# Other products from GSD





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global security devices



#### Technical Specs - GSD Wi-Plus Controller

Power Supply	12 DC	
Current consumption	120mA	
Current consumption with load (max)	160mA	
Relay Contact Rating	5 Amps /240V ac	
Moisture Resistance	Indoor Use Only	
Dimensions	W. 135mm D. 46mm H. 200mm	

#### Technical Specs - Wi-Plus Door Controls

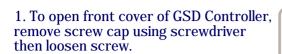
Power Supply	12 DC	
Current consumption	110mA	
Current consumption with load (max)	145mA	
Relay Contact Rating	5 Amps /240V ac	
Operating Temperature	- 20°C to +60°C	
Moisture Resistance	IP 67 ( IP65 on Wi-Bio )	
Dimensions - Flush Mount	W. 87mm D. 21mm H. 119mm	
- Surface Mount	W. 87mm D. 35mm H. 119mm	

#### **Features**

Doors controlled	10
Users	5000
User Groups 16	
Time Zones 16	
Door Groups 16	
Reporting Facility Yes	
Challenge Facility Yes	
Logging	Unlimited
Input/Output Mapping	CCTV & Lift control
Supports Wireless & RS485 Networks Yes	
Automatic Backup Facility	Yes
Database Encryption Yes	

# Installation Steps

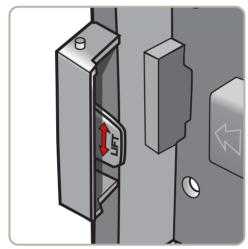
Step	Description	Page
1	Install the Controller using the Installation Diagrams	4-5
2	Wire the Controller using the Wiring Diagrams	8
3	Install and wire each Door Control. Refer to the Door Control Manual for instructions.	
4	Connect the Controller to the PC using Network Diagrams	9-11
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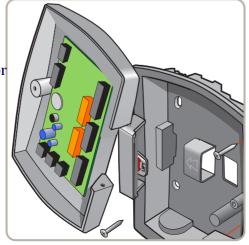
2. Remove door from unit (see inset) before screwing the rear enclosure to the wall.

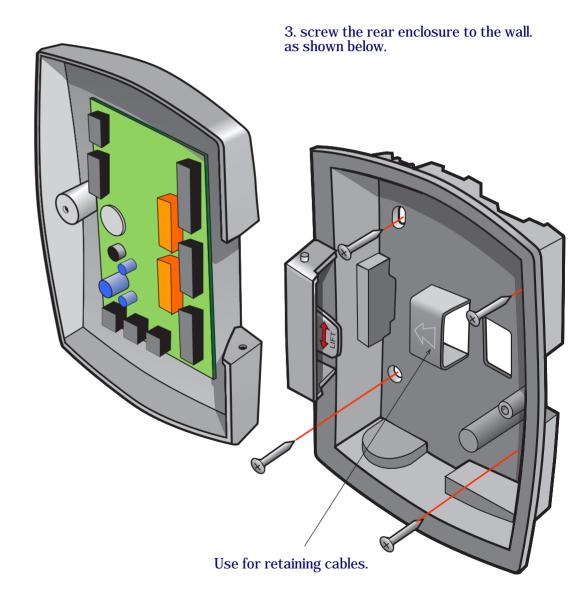
To remove front cover lift tab up and unhook door.



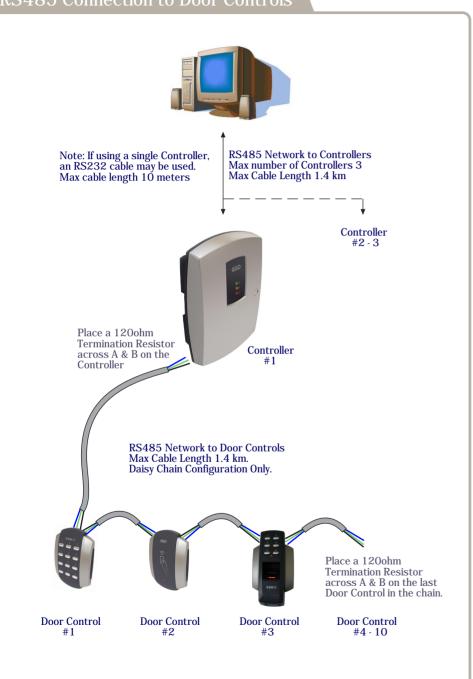
4. Re-attach the front cover

To re-attach front cover: hook door over top pip and rotate into position and push tab down to secure.



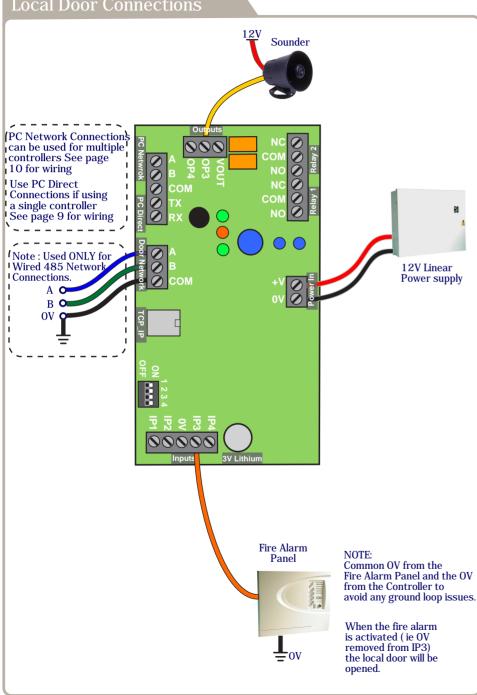


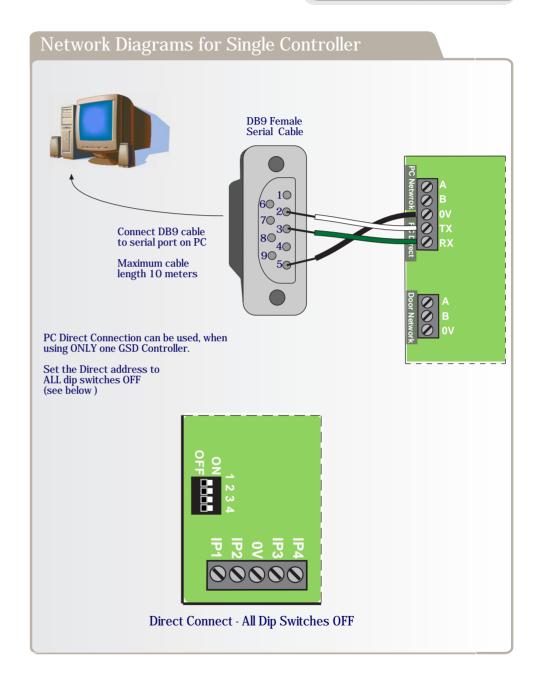
#### **RS485** Connection to Door Controls



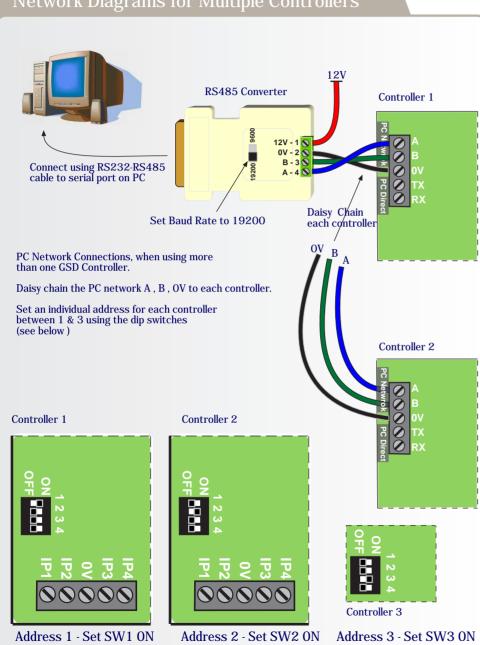
# Wireless Connection to Door Controls Note: If using a single Controller, an RS232 cable may be used. Max cable length 10 meters RS485 Network to Controllers Max number of Controllers 3 Max Cable Length 1.4 km Controller #2 - 3 50 meters Controller 50 meters 50 meters **Door Control** 50 meters **Door Control** #1 **Door Control** 50 meters 50 meters 50 meters Door Control #2 Note: Door Controls can be installed within 50 meters of the Controller or within 50 meters of any other Door Control Door Control as each Door Control will function as a repeater. Each repeater #5 - 10 transmits data to/from the Controller.

# Wiring Diagrams with Local Door Connections





#### Network Diagrams for Multiple Controllers

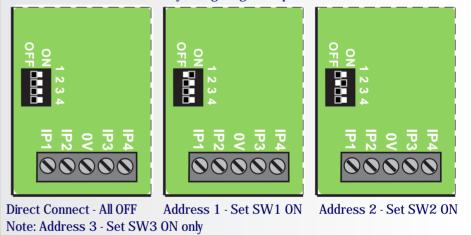


#### **Configuring GSD Controller Communications**

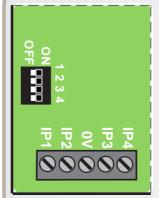
Step	Description
1.	Click 'Settings' tab to open communications window. Select the Serial Port Number connected to the Controller.

#### Setting the GSD Controller address

The Controller Address is set by configuring the Dip swithces as shown below.



#### **Restoring Factory Settings**



To restore the factory default setting, Set ALL Dip Swithces 1,2,3 & 4 to the ON position and then power-up the GSD Controller.

Example: All Dip Swithces are set to the ON position.

Note: Factory Default settings will be restored after powering up the controller with All dip-swithces ON. The dip-switchess should then be set to the controller address as shown above in section "Setting the GSD controller address"

# Phase 1 - Setting up the GSD Controller

Step	Description
1.	Install the main GSD Controller and power up
2.	Default the controller immediately via the dip switch settings (see instructions on page 11
3.	Important! Once powered up and the controller has completed the default the process – reset the dip switches to the correct address positions. (see instructions on page 11)
4.	Connect the PC lead to the Contoller and configure the PC Comms.  A. If using a Serial to USB converter –Follow USB converter instructions.  B. Establish the Com Port no.
5.	Follow instructions on the CD provided to install the GSD PC application. To download the latest drivers, enter the following link in your web browser http://www.globalsecurity.ie/download/GSDWin Access en-US.zip
6.	<ul> <li>Open the application with the PC connected to the controller</li> <li>A. Log in to the application as the Engineer (not the administrator) with the password 6666.</li> <li>B. Go to the settings tab and set the Com port number for the Controller as established above.</li> <li>C. The Controller icon will change colour to show that the Controller is on-line.</li> </ul>

# Phase 2 - Configuring the GSD Controller

Step	Description
1.	Open the 'Doors' tab in the main menu to add the required number of new doors to be part of this network. 1 door will already be added by default. Click on the "+" button to add new doors. "-" to remove doors.
2.	Make sure all doors are 'Enabled' and then click Save.
3.	Open the Settings Tab and do a Full Download to the Controller – this gives the Controller a clean set of instructions before beginning to enrol doors onto the network. This will take approximately 1 minute.
4.	WARNING! A New Network should only be created on first installation. Creating a new network will overwrite any existing network information and any enrolled Door Controls will be un-enrolled. All Door Controls will have to be defaulted and re-enrolled on the new network that has just been created!  A new network is now ready to be created.  Go to the 'Controllers' tab and Click on the 'Create a New Network' button. Click Yes on the 'Hit yes if you want to proceed' pop-up.  Note: The red LED on the Controller PCB will remain ON during the process. It will take about 20 - 60 seconds to complete. The red LED will start to flash again when the Network is created.

# Phase 3 - Enrolling Door Controls

Step	Description
	All Door Controls should be installed at this point and powered up.
1.	<ul> <li>All Door Controls must be defaulted before joining a network.</li> <li>Note: Door Controls will be shipped with their factory default settings.</li> <li>Enter Engineer mode on each Keypad Door Control in the following way</li> <li>A. Press X followed by 6666</li> <li>B. Enter 55 -to default</li> <li>C. Press the tick to confirm - the keypad will now go through the process of defaulting itself.</li> <li>D. When this process has complete hit the X button to leave engineer mode and to put the keypad control in the 'Scan Mode' - the Red Led on the Door Control will now be in flicker mode as an indication.</li> <li>E. Repeat the process for all keypad Door Controls</li> </ul>
	<ul> <li>Enter Engineer mode on each Wi-Bio Door Control in the following way</li> <li>A. Enter 6666</li> <li>B. Enter 55 -to default</li> <li>C. Scan Finger to confirm - the Door Control will now go through the process of defaulting itself.</li> <li>D. When this process has complete Scan Finger again to leave engineer mode and to put the Door Control in the 'Scan Mode' - the Red Led on the Door Control will now be in flicker mode as an indication.</li> <li>E. Repeat the process for all Wi-Bio Door Controls</li> </ul>
	<ul> <li>Enter Engineer mode on each Prox Only Door Control in the following way</li> <li>A. Add a programming card to the Door Control by presenting a card twice on power-up. The security wing must be removed first!</li> <li>B. Present this new programming card to enter Engineer mode.</li> <li>C. Present the programming card again to select "Default mode".</li> <li>D. Present any other card once to default the Door Control.</li> <li>E. When this process has complete the Door Control will be in the 'Scan Mode' – the Red Led on the Door Control will now be in flicker mode as an indication.</li> </ul>

# Phase 3 - Enrolling Door Controls

Description
The controller is now ready to allow Door Controls to enrol onto the Network – click the 'Allow Doors to join this Controllers Network' on the 'Controllers' tab to start the controller scanning for new doors that do not already have an address – only DoorControls without an address can enrol – this will avoid other networks and Door Controls in the same building on a different network becoming part of this new network!
Note: For Wired 485 Door Controls, right click on the Controller on the right hand side of the application and select 'Manually Assign Address' from the drop down menu.
Once all new Door Controls are found by the Controller they will all 'beep' with the number of the next available address/door position on the Controller.
e.g. if door 2 is the next available address then all Door Controls will beep at the same time with 2 beeps. This is basically saying that any door can be assigned to this address – it's up to the installer to decide which one. Also – you will notice that the Key back light of the keypad Door Controls will be illuminated with the next available address as well. i.e. Key 2 will be illuminated for this example.
Go to the Door control that you want to make door 2 on the network system (it should be beeping 2 times). Press any key on this keypad and the system will automatically assign this door control to door 2 location on the system. Present a card if the Door Control is Prox Only.
Note: All other Door Controls will now start beeping with the next available address i.e. '3 beeps' in this instance and so on every time you enrol a new Door Control. The Key back light will also correspond to each address as the system fills up.

# Phase 3 - Enrolling Door Controls

Step	Description
4.	Once all Door Controls are enrolled onto the network — go back to the Controller application and click the 'Secure Network' button — this safeguards the systems — if you select another tab on the aplication this will happen automatically.
5.	Select each Door on the application and configure individual settings such as Timed Actions, Relay Times, Ajar Times, Door Option and Alarm Options etc.
	IMPORTANT: A timezone must be selcted in 'Timed Actions' for one of the options: Card and PIN, Any Card, Card or PIN, or PIN only. If all of these are set to 'inactive' then access will be denied for all cards and PINs on that Door Control.
	Example: Disabling cards/fobs, Enabling PIN codes only on a Wi-PIN&Prox Set the Timed Action "Card or PIN" to "Inactive" and setting the Timed Action "PIN Only" to "All day,Every Day". This will grant access for PIN codes and deny access for cards and fobs.
	To enable or disable Timed Actions at specific times, select a timezone from the drop-down list instead of "All Day, Every day".

# Phase 4 - Configuring Users

Step	Description
1.	Enable a User by ticking the 'Enabled' box for each User
2.	Assign a Name to the User
3.	Assign a UserGroup from the drop-down menu. The Usergroup will determine the access levels for this User. Refer to section below on 'Configuring Access Levels' for information on User Groups.
4.	Assign a Card , PIN number and enrol FingerPrints for the User. Refer to section FingerPrint Enrolment on page 19 Click 'save' to transmit these changes to the Controller.

# Phase 5 - Configuring Access Levels

Step	Description
	Access Levels are controlled by creating UserGroups and assigning the
	UserGroup to a User as decribed in section 'Configuring Users'.
1.	UserGroups are created by combining pairs of DoorGroups with
	Timezones. Each UserGroup can have up to 6 pairs of DoorGroups and
	Timezones. Select DoorGroups and Timezones from the drop-down menus
	to add to the current UserGroup.
2.	Timezones are the periods of time for each day of the week that access
	will be granted. Select times and tick the days of the week this time is valid.
	4 time periods can be created for each timezone. Select 'Holiday Access'
	to grant access for holiday periods. Double click on the 'Holiday Access' to
	add days to the holiday periods. Use the calender to select these days.
3.	DoorGroups are created by grouping doors together. e.g all the entry and
	exit doors could be grouped together as 'Peremiter Doors'. Select a Door
	from the 'All availble Doors' window and drag it to the 'Doors in Current
	Door Group' to add it to the Door Group. Repeat for adding each door.

# Phase 6 - Downloading Configuration

Step	Description
	After all users, access levels and door control settings have been finalised, a full download to the controller should be carried out.
1.	Go to the 'Settings' tab and click on 'Download Configuration'. A pop-up window will appear, tracking the status of the download. All settings will be downloaded to the Controller and Door Controls.

# Enrolling User FingerPrints

Step	Description
	Note: Make sure the USB Fingerprint reader is attached to the PC
1.	Select the User for fingerprint enrollment
2.	Click on the 'Fingerprints' button.
3.	Click on 'Enrol' tick box and place finger on the enrolment reader. An image of the fingerprint will appear on the screen. Ensure that the image quality is good and a value of at least 90% is achieved. Refer to section 'Finger Placement' for correct finger placement and example of good quality image. Repeat this process if this is not achieved on first attempt.
4.	Click 'Save' using a good quality template only. Poor Quality templates can lead to false rejections later when trying to gain access.

#### Correct Finger Placement







Note: Ensure that the core of finger is centered on the sensor window during the enrollment process. This will increase the quality of the fingerprint template

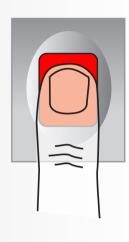
Note: Good Quality image, Fingerprint core is center of sensor window

Note: The System does not store the finger print. It uses an algorithm to generate a binary representation using sample points from the fingerprint. It uses this information to then validate each users fingerprint.



#### **Incorrect Finger Placement**





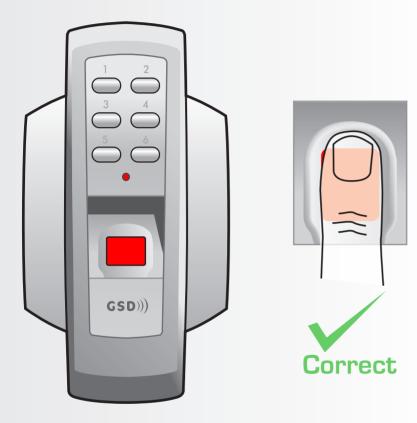
Note: Incorrect placement: finger does not fully cover the sensor window.

# X Poor Quality Image

Note: Poor Quality image, No Fingerprint core on sensor window.

This can result in poor template quality that can lead to false rejection issues later when the user is trying to gain access.



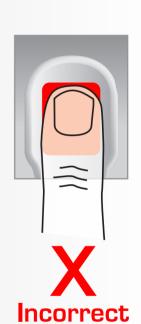


Note: Ensure that the finger is centered and placed flat to the surface and fully covers the sensor window.

Note: Finger must remain on the sensor window until the door control acknowledges that the finger has been scanned by sounding a beep and turning off the red light. This will take approximately 1 second.

#### **Incorrect Finger Placement**





Note: Incorrect placement : finger does not fully cover the sensor window. The door control will not respond and the red light will not turn off if the sensor window is not fully covered by the finger.