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TZ Centurion™ System

Quick Setup Guide





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About TZ

Telezygology, Inc. (TZ) is the inventor of intelligent fastening, locking and actuation devices that in combination with TZ software and communication gateways provide a networked platform that extends traditional access control networks to asset level protection and creates compelling security, locking, monitoring and control applications across a number of market segments.

TZ control networks consist of TZ SMARt locking devices, interconnect modules, physical and environmental sensors and industry standard access control input translators, all of which can be connected to and controlled from stand-alone control devices, computers, via the internet.

Use of Information Contained in This Document

The correct functions of the TZ Centurion system will require consideration of installation and system integration issues such as networking for power and data and subsequent programming for functionality.

The TZ Centurion system described has not been tested or qualified for a specific application other than for compliance to the specification outlined. Specific qualification testing may be required for fit-for-purpose application design.

Caution

Changes or modifications not expressly approved by TZ could void the user's authority to operate the equipment (FCC Code of Federal Regulations Title 47 Part 15.21).

Disclaimer

This document is intended to provide an overview for the set-up and basic operation of the TZ Centurion System.

This document is not meant to be an exhaustive statement of all relevant data. By using this document, however, you agree to accept and comply with the terms, conditions, notices and disclaimer contained in this document.

While TZ has used all due care and skill to ensure that the information contained in this document is accurate, correct, and current at the time of publication, it does not warrant or represent that the information is free from errors or omissions, and does not accept responsibility for any defect in the information.



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1. TZ Centurion™ System



1.1. Introduction

The TZ Centurion System solution truly defines micro-protection. The System's IP based access control system focuses on delivering physical security and environmental monitoring such as temperature sensing, humidity sensing and leak detection at the most granular level from anywhere in the world. TZ Centurion is a cost effective, flexible, retrofitable and easy to implement solution that has been designed specifically to protect your organisation's most valuable and sensitive assets.

Built on an open and extendable architecture, the patented decentralised and embedded intelligence within the system locking devices provide an unprecedented level of capability that cannot be readily delivered by conventional systems in terms of the integrity, control, auditability and traceability of discrete assets.

Up to 32 TZ locking devices and 64 TZ Sensors can be connected to each TZ Centurion Bridge. Each TZ Centurion Bridge can be managed individually or scaled to a larger system, allowing hundreds of networked TZ locking devices, sensors, gateways and other third party components to be administered through TZ Centurion Server software or through a third party network management system that supports Simple Network Management Protocol (SNMP).



2. System Components

The TZ Centurion™ System comprises the following components:

Description	Model #	Part #
TZ Centurion Bridge	7130CF	112271.01
TZ Centurion Multi-Port Link	7105CL	112004.02
TZ Centurion Port Link	7101CL	112330.01
TZ SlideHandle (available with various mounting kits)	4265CF	112479.01
TZ Temperature Sensor	8116CF	112328.02
TZ Humidity Sensor	8117CF	112328.01
TZ Leak Detection Sensor	8118CF	112328.03
TZ Door Contact Sensor	8115CF	112354.01
TZ Centurion Wiegand Translator (connects third party readers)	8105CF	112074.01
TZ Centurion RFID	8101CF	112167.01

2.1. Required for Installation

TOOLS

- > Flathead screwdriver - #2
- > Flathead screwdriver - 1.4mm
- > Philips Head screwdriver - P2
- > Ratchet and 10mm socket
- > Wire cutters / strippers

MATERIALS

- > CAT5e/6 cable (see last page for details)
- > Electrical tape or heat shrink tubing for 4 wire extension, if necessary
- > Cable ties, various sizes – cable and device management and mounting as necessary
- > Alcohol wipes to clean surfaces for sensor mounting
- > Double sided tape to hold sensors in place prior to final mounting



3. Cabling Protocols

TZ recommends that you plan out your cabling before installation in order to ensure that the proper cable lengths are on hand when you start installation of the TZ Centurion System. Plans and cable requirements will differ significantly depending on the layout of the System. Please note that there are several different types of cabling and communication protocols used in the TZ Centurion System.

To connect the TZ Centurion Bridge to the existing network, standard straight through UTP CAT5e/6 with RJ45 connectors are required. The TZ Centurion Bridge communicates across the network via standard Ethernet (802.3) protocol.

Cabling between the TZ Centurion Bridge, TZ Centurion Port Link and TZ SlideHandle locking devices are via standard straight through UTP CAT5e/6 with RJ45 connectors. However, the TZ Centurion Bridge uses the RS485 serial protocol to communicate with the TZ Centurion Multi-Port Link, TZ Centurion Port Link and TZ SlideHandle locking devices.

It is recommended that the CAT5e/6 cabling used for RS485 communications be differentiated from that being used for data communications. It is common practice to use cabling of different colors for different traffic in the data center (e.g. blue = data, white = VoIP, purple = 1GB backbone, etc.). The CAT5e/6 cable between TZ Radials and TZ SlideHandles, TZ Centurion Port Link, TZ Centurion Multi-Port Link, TZ Centurion Bridge and/or cabinet patch panels should be differentiated by color from the cabling carrying Ethernet traffic into and throughout the data center.

As CAT5e/6 cables connecting TZ Radials and TZ SlideHandles to TZ Centurion Port Link or TZ Centurion Multi-Port Link hubs will be routed inside a cabinet door and be subjected to flexing as the door is opened and closed, it is recommended that you use UTP Stranded CAT5e/6.

For cable used for infrastructure from a cabinet back to a TZ Centurion Bridge, it is recommended to use UTP Solid CAT5e/6.

The TZ SlideHandle locking devices is powered over the CAT5e/6 cable. They are powered from the TZ Centurion Bridge or TZ Centurion Multi-Port Link. The maximum cable length from the closest power source (a TZ Centurion Bridge or TZ Centurion Multi-Port Link) to a TZ SlideHandle is 100m. A cable run from a TZ Centurion Bridge to a TZ Centurion Multi-Port Link that is powered can be much longer than 100m. The 100m limitation is specific to cables running to locking and RFID reader devices.

The Temperature, Humidity and Leak Detection sensors use standard 4-conductor cable that end in a terminal block that plugs into the TZ Centurion™ Port Link. For the TZ Temperature Sensor, the solid orange wire should be terminated at [AUX-IN 1] and the solid blue wire in the [GND]. For the TZ Humidity and Leak Detection Sensors the white/orange wire should be terminated in the [AUX-IN 1], the solid blue wire in the [GND] and the blue/white wire in the [V+].

The door sensors for the TZ SlideHandle locking devices have a 1.2m (4') length of 2 wire cabling attached to them. They may be cut to length as the cabling layout requires. Due to range of possible cabinet designs and materials, door sensor placements should be tested for continuity prior to final placement. TZ prefers testing sensor placement for continuity using a multimeter prior to attaching to the TZ SlideHandle™. If a multimeter is not available, continuity may also be tested using the TZ Centurion web UI.



4. How to Locate and Log into a TZ Centurion™ Bridge on the Network

Screen



Description

With TZ Centurion Bridge connected via Ethernet cable to a laptop or network, launch Internet browser of choice.

Note: If connecting directly to a laptop, turn off WLAN to avoid IP conflicts.

Use TZ Centurion Bridge Console.exe utility to find the Centurion Bridge IP address if attached to a network.

Note: DHCP is enabled by default on the TZ Centurion Bridge.

Click the IP Address of the device you would like to manage. The TZ Centurion Bridge Console will open the default web browser and load the TZ Centurion Login page.

If not on a network, try default IP address of 169.254.1.1 in the browser address bar and press [ENTER].

Note: If the TZ Centurion Bridge is not immediately found with the Device Discovery application or by typing the default IP address into a web browser, try rebooting the PC/Laptop while not connected to a local area network. Turn off your wireless LAN adapter and ensure that you are connected using a standard CAT5e/6 straight through cable; NOT a cross-over cable.



The TZ Centurion login screen will appear. This can take up to 20 seconds to respond.

The default Login and Password for the TZ Centurion web interface are:

Login: admin

Password: admin

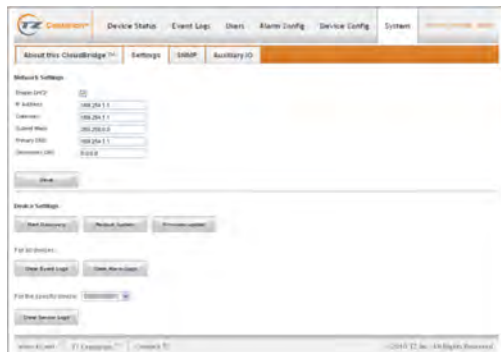
Type both into their appropriate fields and click the [LOGIN] button.



5. How to Discover, Configure and Activate TZ Devices on The Network

Screen

Description

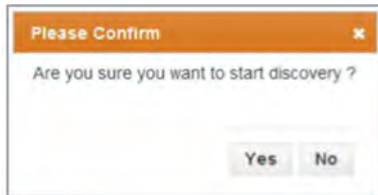


If this is the first time logging into the TZ Centurion Bridge, you must first configure the devices attached to the TZ Centurion Bridge.

Under the **SYSTEM** tab you can define and configure network addresses, SNMP, Auxiliary and other central settings. This is where you will discover all devices (locks and RFID readers) attached to your TZ Centurion Bridge.

Click the **SYSTEM** tab and then the **SETTINGS** sub-tab.

Click the **START DISCOVERY** button under the Device Settings section about half way down the page.



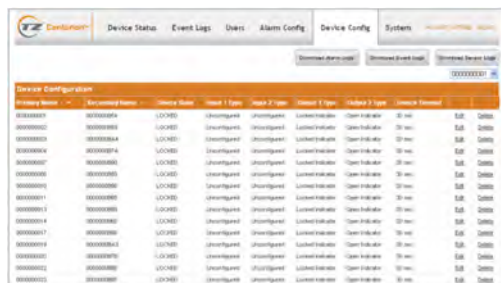
A confirmation dialog will pop up asking that you confirm that you want to **START DISCOVERY**. Click **<YES>**.

This will interrogate the TZ network and return with a list of attached devices.

Note: The discovery process may take up to one minute depending on the number of devices attached to the System.



When the Discovery is complete, a new dialog window will appear that states **DISCOVERY START SUCCESSFUL**.



To see all devices found, click the **DEVICE CONFIG** tab. The devices attached to the System will be displayed in the table.

Note: The TZ Centurion System is limited to 32 devices. Devices are defined as TZ SlideHandle and the TZ RFID + Wiegand Translator and TZ Wiegand Translator for third party RFID readers.

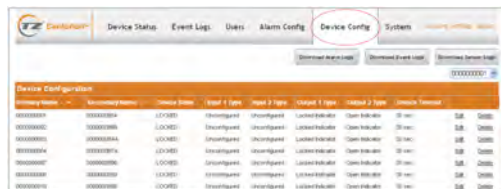
TZ Sensors, TZ Centurion Port Link and TZ Centurion Multi-Port Link components are not counted as “devices” in a TZ Centurion Network.



6. How to Edit Device Settings and Connect/Configure Sensors

Screen

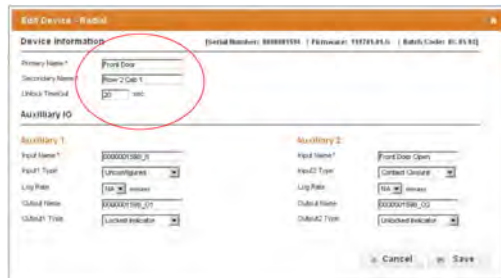
Description



Once all devices are “discovered” the devices on your TZ network must be configured.

All of the settings and connections for the devices in the TZ network are displayed under the **DEVICE CONFIG** tab.

To edit the settings of a particular device, click on the “edit” link of the device in question

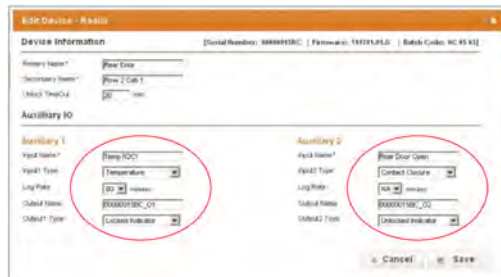


In the **EDIT DEVICE** pop-up window, all of the details for a particular device are set. The Primary Name, Secondary name and unlock-timeout can all be edited here.

Note: For this example the TZ Radial locking devices are named ‘Front Door’ and ‘Rear Door’.

TZ recommends a naming scheme based on the cabinet number scheme so it is immediately recognized which cabinet is open when an alarm is sent.

The **UNLOCK TIMEOUT** refers to the period of time in which unlocking will be active, allowing the handle lock to be physically unlocked by pushing on the top of the handle.



If an add-on sensor is connected to Auxiliary 1, type in a descriptive Input Name to define the sensor on the system and select the type of sensor using the drop down.

Note: In this example, the Temperature Sensor is associated with “Rear Door”.

If a sensor is to be used elsewhere, make note of the Input Name and change it to something pertinent to the situation.

Click [**SAVE**].

Note: The TZ SlideHandle uses Auxiliary 2 exclusively for the Contact Closure. This is the Door Sensor that ships with the TZ SlideHandle.



7. How to Create an Alarm for a Device (door, temperature, humidity or leak detection sensor)

Screen



Description

If the alarm is going to depend on a particular sensor, make sure that the sensor is set up correctly as described above in the section “How to Edit Device Settings and Connect / Configure Sensors.”

Go to the ALARM CONGIF tab and click the [ADD ALARM] button.

Type a title in for the alarm.

Note: In this example, “Row 2 Cab 1 Temp” so we know the location when the alarm goes off.

Select the source for the alarm from the drop down. This is a list of all of the sensors and switches connected to the auxiliary inputs from the devices.

Note: In this example we are using the Temp R2C1 device we setup in the previous step.

Enter in the trigger and reset values. For temperature, there are minimum and maximum trigger values - for cases where the environment might be either too hot or too cold. When the output from a sensor goes beyond the trigger value, the alarm will be “on” and will stay on until the sensor goes below the reset value.

Choose an action to perform for the alarm from the **ACTION** drop-down list. Unless an output device is attached that can be activated (e.g.: fan, light, audio alarm), the default selection is **LOG EVENT ONLY**.

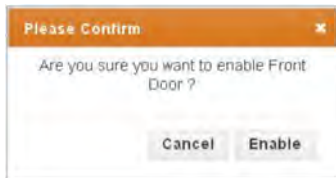
Click the [SAVE] button and the alarm is added to the list of available alarms.

To edit an alarm in future, simply click the [EDIT] link next to the alarm.



10. How to Check Device Status, Unlock and Open Doors Remotely

Screen



Description

Upon logging in, the user is presented with a screen showing the status of every device that user has permission to see.

To directly open a device, click on the door icon.

To unlock a device:

- > Make sure that the **UNLOCK TIMEOUT** field in the **EDIT DEVICE** popup under the **DEVICE CONFIG** tab is set to number greater than zero.
- > In the **DEVICE STATUS** window, click on the **[LOCK]** icon.
- > A prompt will appear requesting confirmation of the unlock request.
- > Click **[ENABLE]** button.

Now the TZ SlideHandle is in a state where unlocking is enabled, but the door is still “latched” closed (as shown in the example).

Go to the cabinet with the TZ SlideHandle that is flashing orange.


















Press the top of the TZ SlideHandle the same as you would on a ballpoint pen.

The top of the handle will pop up, unlatching the door, and the LEDs will show green.

The door status will show open and when the **UNLOCK TIMEOUT** expires, the lock icon will return to a locked state (as shown in the example).



11. TZ SlideHandle™ Modes

TZ SlideHandle™	Device Status	Door State	Description
Solid Red 	 Locked	 Closed	Handle is down, unlocking is not enabled, door is closed
Solid Green 	 Locked	 Open	Handle is up (via authorised access), unlocking has timed out, door is open
	 Unlocked <i>Push down on top of handle to unlock</i>	 Open	Handle is up (via authorised access), unlocking is enabled, door is open
Flashing Orange 	 Unlocked <i>Push down on top of handle to unlock</i>	 Closed	Handle is down, unlocking is enabled, door is closed
		 Open	Handle is down, unlocking is enabled, door is open (For example, after handle was inadvertently closed with the door open)
Flashing Red 	 Locked	 Open	Handle is down, unlocking is not enabled, door is open
	 Error	 Error	Handle opened with key Communication problem



12. Notes (device and user configuration details)

Cable Types and Lengths Needed

From	To	Cable	Protocol	Cable Length
TZ Centurion Bridge	TZ Centurion Port Link	CAT5e/6	RS485 (serial)	
TZ Centurion Port Link	TZ SlideHandle (Front)	CAT5e/6	RS485 (serial)	
TZ Centurion Port Link	TZ SlideHandle (Back)	CAT5e/6	RS485 (serial)	
TZ SlideHandle (Front)	Door Sensor	2-wire	Relay	
TZ SlideHandle (Back)	Door Sensor	2-wire	Relay	
TZ Centurion Port Link	TZ Temperature Sensor	2-wire	Analogue	
TZ Centurion Port Link	TZ Humidity Sensor	3-wire	Analogue	
TZ Centurion Port Link	TZ Leak Detector	3-wire	Relay	

Hardware Configuration

Locks	Primary Name	Secondary Name	Aux 1 Input Name	Aux 2 Input Name
TZ SlideHandle	Front Door	CAT5e/6	RS485 (serial)	
TZ SlideHandle	Back Door	CAT5e/6	RS485 (serial)	

Sensors	Input Name	Type	Aux 1/ Aux 2	Lock Primary Name
Sensor				

Log In Users

Full Name	Login Name	Password	Notes:

RFID Users

Permissions

User Name	Card Number	Front	Back



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