FCC CRF 47 Part 15

Safety of Information Technology Equipment………………………….………..………….UL/CSA 60950

Enclosures for Electrical Equipment…………………………………………………………………Type 3R

11.1.3 Peripheral Equipment and Accessories

The following peripheral equipment, accessories, and sub-components shall be offered in support of the Compact Single-button, Flush-mount VoIP Emergency Telephone:

**L.E.D. Strobe,**  as referenced in section 12.1.0.

**Strobe Mounting Assembly** shall be offered for pole or wall mounting the L.E.D. Strobe.

**Security Screwdriver** shall be offered to permit installation, access, and removal of the Emergency and Assistance telephones.

**Compact Free-standing Tower,**  as referenced in section 12.2.0

**Compact Free-standing Pedestal,**  as referenced in section 12.3.0

**Compact Surface Mount Enclosure**, as referenced in section 12.4.0

**Pole Mounting Kit** shall be designed to allow mounting of the Compact Surface Mount Enclosure to a pole with a maximum diameter of 4-inches.

**Telephone Management Application Software,**  as referenced in section 12.9.0

11.1.4 Equipment Manufacturer and Model Numbers

The Compact Single-button, Flush-mount VoIP Emergency Telephone, shall be GAI-Tronics RED ALERT® model **397-710FS**. Options, peripherals, and accessories shall be GAI-Tronics models numbers, specified as:

* **540-001** 120 V ac, L.E.D. Strobe Assembly with constant-on feature
* **541-001** 12-24 V dc, L.E.D. Strobe Assembly with constant-on feature (programmable)
* **4115A** Strobe Assembly Mounting Kit
* **233-001** Security Screwdriver
* **234FS** Series Compact Free-standing Tower, including L.E.D. Strobe Assembly with constant-on feature
* **234FSB** Series Compact Free-standing Pedestal
* **238-001FS** CompactSurface Mount Enclosure (brushed stainless steel) to provide surface mounting of a compact flush-mount emergency telephone
* **231-001FS** Pole Mounting Kit for compact surface mount enclosure
* **12509-044** Telephone Management Application (TMA) Package for VoIP Telephone

11.2.0 Compact Dual-button, Flush-Mount VoIP Emergency Telephone

11.2.1 Description

The Compact Dual-button, Flush-Mount Emergency VoIP Telephone described in this section shall be designed for flush mounting on any flat surface, in a suitable tower, or in a suitable enclosure that allows surface mounting and shall be suitable for indoor or outdoor use. It shall comply with Sections 1.0.0 (Scope and Intent), 5.2.0 (Installation), and 8.0.0 (Equipment Operation) of this specification The Emergency Telephone shall be designed for dual, single push button autodial activation. One push button shall be intended for Emergency operation and the other push button shall be intended for Assistance (non-emergency) operation.

11.2.2 Performance Specification

The Compact Dual-button Autodial, Flush-Mount VoIP Emergency Telephone shall meet the following performance and physical specifications:

**Electrical**

Power: . . . . . . . . . . . . . . . . . . . . . . . . . . . . ….. . . Power-over-Ethernet, 802.3af compliant (via RJ45),

 or External power supply 24-53 V dc, 200 mA, a

 separate, isolated supply must be provided for

 each telephone

Power consumption . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 12 Watts, max.

Microphone . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .. . . . . . . . . . . . . . . . . . . . . . . . …Electret

**Inputs**

Push Buttons (as applicable) . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Emergency Autodial

**Outputs**

Programmable Output (2) Contact Rating. . . . . . . . . . . . . . . . 5 A @ 250V ac/30 V dc (resistive load)

**Controls**

External (as applicable). . . . . . . . . . . . . . . . . . . . . .. . . . . . . . . . . . . . . . . . . . . . … push-button inputs

Internal . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Speaker volume, mic bias, reset switch

**Indicators**

External . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .Call received L.E.D.

Internal . . . . . . . . . . . . . . . . . . . . . . . . . . .. . . . . . . . . . . . . . . . . . . Power, Heartbeat & EACT L.E.D.s

Audio output . . . . . . . . . . . . . . . . . . . . . . . . . . . . …… 90 dB SPL or greater @ 0.5.meters (@ 1KHz)

Call Diversion . . . . . . . . . . . . . . . . . . …. . . . . . . . . . . . . . . . . .Configurable call list Numbers or URIs

 (max 20 entries) with comfort tones,

 diverts to next in list if the call fails

**Mechanical**

Mounting . . . . . . . . . . . . . . . . . . . . . . . . . . . .Flush-mounting in appropriate vessel or surface cut-out,

Electrical Connections . . . . . . . . . . . . . .. . . . . . . . . . . . . . . . . . . . . . . . . . . . RJ45 and Terminal block

Front Panel . . . . . . . . . ……………………….. . . . ………14-gauge, type 304 brushed stainless steel;

 8.5 H x 6.5 W inches (215 x 165.1 mm)

Back Box (depth from mounting surface). . . . . . . . . . . . . . . . 16-gauge CRS with black polyurethane

 finish (2.37 inches / 62.0 mm D)

Cut-out Dimensions. . .. . . . . . . . . . . . . . . . . . . . . . . . . . 7.75 H x 5.75 W inches (193.6 x 146.01 mm)

Net Weight . . . . . . . . . . .. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .. . . . . . . . . . . . 5 lbs. (2.3 kg)

Keypad (if included). . . . . . . . . . . . . . . . . . . .. . . . . . . . . . . . . . . . . . . . . . . Braille, chrome plated zinc

# Environmental

Temperature Range

 Operating . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .. . . . . . -4º F to + 140º F (-20º C to +60º C)

 Storage . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .. . . . . . . . . . . . . . . . . . . . -40º C to +70º C

Weatherproof Rating . . . .. . . . . . . . . . . . . . . . . . . . . . . . . ……………… . . . . . . . . . . . . . . . . Type 3R

Humidity . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Up to 95% non-condensing

Printed Circuit Board. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Conformal Coated

**Approval Standards**

Compliance to Standards . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . FCC CRF 47 Part 15

Safety of Information Technology Equipment………………………….………..………….UL/CSA 60950

Enclosures for Electrical Equipment…………………………………………………………………Type 3R

11.2.3 Peripheral Equipment and Accessories

The following peripheral equipment, accessories, and sub-components shall be offered in support of the Compact Dual-button Autodial, Flush-Mount VoIP Emergency Telephone:

**L.E.D. Strobe,**  as referenced in section 12.1.0.

**Strobe Mounting Assembly** shall be offered for pole or wall mounting the L.E.D. Strobe.

**Security Screwdriver** shall be offered to permit installation, access, and removal of the Emergency and Assistance telephones.

**Compact Free-standing Tower,**  as referenced in section 12.2.0

**Compact Free-standing Pedestal,**  as referenced in section 12.3.0

**Compact Surface Mount Enclosure**, as referenced in section 12.4.0

**Pole Mounting Kit** shall be designed to allow mounting of the Compact Surface Mount Enclosure to a pole with a maximum diameter of 4-inches.

**Telephone Management Application Software,**  as referenced in section 12.5.0

11.2.4 Equipment Manufacturer and Model Numbers

The Compact Dual-button Autodial, Flush-Mount VoIP Emergency Telephone, shall be GAI-Tronics RED ALERT® model **397-711FS**. Options, peripherals, and accessories shall be GAI-Tronics models numbers, specified as:

* **540-001** 120 V ac, L.E.D. Strobe Assembly with constant-on feature
* **541-001** 12-24 V dc, L.E.D. Strobe Assembly with constant-on feature (programmable)
* **4115A** Strobe Assembly Mounting Kit
* **233-001** Security Screwdriver
* **234FS** Series Compact Free-standing Tower, including L.E.D. Strobe Assembly with constant-on feature
* **234FSB** Series Compact Free-standing Pedestal
* **238-001FS** CompactSurface Mount Enclosure (brushed stainless steel) to provide surface mounting of a compact flush-mount emergency telephone
* **231-001FS** Pole Mounting Kit for compact surface mount enclosure
* **12509-044** Telephone Management Application (TMA) Package for VoIP Telephone

11.3.0 Compact Call Push Button and Keypad, Flush-mount VoIP Access Telephone

11.3.1 Description

The Compact Call Push Button and Keypad, Flush-mount VoIP Access Telephone described in this section shall be designed for flush mounting on any flat surface, in a suitable tower, or in a suitable enclosure that allows surface mounting and shall be suitable for indoor or outdoor use. It shall comply with Sections 1.0.0 (Scope and Intent), 5.2.0 (Installation) and 8.0.0 (Equipment Operation) of this specification.

11.3.2 Performance Specification

The Compact Call Push Button and Keypad, Flush-mount VoIP Access Telephone shall meet the following performance and physical specifications:

**Electrical**

Power: . . . . . . . . . . . . . . . . . . . . . . . . . . . . ….. . . Power-over-Ethernet, 802.3af compliant (via RJ45),

 or External power supply 24-53 V dc, 200 mA, a

 separate, isolated supply must be provided for

 each telephone

Power consumption . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 12 Watts, max.

Microphone . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .. . . . . . . . . . . . . . . . . . . . . . . . …Electret

**Inputs**

Keypad . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 3x4 matrix

Push Buttons. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Call

**Outputs**

Programmable Output (2) Contact Rating. . . . . . . . . . . . . . . . 5 A @ 250V ac/30 V dc (resistive load)

**Controls**

External (as applicable). . . . . . . . . . . . . . . . . . . . . .. . . . . . . . . . . . . . . . . . . . . . … push-button inputs

Internal . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Speaker volume, mic bias, reset switch

**Indicators**

External . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .Call received L.E.D.

Internal . . . . . . . . . . . . . . . . . . . . . . . . . . .. . . . . . . . . . . . . . . . . . . Power, Heartbeat & EACT L.E.D.s

Audio output . . . . . . . . . . . . . . . . . . . . . . . . . . . . …… 90 dB SPL or greater @ 0.5.meters (@ 1KHz)

Call Diversion . . . . . . . . . . . . . . . . . . …. . . . . . . . . . . . . . . . . .Configurable call list Numbers or URIs

 (max 20 entries) with comfort tones,

 diverts to next in list if the call fails

**Mechanical**

Mounting . . . . . . . . . . . . . . . . . . . . . . . . . . . .Flush-mounting in appropriate vessel or surface cut-out,

Electrical Connections . . . . . . . . . . . . . .. . . . . . . . . . . . . . . . . . . . . . . . . . . . RJ45 and Terminal block

Front Panel . . . . . . . . . ……………………….. . . . ………14-gauge, type 304 brushed stainless steel;

 8.5 H x 6.5 W inches (215 x 165.1 mm)

Back Box (depth from mounting surface). . . . . . . . . . . . . . . . 16-gauge CRS with black polyurethane

 finish (2.37 inches / 62.0 mm D)

Cut-out Dimensions. . .. . . . . . . . . . . . . . . . . . . . . . . . . . 7.75 H x 5.75 W inches (193.6 x 146.01 mm)

Net Weight . . . . . . . . . . .. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .. . . . . . . . . . . . 5 lbs. (2.3 kg)

Keypad (if included). . . . . . . . . . . . . . . . . . . .. . . . . . . . . . . . . . . . . . . . . . . Braille, chrome plated zinc

# Environmental

Temperature Range

 Operating . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .. . . . . . -4º F to + 140º F (-20º C to +60º C)

 Storage . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .. . . . . . . . . . . . . . . . . . . . -40º C to +70º C

Weatherproof Rating . . . .. . . . . . . . . . . . . . . . . . . . . . . . . ……………… . . . . . . . . . . . . . . . . Type 3R

Humidity . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Up to 95% non-condensing

Printed Circuit Board. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Conformal Coated

**Approval Standards**

Compliance to Standards . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . FCC CRF 47 Part 15

Safety of Information Technology Equipment………………………….………..………….UL/CSA 60950

Enclosures for Electrical Equipment…………………………………………………………………Type 3R

11.3.3 Peripheral Equipment and Accessories

The following peripheral equipment, accessories, and sub-components shall be offered in support of the Compact Call Push Button and Keypad, Flush-mount VoIP Access Telephone:

**L.E.D. Strobe,**  as referenced in section 12.1.0.

**Strobe Mounting Assembly** shall be offered for pole or wall mounting the L.E.D. Strobe.

**Security Screwdriver** shall be offered to permit installation, access, and removal of the Emergency and Assistance telephones.

**Compact Free-standing Tower,**  as referenced in section 12.2.0

**Compact Free-standing Pedestal,**  as referenced in section 12.3.0

**Compact Surface Mount Enclosure**, as referenced in section 12.4.0

**Pole Mounting Kit** shall be designed to allow mounting of the Compact Surface Mount Enclosure to a pole with a maximum diameter of 4-inches.

**Telephone Management Application Software,**  as referenced in section 12.5.0.

11.3.4 Equipment Manufacturer and Model Numbers

The Compact Call Push Button and Keypad, Flush-mount VoIP Access Telephone, shall be GAI-Tronics RED ALERT® model **398-711FS**. Options, peripherals, and accessories shall be GAI-Tronics models numbers, specified as:

* **540-001** 120 V ac, L.E.D. Strobe Assembly with constant-on feature
* **4115A** Strobe Assembly Mounting Kit
* **233-001** Security Screwdriver
* **234FS** Series Compact Free-standing Tower, including L.E.D. Strobe Assembly with constant-on feature
* **234FSB** Series Compact Free-standing Pedestal
* **238-001FS** CompactSurface Mount Enclosure (brushed stainless steel) to provide surface mounting of a compact flush-mount emergency telephone
* **231-001FS** Pole Mounting Kit for compact surface mount enclosure
* **12509-044** Telephone Management Application (TMA) Package for VoIP Telephone

**12.0.0 Peripheral Equipment**

12.1.0 L.E.D Strobe (120 Vac or 12-24 Vdc)

12.1.1 Description

The 120 Vac L.E.D. Strobe shall provide a constant-on glow when power is applied. The input power shall be routed directly to the strobe and not through the controlling Emergency Telephone. When the strobe receives a dry contact closure from a connected Emergency Telephone, the constant-on glow shall flash at a rate of 240 times per minute. This flash shall remain active until the contact closure provided by the connected telephone is removed. Upon contact closure removal, the strobe shall return to its constant-on state.

The 12-24 Vdc L.E.D. Strobe shall be field-programmable to provide a constant-on glow when power is applied or to be off until activated. The input power shall be routed directly to the strobe and not through the controlling Emergency Telephone. When the strobe receives a dry contact closure from a connected Emergency Telephone, the strobe shall flash at a rate of 240 times per minute. This flash shall remain active until the contact closure provided by the connected telephone is removed. Upon contact closure removal, the strobe shall return to its constant-on state or turn off, depending on the programming.

Both L.E.D. Strobes shall provide a high visibility, even in daylight and shall have a minimum life expectancy of up to 100,000 hours. The outer lens of the strobes shall be blue in color, creating a uniform blue “glow” when energized. The strobes shall provide a secondary dry contact closure output, rated at 2 amperes, when in flash mode. This contact closure output shall be used to activate ancillary devices and shall disengage when the strobes return to their original state.

The L.E.D. Strobes shall be capable of being mounted onto a male, ¾” pipe thread. The strobes shall connect to the telephones via a pre-connected wire pair.

12.1.2 Features

The L.E.D. Strobe shall include the following features:

* High visibility, even in daylight
* 100,000-hour L.E.D. life
* Low power consumption
* “Outdoor Wet” weatherproof rating
* Low operating temperature
* Constant-on feature
* 240 Flashes per minute
* UL/cUL listing
* Dry contact closure output (rated at 2 amperes)

12.1.3 Specifications

The L.E.D. strobes shall meet the following performance specification:

**Electrical**

Nominal Current . . . . . . . . . . . . . . . . . . . . . . . …….. . . . . . . . . … . . . . . . 0.39 amperes at 120 V ac

 1.1 amperes at 12 V dc

 0.5 amperes at 24 V dc

Rated L.E.D. life . . . . . . . . . . . . . . . . . . . . . .. . …... . . . . . . . . . . . . . . . . . . . . . Up to 100,000 hours

Flashes per minute . . . .. . . . . . . . . .. . . . . . . . . . . . …… . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 240

Auxiliary contact maximum rating . . . . . . . . . .. . . …... . . . . . 2 amps @ 30 Vdc, 2 amps @ 240 Vac

Termination (ac, control, auxiliary contact) . . . . . . . . . . . ….. . . . . . . . . . . . . . 15-foot, 18 AWG wire

**Environmental**

Operating (environment) temperature range . . . . …... . .. . . . . -40° C to +66° C (-40° F to + 150° F)

Environmental……………………………………………….…..…UL listed for “Outdoor Wet” Locations

**Mechanical**

Base. . . . . . . . . . . . . ……. . . . . . . . … . Die-cast aluminum (light gray or black baked enamel finish)

Dome . . . . . . . . . . . . . . . . . .. . …… . . . .. . . . . . . . . . . . . . . . . . . . . . . . . . . . . Polycarbonate (blue)

Dimensions . . . . . . . . . . …… . .. . . . . . . . . . . . . . . . 7.75 H x 8.25 W inches (196.85 x 209.55 mm)

Shipping weight . . . .. . . . . . . .. . . . . . . . . . . . . . . . . ….. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 6.5lbs

Mounting . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . ….. . . . . . . . . . . . . . . . . . . . . 3/4-14NPT female

**Approvals**. . . . . . . . . . . . . . . . . . . . . . . .. . . . . .. . . . . . . . . . . . . .UL 1638A / CSA C22.2 No. 205-17

12.1.4 Interconnection

The L.E.D. Strobe shall include a minimum 12-foot wiring harness for the following connections:

* Control pair (dry contact closure from connected Emergency Telephone)
* Output pair (dry contact closure to ancillary device)
* 120 V ac power input

All wire leads shall be stripped and tinned and suitable for wire nut or screw terminal installation.

12.1.5 Accessories

The following peripheral equipment shall be offered in support of the L.E.D. Strobe.

**Mounting Kit** shall provide the ability to mount the strobe on a wall or flat surface.

12.1.6 Equipment Manufacturer and Model Numbers

The L.E.D. Strobe shall be GAI-TRONICS Model **540-001 (120 Vac)** or **541-001 (12-24 Vdc)**. The Strobe Mounting Kit shall be GAI-TRONICS Model **4115A**.

12.2.0 Compact Free-Standing Tower

12.2.1 Description

The Compact Free-standing Tower shall be designed to house the following components:

* Flush-mount Compact Emergency or Access Telephone
* Blue-light Strobe with constant-on feature (120 V ac or 24 V dc)

The Compact Free-standing Tower body shall measure 7 feet tall, including the installed strobe. It shall be constructed of 3/16” cold-rolled steel, and painted with powder coat epoxy; Bronze, Safety Red, or Safety Blue in color. The tower shall be offered with either EMERGENCY or ASSISTANCE white graphics on two sides.

The body shall include openings for installing the flush-mount telephone and rear access for installation purposes. A gasketed access panel shall be included with the tower body. The body shall include provisions to install a strobe assembly, via a ¾” male NPT coupling. A mounting plate to provide conduit entrance and clearance holes for attaching to secure anchor bolts shall be incorporated into the design and construction of the tower body.

The Compact Free-standing Tower shall include the following assemblies:

* Tower body
* L.E.D. Constant-on Strobe, Blue, 120 Vac

The reference flush-mount compact telephone shall be purchased separately.

12.2.2 Interconnection

Interconnecting wiring shall be limited to standard telephone or cat 5/6e twisted telephone pairs and appropriately gauged power triplet for 120 V ac connections. All external cabling shall be entered through the bottom of the tower body, insuring proper separation of audio and power conductors. All wiring shall connect to its designated components via screw-down terminal strips or wire nuts/crimps.

12.2.3 Features

The Compact Free-standing Tower shall include the following features:

* UL/cUL listed for outdoor installations
* ADA Compliant
* Powder-coated epoxy finish
* Rugged construction for longevity and durability
* Suitable for AC or DC power applications
* 160 MPH wind speed rating (when installed in compliance with manufacturer’s published instructions)

12.2.4 Specifications

This Compact Free-standing Tower shall meet the following performance and physical specifications:

Dimensions....................................................................... 7 W x 7 D x 77 H inches (0.178 x 0.178 x 1.96 m)

Construction ...........................................................................................................3/16-inch cold-rolled steel

Finish/Color .............................................................................. Powder-coated epoxy / Architectural bronze

Power Rating

Strobe Nominal Current . . . . . . . . . . . . . . . . . . . . . . . …….. . . . . . . . . … . . . . . . 0.39 amperes at 120 V ac

Terminations

Strobe (AC/DC power, control, auxiliary contact) .................................................. 15-foot, No. 18 AWG wire

 (stripped, tinned leads)

Shipping weight ....................................................................................................................Approx. 150 lbs.

Wind speed rating…………………………………………………………………………………………..160 MPH

 AASHTO LTS6 Risk Category II;

 International Building Code

Approvals: ………………………………………………………UL/ cUL listed OUTDOOR telephone stanchion:

 Canadian Electrical Code, Part 1 (CE Code, Part 1), and the

 ANSI/NFPA 70 National Electrical Code (NEC)

12.2.5 Equipment Manufacturer and Model Numbers

The Compact Free-standing Tower shall be GAI-TRONICS Model **234FS** series with graphic and color options specified as:

* **234FS-A** Compact Free-standing Tower with ASSISTANCE graphics, bronze
* **234FS-E** Compact Free-standing Tower with EMERGENCY graphics, bronze
* **234FS-AB** Compact Free-Standing Tower with ASSISTANCE graphics, safety blue
* **234FS-EB** Compact Free-standing Tower with EMERGENCY graphics, safety blue
* **234FS-AR** Compact Free-Standing Tower with ASSISTANCE graphics, safety red
* **234FS-ER** Compact Free-standing Tower with EMERGENCY graphics, safety red

12.3.0 Compact Free-standing Pedestal

12.3.1 Description

The Compact Free-standing Pedestal shall be designed to house a Flush-mount Compact Emergency or Access Telephone

The Compact Free-standing Pedestal body shall measure 56 inches tall, be constructed of 3/16” cold-rolled steel, and painted with powder coat epoxy; Bronze, Safety Red, or Safety Blue in color. The pedestal shall be offered with either EMERGENCY or ASSISTANCE white graphics on two sides.

The body shall include openings for installing the flush-mount telephone and rear access for installation purposes. A gasketed access panel shall be included with the tower body. A mounting plate to provide conduit entrance and clearance holes for attaching to secure anchor bolts shall be incorporated into the design and construction of the tower body.

The referenced flush-mount compact telephone shall be purchased separately.

12.3.2 Interconnection

Interconnecting wiring shall be limited to standard telephone or cat 5/6e twisted telephone pairs. All external cabling shall be entered through the bottom of the tower body and shall connect to the telephone via screw-down terminal strips.

12.3.3 Features

The Compact Free-standing Pedestal shall include the following features:

* UL/cUL listed for outdoor installations
* ADA Compliant
* Powder-coated epoxy finish
* Rugged construction for longevity and durability
* 160 MPH wind speed rating (when installed in compliance with manufacturer’s published instructions)

12.3.4 Specifications

This Compact Free-standing Pedestal shall meet the following performance and physical specifications:

Dimensions....................................................................... 7 W x 7 D x 56 H inches (0.178 x 0.178 x 1.42 m)

Construction ...........................................................................................................3/16-inch cold-rolled steel

Finish/Color .............................................................................. Powder-coated epoxy / Architectural bronze

Shipping weight ....................................................................................................................Approx. 115 lbs.

Wind speed rating…………………………………………………………………………………………..160 MPH

 AASHTO LTS6 Risk Category II;

 International Building Code

Approvals: ………………………………………………………UL/ cUL listed OUTDOOR telephone stanchion:

 Canadian Electrical Code, Part 1 (CE Code, Part 1), and the

 ANSI/NFPA 70 National Electrical Code (NEC)

12.3.5 Equipment Manufacturer and Model Numbers

The Compact Free-standing Pedestal shall be GAI-TRONICS Model **234FSP** series with graphic and color options specified as:

* **234FSP-A** Compact Free-standing Pedestal with ASSISTANCE graphics, bronze
* **234FSP-E** Compact Free-standing Pedestal with EMERGENCY graphics, bronze
* **234FSP-AB** Compact Free-Standing Pedestal with ASSISTANCE graphics, safety blue
* **234FSP-EB** Compact Free-standing Pedestal with EMERGENCY graphics, safety blue
* **234FSP-AR** Compact Free-Standing Pedestal with ASSISTANCE graphics, safety red
* **234FSP-ER** Compact Free-standing Pedestal with EMERGENCY graphics, safety red

12.4.0 Compact Surface-mount Enclosure

12.4.1 Description

A Compact Surface-mount Enclosure shall be offered to provide surface mounting of compact flush-mount emergency and access telephones. Enclosure shall be offered in a brushed stainless-steel design. When installed, the compact emergency and access telephones shall meet Type-3R weatherproof standards.

12.4.2 Interconnection

Interconnecting wiring shall be limited to standard telephone or cat 5/6e twisted telephone pairs. All external cabling shall be entered through the rear or bottom of the Compact Surface-mount Enclosure. All wiring shall connect to the telephone via screw-down terminal strips or RJ11 modular connector (4-conductor).

12.4.3 Specifications

This Compact Surface-mount Enclosures shall meet the following physical specifications:

Dimensions................................................................ 8.5 H x 6.5 W x 2.56 D inches (215 x 165.1 x 65 mm)

Construction .................................................................................Type 304 stainless steel, 0.063 thickness

Finish/Color ............................................................................................................ Brushed and passivated

Mounting .....................................Four 5/16-inch (0.312 mm) diameter mounting holes in mounting bosses

Cable Entry ......................................................................(2) 7/8-inch entries in rear or bottom of enclosure

 (seals provided for unused holes)

Shipping weight ....................................................................................................................... 3.0 lbs. max.

Labeling.................................................................................................................................................None

12.4.4 Equipment Manufacturer and Model Numbers

The Surface-mount Enclosures shall be GAI-TRONICS model no. **238-001FS.**

12.5.0 Telephone Management Application (TMA) Package

12.5.1 Description

The Telephone Management Application (TMA) package shall be designed as a maintenance data collection and reporting tool to allow users to view and report the health of the Telephones in the system. TMA shall be a Windows 10® based software application and shall be intended for use on a dedicated PC. TMA shall be designed to monitor individual Telephones in the system, each on a dedicated analog line or on a common Ethernet network.

The TMA shall be designed to poll each Behavioral Health Telephone in the system to determine health status and activity. The TMA shall route all analog telephone polling activity through a transceiver designed and manufactured by the TMA software designer. Each transceiver shall poll one telephone at a time, but TMA shall be capable of supporting eight analog (8) line inputs, allowing eight different telephones to be polled simultaneously. A TMA transceiver shall be required for each connected analog line.

The TMA shall be also be capable of polling VoIP telephones via software embedded in the required security key, with no additional cabling requirement.

When polled, each Analog Compact Emergency and Assistance Telephone shall report the following to the TMA:

* **Line integrity**
* **Microprocessor health**
* **Stuck buttons**
* **Handset Integrity**
* **Audio Path Test** (handset microphone/receiver)
* **Line interrupt** (power failure)

When polled, each VoIP Compact Emergency and Assistance Telephone shall report the following to the TMA:

* **Configuration Error** –Signal that the configuration file currently used by the unit has one entry errors which have been ignored.
* **Cold Reset** – Signal the unit has been reset due to a power cycle (failure)
* **Warm Reset** – Signal the unit has reset due to an internal software command or error
* **Keypad Error** – Signal that a key has remained pressed for the entire usage period
* **Handset Integrity**
* **Register Fail** – Signal a failure to register with the Proxy server for a period in excess of the usage period
* **Audio Path Test** - Signal a failure in the handset microphone/receiver operation

The TMA shall be flexible in its provisions for adding, changing, and deleting Telephones within the system. It shall provide a variety of reports minimally in the form of call activity, exception reports (faults), and complete status reports. TMA shall provide an auto-discovery feature to detect and record new Emergency Telephones added to the system. It shall also allow manual entry of newly added Emergency Telephones. All TMA entries shall be done only by authorized personnel, controlled by a system security key.

Each Compact Analog Emergency and Assistance Telephone shall take approximately 90 seconds to poll and gather data. Each Compact Emergency and Assistance VoIP Telephone shall take approximately 20 seconds to poll. In lieu of polling, Telephones shall be capable of being programmed to “call in” to the TMA. This method shall be expected to require multiple system dial-in numbers if more than one Telephone is required to call-in at a time.

12.5.2 Interconnection

The analog TMA transceiver shall connect to the host PC via USB connector and to the telephone line via 4-pin modular connector (RJ11). A VoIP only TMA shall require only a USB security key for network connection.

12.5.3 Material Provided

The analog TMA package shall include the following material:

* (1) Transceiver Unit
* Software CD-ROM
* Security Key
* Telephone Cable (4-conductor) for connection to PBX line
* USB Cable for connecting host PC to Transceiver Unit

The VoIP TMA package shall include only a USB security key and USB flash disk with the operating software.

12.5.4 System Requirements

The customer-provided, TMA host PC shall meet the minimum operating requirements:

* Intel® Pentium™ or AMD® 32-bit or 64-bit Processor
* Windows®  10 operating system
* RAM, hard disk space, and processor speed is dependent on the operating system's

recommended requirements

* CD-ROM Drive
* One USB port for the security key
* One USB port per TMA DTMF Transceiver
* One printer port

12.5.5 Peripheral Equipment and Accessories

The following peripheral equipment, options, and accessories shall be offered in support of the Telephone Management Application.

**TMA Expansion Kit** shall provide a transceiver and interconnecting cables for connection to the telephone system and host PC for the purpose of providing the capability to poll via an additional analog line.

12.5.6 Equipment Manufacturer and Model Numbers

The Analog/VoIP Telephone Management Application package shall be GAI-TRONICS Model **12509-042**. The Analog/VoIP TMA Expansion Kit shall be GAI-Tronics Model **12509-043**. The VoIP only TMA kit shall be GAI-TRONICS Model **12509-044**.