CardAccess

Security Sensor Bridge V2

Model Number: ZGB20

Quick Start and Installation Guide

Card Access Security Sensor Bridge
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Easily bridge inexpensive security sensors into home automation -- with or without a security panel*

![CardAccess logo]

Welcome and congratulations on your purchase of the Card Access Security Sensor Bridge. This Quick Start & Installation Guide is an overview of configuring your Security Sensor Bridge with a Control4 System. This guide assumes that you are a qualified and trained Control4 dealer.

*NOTICE: THE SECURITY SENSOR BRIDGE V2 IS INTENDED FOR HOME AUTOMATION PURPOSES ONLY. THIS IS NOT A SECURITY SYSTEM.

Introduction

The Card Access Security Sensor Bridge is a device capable of receiving and interpreting signals from GE/ITI sensors and integrating these signals with a Control4 System via the Control4 ZigBee wireless mesh. This device gives the homeowner the ability to utilize the wide range of GE sensors available as accessories to the Control4 system.

The device consists of a self-contained, wall-mountable bridge in a plastic enclosure. It is powered by a 12V DC adapter.

Specifications

ZGB20 Specifications	
Dimensions	6.75" x 4.5" x 1.5" (excluding antennas)
Weight	0.5 Lbs (0.23Kg)
Maximum Ambient Operational Temperature	140℉ (60℃)
Power Input	12VDC, 100mA
Operational Environment	Type 1 Device shall be mounted in a dry, moisture-protected location.

Site Requirements and Wiring Options

- Allow at least 10 inches of clearance above the enclosure for the antennas.
- Avoid mounting locations that expose the module to moisture.
- Avoid areas with excessive metal or electrical wiring including furnace and utility rooms. If unavoidable, mount on or near metal with the antenna extending above the metallic surfaces as shown in *Figure 1*.
- Ensure that an electrical source is accessible for the DC power adaptor.
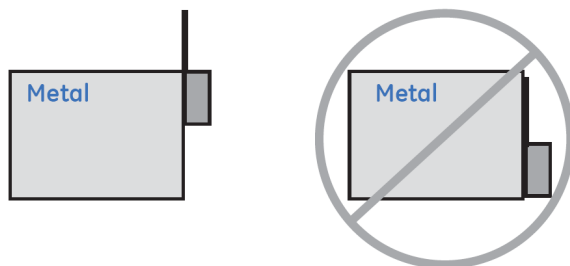
Figure 1 - Mounting on or near metal

Tools and Supplies Needed

To complete the installation, you will need the following tools and supplies:

- Screwdrivers

![Card Access logo]

- Drill with bits
- Mounting screws and anchors (included)

Mounting

The bridge can be mounted on any interior wall (protected from the elements) by following these steps:

1. Remove the cover by pressing in the button on the bottom of the enclosure and rocking the cover outward.
2. Hold the bridge base against the mounting surface and mark the four (4) mounting holes and two (2) wire access holes as shown in *Figure 2*. Remember to leave at least 10 in. (25 cm) above the bridge for the antennas.

NOTE: The circuit board may be hinged out of the bridge base plastics to gain better access to the mounting holes by pulling outward on the retaining latch with a finger.

3. Drill holes and insert the appropriate anchors.
4. Use the wire access holes to route the wires from the DC power supply (included) into the bridge base.
5. Secure the bridge base to the wall with the pan head screws provided.

Mounting Holes

Wire Access
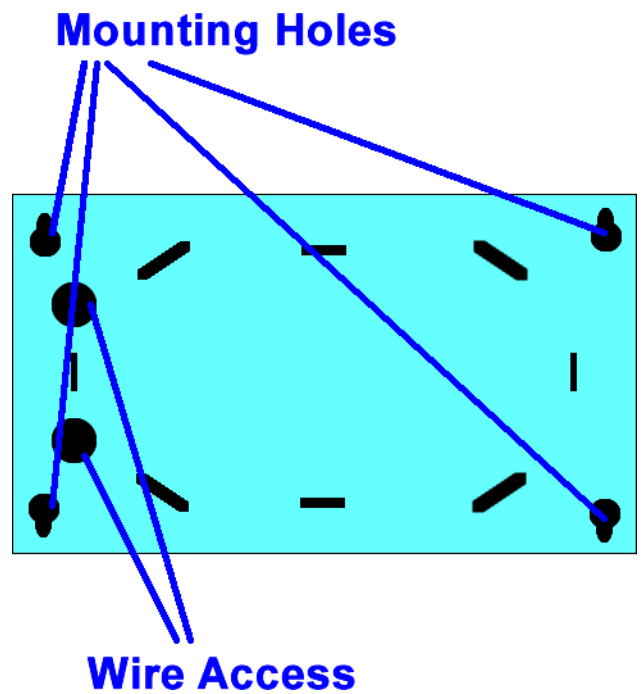
Figure 2 – Bridge Base Plastics

Wiring

To wire the DC power supply to the bridge, do the following:

1. Remove AC power (if applied) to the included DC power supply.
2. Wire leads of DC power supply into terminal block on the lower right side of the board. Polarity of the wires does not matter.
3. Install metal antennas into outer slots of terminal blocks at top of board.
4. Replace cover.

Control4 Software Installation / Operation Instructions

	NOTE: The Card Access Security Sensor Bridge and GE Sensors use Control4 DriverWorks™ drivers, which are not included with Composer software. They must be downloaded from the Card Access website and manually installed.

Download and Install Drivers:

1. Go to http://www.cardaccess-inc.com/automation/drivers
2. Download the drivers you will need to use in your project.
3. Copy them to the appropriate folder on the computer you will be using to configure the project, typically "My Documents\control4\Drivers\"

Add the Security Sensor Bridge V2 (ZGB20) to your Composer project:

1. In *System Design* view in Composer, select the 'Card Access ZGB20' driver from the *Search* tab and drag it into your project (see figure at right).

2. Identification is similar to other Control4 ZigBee devices: Go to *Connections* view in Composer and choose the 'Network' tab. Find the Card Access Security Sensor Bridge device in the device list and highlight it. Then click the 'Identify' button at the top of the screen.

3. When prompted to identify the unit, press the ID button on the Bridge by using a paper clip inserted through the small hole located on the face of the Bridge. Press the button four times in succession. The 'BUS' LED on the Security Sensor Bridge will begin blinking as it attempts to join the ZigBee mesh and identify into the Control4 project.

4. When the Security Sensor Bridge has successfully joined the ZigBee mesh and identified, the address of the bridge will appear in the identification window. Click the 'Close' button.

To add additional Security Sensor Bridges to your Composer project:

1. When using two or more Security Sensor Bridges in the project, you must first add one ZGB20 driver for the first Security Sensor Bridge. Then, you will add one instance of the Expansion Bridge driver (ZGB20-XP) for each additional bridge.

2. Select the Card Access ZGB20-XP driver from the *Search* tab. Add one instance of the Expansion Bridge driver for each additional bridge you will use.

3. Identify each Expansion Bridge as specified in the ZGB20 instructions above. No bindings or connections to the primary bridge are needed.
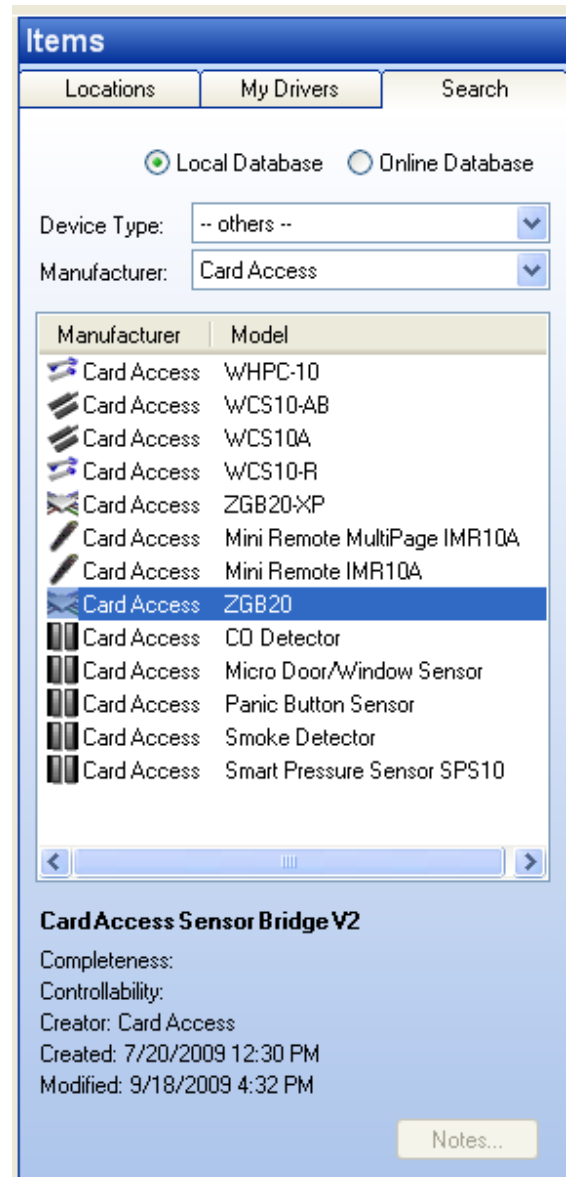
Add wireless sensors to the project:

	NOTE: Ensure that the Security Sensor Bridge driver is added to the project before adding individual wireless sensors.

1. In *System Design* view in Composer, select the appropriate wireless sensor driver from the *Search* tab and drag it into your project.
2. Navigate to the Properties page of the wireless sensor by clicking on the newly added item on the left pane of Composer. *Note that you may need to click on another item and then back on the newly added item to force Composer to display the Properties page for the device.*
3. On the Properties page, replace the text '*unassigned*' with the 6 or 7-digit **TxID** printed on the label on the wireless sensor. Then click the *'Set'* button.
4. Test the sensor by activating/deactivating the sensor's input. You will see the sensor status populate on the properties page as well as the wireless signal level of the sensor-to-bridge connection.

5. Select the generic proxy of your choice and at it to your project. Go to the *Connections* tab, and under *Control/AV,* bind the output for the sensor to this proxy. **DO NOT change the input bindings.**

Diagnostic Indications

The Security Sensor Bridge has two LEDs which indicate its current operational state. During normal operation, these LEDs will help to determine if the bridge is functioning properly. The tables below provide a brief summary of these LEDs:

BUS LED (top):	
GREEN (solid)	Bridge is connected to Control4 automation system and operating properly (ZigBee connection established, driver properly identified)
RED (solid)	*ZigBee PRO*: Bridge is not connected to the ZigBee mesh.
RED (short winks OFF)	*ZigBee PRO*: Bridge is connected to the ZigBee mesh but is not communicating with the ZGB20 driver. Ensure bridge has been identified into the system. *EmberNet:* Bridge is not communicating with the ZGB20 driver. Ensure bridge has been identified into the system.

RF LED (bottom):	
GREEN (short winks ON)	Wireless sensor activity

> **NOTE:** The Security Sensor Bridge and its associated drivers provide a good deal of diagnostic information to assist in deployment of Security Sensor Bridges as well as placement and testing of wireless sensors. The information below is also included in the *Documentation* tab of each driver.

ZGB20 Driver Details

- **Supported Devices:**
  - First Security Sensor Bridge in a project
    - Model Number. ZGB20
- **Properties Page Help:**
  - *Bridge Status*: Displayed as "Online" or "Offline." NOTE: if the Security Sensor Bridge is offline, all sensors will register as offline.
  - *Last Check-In:* Shows the last check-in date and time of the Security Sensor Bridge.
  - *Last Event:* Shows the date and time of the last sensor event, along with the TxID or name of the sensor and the signal level.

ZGB20-XP Driver Details

- **Supported Devices:**
  - Additional Security Sensor Bridges in the same project
    - Model Numbers. ZGB20
- **Properties Page Help:**
  - To view diagnostic information on Expansion Bridges, refer to the properties page of the primary Security Sensor Bridge ZGB20 driver.

Micro Door/Window Sensor Driver Details

- **Supported Devices:**
  - GE Micro Door/Window Sensor
    - Card Access Model Number: GMS10A
    - GE Model Number: NX-454

  - GE Recessed Micro Door/Window Sensor
    - Card Access Model Number: GRS10A
    - GE Model Number: 60-741-95

NOTE: This driver MUST be used in conjunction with the Card Access Security Sensor Bridge hardware and DriverWorks driver. GE Wireless Sensors do NOT need to be associated in any way with a specific Security Sensor Bridge in Composer.

- **Properties Page Help**:
  - *Sensor TxID:* Enter the TxID printed on the Sensor Label. The TxID is a 6 or 7-digit alphanumeric address.
  - *Sensor Name:* An optional descriptive name may be entered here. This name is displayed on the property page of the Bridge when data for this sensor is received.
  - *Sensor Contact State:* shows the current state of the contact as "Opened" or "Closed."
  - *Sensor Status:* shows whether the sensor as "Online" or "Offline." This status is affected by the connection state of the Security Sensor Bridge(s).
  - *Last Sensor Event:* shows the date and time of the last event received, as well as the contact status and low-battery status.
  - *Last Signal Level:* shows the approximate signal level of the last received event. Use this level to aid in proper positioning of sensors.
  - *Supervisory Timeout:* sets the number of supervisory periods which must be missed before the "Supervisory Lost" event is triggered. Supervisory periods for these sensors are every 64 minutes.
  - *Supervisory State:* shows current state of the supervisory signal monitor.
  - *Statistics:* shows the number of events and RX success of the sensor.

- **Actions Page Help:**
  - *Identify Sensor:* Click this button to allow the driver to automatically 'learn' the TxID of the sensor. After clicking the button, activate the 'Tamper' switch on the sensor as follows:
    - *Micro/Door Window Sensor:* Remove the sensor cover and slide the battery about half-way out of the battery holder. When finished, slide the battery back in. When the sensor has been successfully identified, the TxID will appear in the Sensor TxID field of the Driver Properties page.
    - *Recessed /Door Window Sensor:* Insert the blade of a standard screwdriver into the slot at the top of the sensor. Press in firmly while slowly rotating the top 1/8 turn counter-clockwise, then rotate it back. When the sensor has been successfully identified, the TxID will appear in the Sensor TxID field of the Driver Properties page.
  - *Cancel Identify:* Click this button to abort the sensor identify process. Note that clicking this button is not necessary if you have successfully identified a sensor.

Panic Button Sensor Driver Details

- **Supported Devices:**
  - GE Water-Resistant Panic Pendant
    - Card Access Model Number: GPB10A
    - GE Model Number: NX-475
  - GE Multi-Purpose Panic Button
    - Card Access Model Number: GMP10A
    - GE Model Number: 60-906-95

NOTE: This driver MUST be used in conjunction with the Card Access Security Sensor Bridge hardware and DriverWorks driver. GE Wireless Sensors do NOT need to be associated in any way with a specific Security Sensor Bridge in Composer.

- **Properties Page Help**:
  - *Sensor TxID:* Enter the TxID printed on the Sensor Label. The TxID is a 6 or 7-digit alphanumeric address.

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- o *Sensor Name:* An optional descriptive name may be entered here. This name is displayed on the property page of the Bridge when data for this sensor is received.

- o *Panic Button Contact State:* shows the current state of the contact as "Opened" or "Closed."

- o *Sensor Status:* shows whether the sensor as "Online" or "Offline." This status is affected by the connection state of the Sensor Bridge(s).

- o *Last Sensor Event*: shows the date and time of the last event received, as well as the contact status and low-battery status.

- o *Last Signal Level:* shows the approximate signal level of the last received event. Use this level to aid in proper positioning of sensors.

- o *Supervisory Timeout*: sets the number of supervisory periods which must be missed before the "Supervisory Lost" event is triggered. Supervisory periods for these sensors are every 64 minutes.

- o *Supervisory State:* shows current state of the supervisory signal monitor.

- o *Statistics:* shows the number of events and RX success of the sensor.

- **Actions Page Help:**

  - *Identify Sensor:* Click this button to allow the driver to automatically 'learn' the TxID of the sensor. After clicking the button, activate the 'Panic' condition on the sensor by pressing and holding the panic button. When the sensor has been successfully identified, the TxID will appear in the Sensor TxID field of the Driver Properties page.

  - *Cancel Identify*: Click this button to abort the sensor identify process. Note that clicking this button is not necessary if you have successfully identified a sensor.

Smoke Detector Driver Details

- **Supported Devices:**

  - o GE Supervised Wireless Smoke Detector

    - Card Access Model Number: GSD10A

    - GE Model Number: TX-6010-01-1

NOTE: This driver MUST be used in conjunction with the Card Access Security Sensor Bridge hardware and DriverWorks driver. GE Wireless Sensors do NOT need to be associated in any way with a specific Security Sensor Bridge in Composer.

- **Properties Page Help**:

  - o *Sensor TxID:* Enter the TxID printed on the Sensor Label. The TxID is a 6 or 7-digit alphanumeric address.

  - o *Sensor Name:* An optional descriptive name may be entered here. This name is displayed on the property page of the Bridge when data for this sensor is received.

  - o *Alarm Contact State:* shows the current state of the alarm as "Alarm" (meaning smoke is detected) or "No Alarm" (meaning no smoke has been detected).

  - o *Sensor Status:* shows whether the sensor as "Online" or "Offline." This status is affected by the connection state of the Security Sensor Bridge(s).

  - o *Last Sensor Event*: shows the date and time of the last event received, as well as the contact status and low-battery status.

  - o *Last Signal Level:* shows the approximate signal level of the last received event. Use this level to aid in proper positioning of sensors.

- o *Supervisory Timeout*: sets the number of supervisory periods which must be missed before the "Supervisory Lost" event is triggered. Supervisory periods for these sensors are every 64 minutes.

  o *Supervisory State:* shows current state of the supervisory signal monitor.

  o *Statistics:* shows the number of events and RX success of the sensor.

- **Actions Page Help:**

  - *Identify Sensor:* Click this button to allow the driver to automatically 'learn' the TxID of the sensor. After clicking the button, activate the 'Tamper' signal on the smoke detector by separating the unit from the mounting base. When the sensor has been successfully identified, the TxID will appear in the Sensor TxID field of the Driver Properties page.

  - *Cancel Identify*: Click this button to abort the sensor identify process. Note that clicking this button is not necessary if you have successfully identified a sensor.

Carbon Monoxide Detector Driver Details

- **Supported Devices:**

  - o GE Wireless Carbon Monoxide Detector

    - Card Access Model Number: GCO10A

    - GE Model Number: 60-652-95

NOTE: This driver MUST be used in conjunction with the Card Access Security Sensor Bridge hardware and DriverWorks driver. GE Wireless Sensors do NOT need to be associated in any way with a specific Security Sensor Bridge in Composer.

- **Properties Page Help**:

  o *Sensor TxID:* Enter the TxID printed on the Sensor Label. The TxID is a 6 or 7-digit alphanumeric address.

  o *Sensor Name:* An optional descriptive name may be entered here. This name is displayed on the property page of the Bridge when data for this sensor is received.

  o *Alarm Contact State:* shows the current state of the alarm as "Alarm" (meaning CO is detected) or "No Alarm" (meaning no CO has been detected).

  o *Sensor Status:* shows whether the sensor as "Online" or "Offline." This status is affected by the connection state of the Security Sensor Bridge(s).

  o *Last Sensor Event*: shows the date and time of the last event received, as well as the contact status and low-battery status.

Regulatory Statements

FCC
The Card Access Security Sensor Bridge complies with standards established by the following regulatory bodies: Federal Communications Commission (FCC), Conformité Européene (CE), and Restriction of Hazardous Substances (RoHS).

FCC ID: MHIZGB20
This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

• Reorient or relocate the receiving antenna.
• Increase the separation between the equipment and receiver.
• Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
• Consult the dealer or an experienced radio/TV technician for help.

IMPORTANT! Changes or modifications not expressly approved by Card Access, Inc. void the user's authority to operate the equipment.

CE
We, Card Access, Inc. of 11778 South Election Road, Suite 260, Salt Lake City, Utah, 84020 USA, declare under our sole responsibility that the Card Access Security Sensor Bridge, Model Number ZGB20, to which this declaration relates, is in conformity with the following standards and / or other normative documents: EN60950, EN55022, EN55024

We hereby declare that the above named product is in conformity with the essential requirements and other relevant provisions of Directive 1999/5/EC. The conformity assessment procedure referred to in Article 10(3) and detailed in Annex II of Directive 1999/5/EC has been followed.

Industry Canada
IC: 3681C-ZGB20
This Class B digital apparatus complies with Canada ICES-003.
Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.
Operation c'est thème aux suivant deux conditions : (1) ça truc Mai pas raison parasites , et (2) ça truc devoir agréer tout parasites , incluant parasites thanksggiving Mai raison peu souhaitable les fonctionnements de les truc.

One-Year Limited Warranty

This product is warranted to be free of defects in material and workmanship for one year from date of original purchase from Card Access, Inc. ("Card Access").

Card Access will, at its election and as the purchaser's or end user's sole and exclusive remedy for any breach of the limited warranty set forth above, repair or replace this product if a defect in material or workmanship is identified and communicated to Card Access within the one-year period described above. Card Access is not responsible for removal or reinstallation costs. This warranty is not valid in cases where damage to this product is the result or arises out of misuse, abuse, incorrect repair or improper wiring or installation.

To notify Card Access of any breach of the foregoing limited warranty and to obtain warranty service, contact Card Access Customer Support by e-mail to inhomesupport@cardaccess-inc.com or by calling 801-748-4900, extension 15, to obtain a Return Materials Authorization ("RMA") number and instructions for returning your defective product to Card Access.

IMPLIED WARRANTIES, INCLUDING THOSE OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE EXPRESSLY DISCLAIMED, EXCEPT WHERE SUCH DISCLAIMER IS PROHIBITED BY APPLICABLE LAW. CARD ACCESSAND/OR THE SELLER DISCLAIM(S) ANY AND ALL LIABILITY FOR SPECIAL,INCIDENTAL AND CONSEQUENTIAL DAMAGE IN ANY WAY ASSOCIATED WITH OR RELATED TO THE PURCHASE, INSTALLATION AND/OR USE OF THISPRODUCT.

Some states/provinces do not allow limitations on how long an implied warranty lasts, or the exclusion or limitation of special, incidental or consequential damages, so these limitations and exclusions may not apply to you. This warranty gives you specific legal rights. You may also have other rights which vary from state/province to state/province. This is Card Access' exclusive written warranty.

QSG-ZGB-INST20