



GAI-TRONICS®
A HUBBELL COMPANY



HUBBCOM™ GSC3100/GSC4100 Dual-Port Flush-Mount Smart Controller Quick Installation Guide

General Information



This guide covers the installation of the HUBBCOM Dual-Port Flush-Mount Smart Controller, Models GSC3100 and GSC4100. The Model GSC3100 Smart Controller is equipped with a handset. The Model GSC4100 Smart Controller is designed for hands-free operation and is not equipped with handset (see Figure 1). See the GAI-Tronics website at <https://www.gai-tronics.com> for system specifications, warranty information, and the GUDA (GAI-Tronics Universal Device Application).

Important Safety Instructions



- Read, follow, and retain instructions—All safety and operating instructions should be read and followed before operating the unit. Retain instructions for future reference.
- Heed warnings—Adhere to all warnings on the unit and in the operating instructions.
- Attachments—Attachments not recommended by the product manufacturer should not be used, as they may cause hazards.
- Servicing—Do not attempt to service this unit by yourself. Opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.
- HUBBCOM Smart Controllers are designed for indoor use only.

 **ATTENTION**  —Install equipment without modification and according to all applicable local, national, and international electrical codes. North America - Consult the National Electrical Code (NFPA 70), Canadian Standards Association (CSA 22.1), and local codes for specific requirements regarding your installation. Class 2 circuit wiring must be performed in accordance with NEC 725.55.

These enclosures must be installed by trained, qualified and competent personnel. Installation must comply with state and national regulations, as well as safety practices for this type of equipment.

 **WARNING**  —Use only 24 V dc power supplies that conform to UL/CSA/CE Class II, Double Insulated supplies with over voltage and short circuit protection. Use only a dc source with a 50-watt maximum output or fuse the supply with a 2-amp fuse. EMI standards to Class B.

- Onderhoud—Probeer dit apparaat niet zelf te repareren. Het openen of verwijderen van afdekkingen kan u blootstellen aan gevaarlijke spanning of andere gevaren. Laat alle onderhoud over aan bevoegd onderhoudspersoneel.
- HUBBCOM Smart Controllers zijn alleen bedoeld voor gebruik binnenshuis.

 **AANDACHT**  —Gebruik alleen 24 VDC-voedingen die voldoen aan UL / CSA / CE Klasse II, dubbel geïsoleerde voedingen met overspanning en kortsluitbeveiliging. Gebruik alleen een DC-bron met een maximale output van 50 W of fuseer de voeding met een 2-ampère zekering. EMI-normen voor klasse B.

- Dépannage—N'essayez pas de réparer cet appareil vous-même. Ouvrir ou retirer les capots peut vous exposer à des tensions dangereuses ou à d'autres dangers. Confiez toute réparation à un personnel qualifié.
- Les contrôleurs intelligents HUBBCOM sont conçus pour une utilisation en intérieur uniquement.

! ATTENTION ! —Utilisez uniquement des alimentations 24 Vcc conformes à UL / CSA / CE Classe II, des alimentations à double isolation avec protection contre les surtensions et les courts-circuits. Utilisez uniquement une source cc avec une sortie maximale de 50 watts ou fusionnez l'alimentation avec un fusible de 2 ampères. Normes EMI à la classe B.

- Manutenzione—non tentare di riparare l'unità da soli. L'apertura o la rimozione dei coperchi potrebbero esporre a tensioni pericolose o altri rischi. Rivolgersi a personale qualificato per l'assistenza.
- Gli HUBBCOM Smart Controller sono progettati esclusivamente per uso interno.

! AVVERTIMENTO ! —Utilizzare solo alimentatori a 24 V cc conformi a UL / CSA / CE Classe II, alimentatori a doppio isolamento con protezione da sovratensione e cortocircuito. Utilizzare solo una fonte di corrente continua con un'uscita massima di 50 watt o collegare l'alimentazione con un fusibile da 2 A. Standard EMI per la classe B.

- Mantenimiento—no intente reparar esta unidad por sí mismo. Abrir o quitar las cubiertas puede exponerlo a un voltaje peligroso u otros peligros. Remita todo el servicio a personal de servicio calificado.
- Los controladores inteligentes HUBBCOM están diseñados para uso en interiores solamente.

! ADVERTENCIA ! —Utilice solo fuentes de alimentación de 24 V cc que cumplan con UL / CSA / CE Clase II, fuentes con doble aislamiento con sobretensión y protección contra cortocircuitos. Utilice solo una fuente de CC con una salida máxima de 50 vatios o fusione la fuente con un fusible de 2 amperios. Estándares EMI a Clase B.

Security Hardware

The HUBBCOM Smart Controllers described in this manual are vandal resistant. The front panel of each smart controller is attached to its enclosure with security screws. A GAI-Tronics Model 233-001 Security Screwdriver or Torx T-25 security head tip (sold separately) is required for installing the telephone.

Installation

HUBBCOM Flush-Mount Smart Controllers can be flush mounted in a wall or stanchion using the included backbox or surface mounted using a GAI-Tronics Model 236 Series or Model 238-001 Stainless-Steel Surface-Mount Enclosure (sold separately).

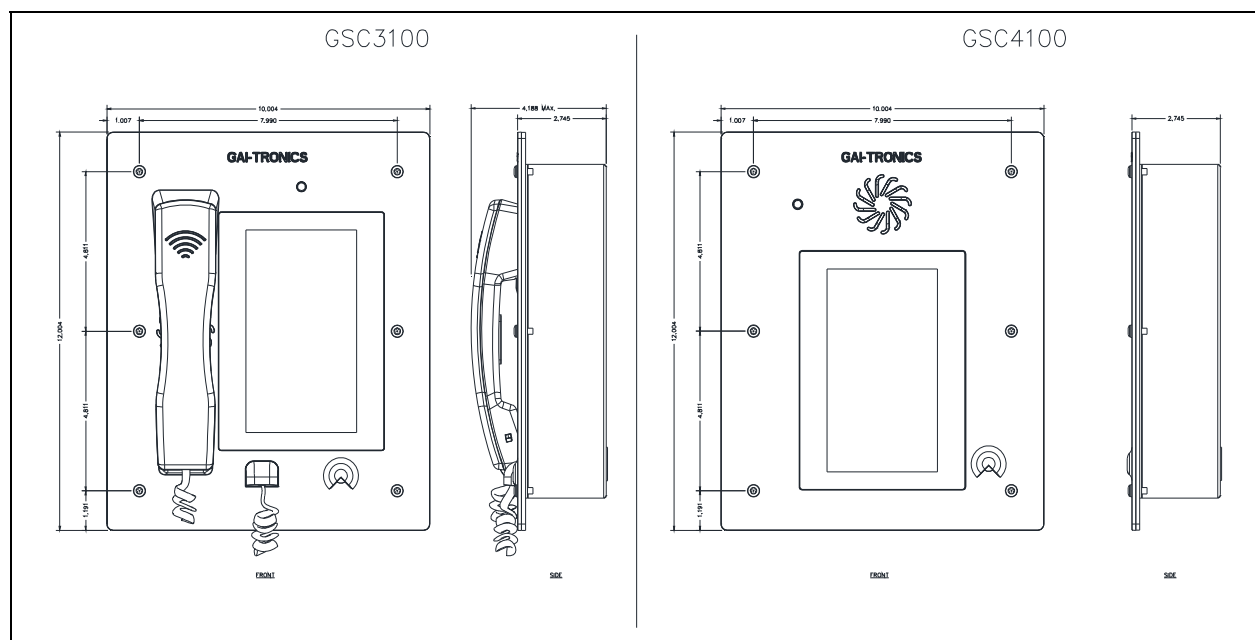


Figure 1. HUBBCOM Model GSC3100 and Model GSC4100 Smart Controllers

Flush-Mount Installations

The supplied back box must be used when mounting the HUBBCOM Smart Controller in a GAI-Tronics Model 234 Series Tower and for flush mount installations:

1. Remove the backbox from the Smart Controller by removing the six #10-32 security screws and washers holding them together.
2. Remove a tapered plug from one of the rear cable entry holes in the backbox.
3. Install a cable strain relief cable fitting to the box.
4. Feed the Ethernet cable and all additional cables through the cable fitting.
5. Mount the back box to the structure using appropriate hardware (see [Figure 3](#) for cutout dimensions).
6. Complete all necessary cable terminations (see the [Wiring](#) section).

NOTE: Two clamp on ferrite cores are supplied with the unit. Install a ferrite core around all wires terminating to terminal blocks TB1 and/or TB2. Attach the clamp on ferrite cores as close as possible to the terminal block.

7. Secure the unit to the backbox mounting flanges using the six security screws with washers removed in Step 1.
8. Tighten the screws to 10–12 in-lb.

Surface Mount Installations with GAI-Tronics Model 236 Series or Model 238-001 Enclosure

1. Refer to Pub. 42004-285 for the Model 236 Series or Pub. 42004-434 for the Model 238-001 backboxes to install the surface-mount enclosure. GAI-Tronics publications are located on the GAI-Tronics website at <https://www.gai-tronics.com>.
2. Remove and discard the backbox installed on the Smart Controller by removing the six security screws and washers. Retain the six security screws and washers.
3. Complete all necessary cable terminations (see the [Wiring](#) section).

NOTE: Two clamp on ferrite cores are supplied with the unit. Install a ferrite core around all wires terminating to terminal blocks TB1 and/or TB2. Attach the clamp on ferrite cores as close as possible to the terminal block.

4. Secure the unit to the surface-mount enclosure using the six security screws and washers removed in Step 2.
5. Tighten the screws to 10–12 in-lb.

Wiring

HUBBCOM Smart Controllers are equipped with quick release terminal blocks that accept 18–24 AWG wires. Wires can be released from the terminal block by pressing the quick release button above the terminal.

RTU Input/Output

Terminal Block TB1 is for optional RTU I/O (Remote Terminal Unit Input/Output) functionality. Complete the following steps to terminate the RTU I/O cables:

1. Install appropriately sized ferrules onto the wire ends.
2. Install a clamp on ferrite core around all wires terminating to TB1 as close as possible to the terminal block.
3. Insert each wire into the correct quick release terminal (see [Table 1](#)).

Table 1. Terminal Block TB1—RTU I/O

Purpose	Term Block-Pin	Label
RTU Input One Ground	TB1-1	GND
RTU Input One	TB1-2	IN1
RTU Input Two Ground	TB1-3	GND
RTU Input Two	TB1-4	IN2
RTU Output 1 +	TB1-5	OUT1+
RTU Output 1 –	TB1-6	OUT1(-)
RTU Output 2 –	TB1-7	OUT2(-)
RTU Output 2 +	TB1-8	OUT2+

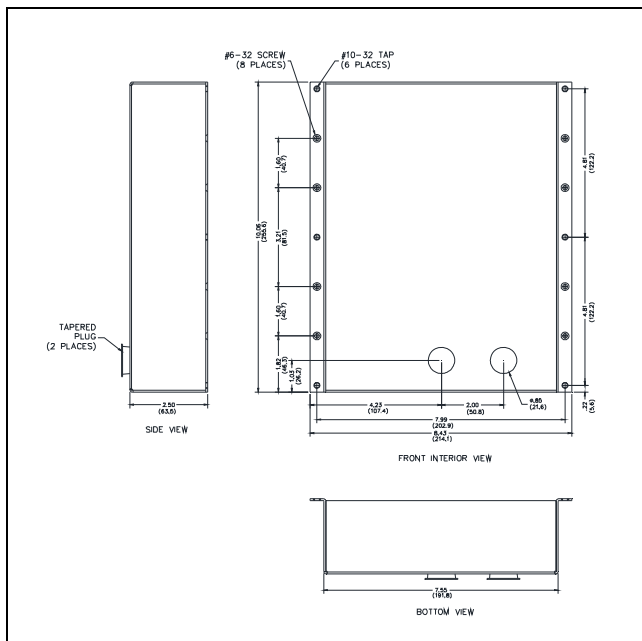


Figure 2. Flush-Mount Smart Controller Back Box Mounting Details

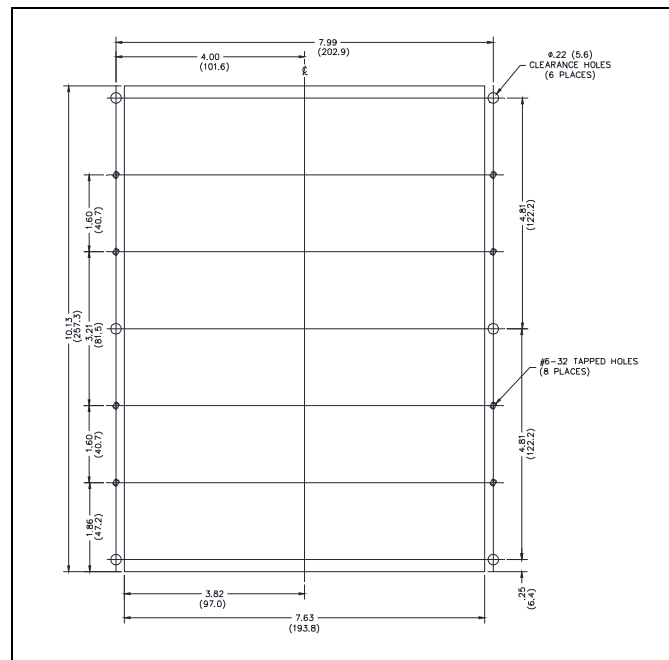


Figure 3. Flush-Mount Cutout Details

RS-485 and External Speaker Connections

Terminal Block TB2 is for optional RS-485 and external speaker connections. Complete the following steps to terminate the RS-485 and external speaker connections

NOTE: External 24 V dc power is required for stations with external speaker hook-ups.

1. Install appropriately sized ferrules onto the wire ends.
2. Install a clamp on ferrite core around all wires terminating to TB2 as close as possible to the terminal block.
3. Insert each wire into the correct quick release terminal (see [Table 2](#)).

Table 2. Terminal Block TB2—RS-485 and External Speaker

Purpose	Term Block-Pin	Label
RS485 Ground	TB2-1	GND
RS485 B	TB2-2	RS485B
RS485 A	TB2-3	RS485A
External Speaker –	TB2-4	SPKR–
External Speaker +	TB2-5	SPKR+

Ethernet

HUBBCOM Smart Controllers are equipped with dual Ethernet ports. The port furthest from the USB port must be used to connect to the Ethernet network. The port closest to the USB port can be used to connect a PC.

1. Plug the Ethernet cable from the network into the RJ45 port furthest from the USB port.
2. (Optional) Plug an Ethernet cable from a PC into the remaining RJ45 jack.

24 V DC Power

24 V dc power can be used in place of POE and must be used for units requiring an external speaker hook-up. Complete the following steps to terminate the 24 V dc power source to the access panel:

1. Install appropriately sized ferrules onto the wire ends.
2. Insert each wire into the correct quick release terminal (see [Table 3](#)).

Table 3. 24 V DC Power

Purpose	Term-Block Pin	Label
24 V dc Positive	TB3-1	+24V
Ground	TB3-2	GND

Antenna

An SMA (Sub-Miniature connector A) coaxial connector is provided for an antenna connection.

NOTE: The secondary Ethernet port is not functional when the HUBBCOM station is connected via WiFi.

NOTE: The antenna used in flush-mount installations is customer-supplied. FCC, IC, ETSI/CE, and TELEC Certified with PCB, Dipole, Chip, and PIFA Antennae. GAI-Tronics Kit No. 12840-001 (purchased separately) meets the antenna requirements.

Activation

HUBBCOM devices require activation the first time they are energized and after any purchased upgrades are installed.

1. Complete all installation steps for the HUBBCOM device.
2. Apply power to the HUBBCOM device.
The HUBBCOM device takes 40–50 seconds to boot to the device activation screen (see Figure 4). The screen may flicker several times during boot-up.
3. Touch the screen in the ACTIVATION KEY field to display the onscreen keyboard.
4. Enter the device key provided on the device's activation label (see Figure 5 and Figure 6).
5. Press the SUBMIT ACTIVATION KEY button on the screen (see Figure 6).

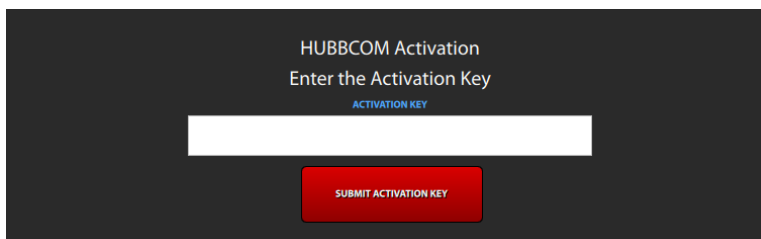


Figure 4. HUBBCOM Device Activation Screen



Figure 5. Device Activation Label

- The HUBBCOM device will reboot to activate. The device takes 40–50 seconds to reboot before the device configuration notification screen is displayed (see Figure 7). The screen may flicker several times during boot-up.
6. Use the GUDA (GAI-Tronics Universal Device Application) to complete the software configuration of the HUBBCOM device.

The GUDA is available on GAI-Tronics website at www.GAI-TRONICS.com.

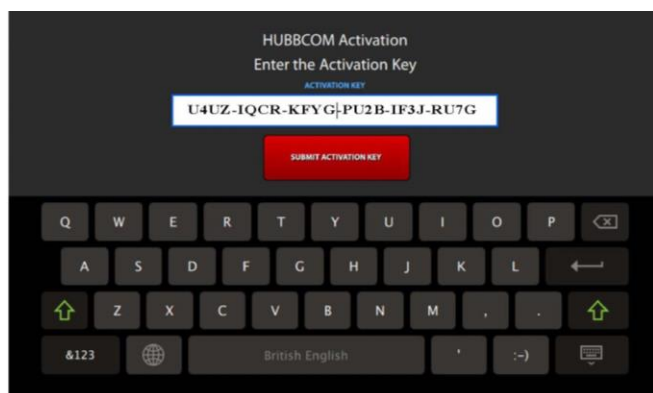


Figure 6. Device License Key Entered

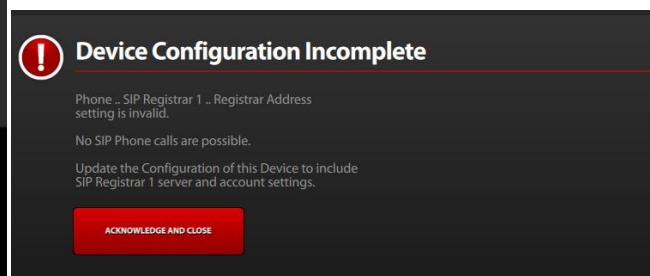


Figure 7. Activation Complete

Service and Spare Parts

Contact a Regional Service Center for assistance if the equipment requires service or spare parts. A return authorization number (RA#) will be issued if service is required. Equipment must be shipped prepaid to GAI-Tronics with a return authorization number and a purchase order number. Repairs or a replacement will be made in accordance with GAI-Tronics' warranty policy if the equipment is under warranty. Please include a written explanation of all defects to assist our technicians in their troubleshooting efforts. Call 800-492-1212 inside the USA or 610-777-1374 outside the USA for help with identifying the Regional Service Center closest to you.

Specifications

Wi-Fi operating frequency range 2.412–2.462 GHz (US)
Temperature Range 32–122 °F (0–50 °C)

Approvals

Compliance to Standard FCC CFR 47 Part 15 Class A
FCC ID: Z64-WL18DBMOD
IC: 4511-WL18DBMOD

Safety to IEC62368-1 Audio/video, information, and communication technology equipment
EN62311 Assessment risk of exposure

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy; and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at their own expense.

Warranty

Equipment. GAI-Tronics warrants for a period of one (1) year from the date of shipment, that any GAI-Tronics equipment supplied hereunder shall be free of defects in material and workmanship, shall comply with the then-current product specifications and product literature, and if applicable, shall be fit for the purpose specified in the agreed-upon quotation or proposal document. If (a) Seller's goods prove to be defective in workmanship and/or material under normal and proper usage, or unfit for the purpose specified and agreed upon, and (b) Buyer's claim is made within the warranty period set forth above, Buyer may return such goods to GAI-Tronics' nearest depot repair facility, freight prepaid, at which time they will be repaired or replaced, at Seller's option, without charge to Buyer. Repair or replacement shall be Buyer's sole and exclusive remedy. The warranty period on any repaired or replacement equipment shall be the greater of the ninety (90) day repair warranty or one (1) year from the date the original equipment was shipped. In no event shall GAI-Tronics warranty obligations with respect to equipment exceed 100% of the total cost of the equipment supplied hereunder. Buyer may also be entitled to the manufacturer's warranty on any third-party goods supplied by GAI-Tronics hereunder. The applicability of any such third-party warranty will be determined by GAI-Tronics.

Services. Any services GAI-Tronics provides hereunder, whether directly or through subcontractors, shall be performed in accordance with the standard of care with which such services are normally provided in the industry. If the services fail to meet the applicable industry standard, GAI-Tronics will re-perform such services at no cost to buyer to correct said deficiency to Company's satisfaction provided any and all issues are identified prior to the demobilization of the Contractor's personnel from the work site. Re-performance of services shall be Buyer's sole and exclusive remedy, and in no event shall GAI-Tronics warranty obligations with respect to services exceed 100% of the total cost of the services provided hereunder.

Warranty Periods. Every claim by Buyer alleging a defect in the goods and/or services provided hereunder shall be deemed waived unless such claim is made in writing within the applicable warranty periods as set forth above. Provided, however, that if the defect complained of is latent and not discoverable within the above warranty periods, every claim arising on account of such latent defect shall be deemed waived unless it is made in writing within a reasonable time after such latent defect is or should have been discovered by Buyer.

Limitations / Exclusions. The warranties herein shall not apply to, and GAI-Tronics shall not be responsible for, any damage to the goods or failure of the services supplied hereunder, to the extent caused by Buyer's neglect, failure to follow operational and maintenance procedures provided with the equipment, or the use of technicians not specifically authorized by GAI-Tronics to maintain or service the equipment. **THE WARRANTIES AND REMEDIES CONTAINED HEREIN ARE IN LIEU OF AND EXCLUDE ALL OTHER WARRANTIES AND REMEDIES, WHETHER EXPRESS OR IMPLIED BY OPERATION OF LAW OR OTHERWISE, INCLUDING ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.**

Return Policy

If the equipment requires service, contact your Regional Service Center for a return authorization number (RA#). Equipment should be shipped prepaid to GAI-Tronics with a return authorization number and a purchase order number. If the equipment is under warranty, repairs or a replacement will be made in accordance with the warranty policy set forth above. Please include a written explanation of all defects to assist our technicians in their troubleshooting efforts.

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