

GE  
Industrial Solutions

# EntelliGuard\*

## Manager Gateway

User Guide



imagination at work

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## EntelliGuard Manager Gateway

### Overview

The following manual walks through the features and capabilities of the GE EntelliGuard Manager Gateway system. The GE EntelliGuard Manager Gateway allows the user to monitor the status and settings of a circuit breaker line up via smartphone or tablet. The RS-485 Modbus connection is brought from the EntelliGuard Trip Units to the serial port on the EntelliGuard Manager Gateway. Up to 8 breakers can be connected to the device.

The EntelliGuard Manager Gateway is a wireless computer that broadcasts its own Wi-Fi signal. The user needs to connect to the Gateway Wi-Fi to view breaker information. The signal has a range of approximately 50 feet.

The EntelliGuard Gateway hardware needs to be installed first. For installation instruction, refer to:

- EntelliGuard Manager Gateway – Installation Instructions (**DEE-702**)
- EntelliGuard Manager Toolkit – Installation Instructions (**DEE-688**)
- EntelliGuard Manager Toolkit User Guide (**DEE-689A**)



Figure 1. EntelliGuard Manager Gateway

### Getting Started

#### Requirements:

- EntelliGuard Trip Unit with Software version 8.00.27 or later
- EntelliGuard Manager Toolkit TKS Software
- EntelliGuard Digital Test Kit (GTUTK20)
- EntelliGuard Manager Gateway device
- Serial cable to connect to computer

#### Configuring the Gateway Name

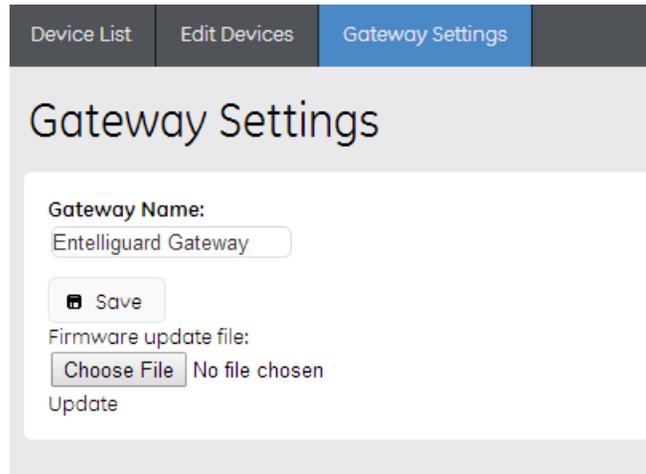
Before installing the EntelliGuard Manager Gateway, it is recommended to configure it. To configure the gateway do the following:

- 1) Power on the gateway using the 5Vdc wall wart power supply

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- 2) Wait two minutes and then using a computer or laptop, connect to the “Manager\_Access\_pt” Wireless Signal
- 3) Open **Firefox** or **Chrome** browser and type the following URL: 192.168.40.01

This will take you to the EntelliGuard Manager Gateway Setup Page. Once connected, simply select the “Gateway Setting” tab and type the name of the Gateway (See figure below for example). To save changes, click “save”.



The screenshot shows a web interface with three tabs: "Device List", "Edit Devices", and "Gateway Settings". The "Gateway Settings" tab is active. Below the tabs, the title "Gateway Settings" is displayed. Underneath, there is a form with the following elements: "Gateway Name:" followed by a text input field containing "Entelliguard Gateway"; a "Save" button; "Firmware update file:" followed by a "Choose File" button and the text "No file chosen"; and an "Update" button.

Figure 2. Naming the Gateway

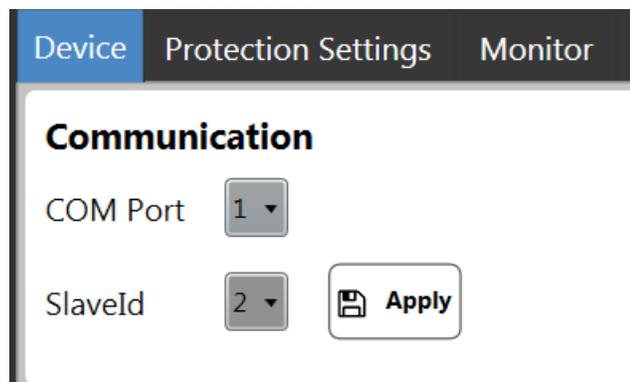
*Note: it takes a few minute for the Gateway Name to get updated*

### Naming EntelliGuard Trip Unit

The EntelliGuard Manager Gateway requires that the EntelliGuard Trip Units be named before the system is installed. This will allow the device to scan the RS-485 network and auto detect the breakers that are in the network.

The breaker can be named by using the EntelliGuard Manager TK tool.

- 1) Connect to each breaker using the Testkit GTUTK20, laptop and serial cable.
- 2) Run the EntelliGuard manager TK software
- 3) Select the right COM Port and SlaveId and connect



The screenshot shows a software interface with three tabs: "Device", "Protection Settings", and "Monitor". The "Device" tab is active. Below the tabs, the title "Communication" is displayed. Underneath, there are two dropdown menus: "COM Port" set to "1" and "SlaveId" set to "2". To the right of the "SlaveId" dropdown is an "Apply" button.

Figure 3. Connecting to Breaker

- 4) Once connected add trip unit's name

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**General Settings**

Name

Figure 4. Naming EntelliGuard Trip Unit (Max of 10 characters)

For more information on how to change the Trip Unit name, please refer to the EntelliGuard Manager Toolkit User Guide (DEE-701).

### Notes:

- All breakers connected to the EntelliGuard Gateway must have different *Modbus Address (Slave ID)* and *Name*
- All breakers need to have Modbus Baud rate of **19.2K8N1**
- If two devices are added with the same Modbus Address (Slave ID), the same information will be displayed for both devices

### Installing the Gateway

To install the EntelliGuard Manager Gateway, please refer to the EntelliGuard Manager Gateway – Installation Guide (DEE-702).

### Downloading Application

The App can be downloaded through the Google Play on Android devices. iTunes will offer the App in the near future for IOS devices. Simply search for “EntelliGuard Manager” and download the application on any Android device.



Figure 5. EntelliGuard Manager Gateway App

### Running Application

Once the Gateway is installed and the breakers are connected to it, the user can launch the application. When the app is first opened, it will try to detect available EntelliGuard Gateways. Make sure the smart phone or tablet is connected to the “Manager\_Access\_pt” Wi-Fi network before running the application.

Once it is launched in the network the app will automatically identify the gateway as seen in the figure below.

## EntelliGuard Manager Gateway

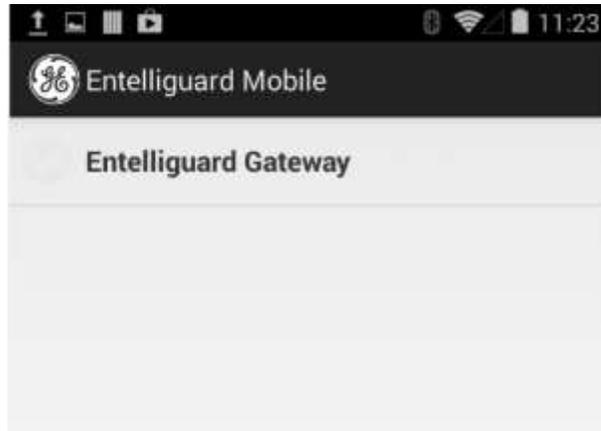


Figure 6. Available EntelliGuard Gateway

Once a Gateway is identified, users can tab on the Gateway to view the breakers in the network

**Note:** If the app is opened outside the “Manager\_Access\_pt” network, it will not detect a Gateway and nothing will be displayed.

### Device List

Once the Gateway is selected, the Gateway will automatically scan the Modbus Network and identify the breakers in the network. For this to work properly each circuit breaker must have:

- Unique Modbus Address (Slave ID)
- Unique Name

The name of each trip unit would be displayed. See figure below for example:

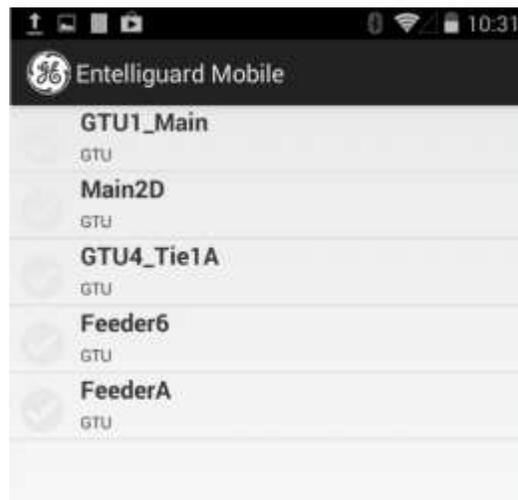


Figure 7. Device List

Once the desired breaker is selected, the app displays the Trip Unit Overview.

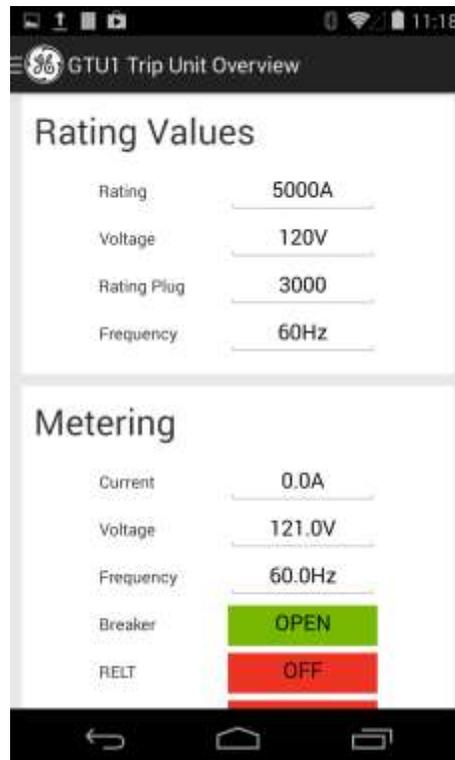


Figure 8. Trip Unit Overview

### Manually Adding Device

If a breaker did not get automatically detected, it can be manually added to the circuit breaker list. Complete the following steps to add a device:

- 1) With a computer or laptop connect to the "Manager\_Access\_pt" Wireless Signal
- 2) Open Firefox or Chrome browser and type the following URL: 192.168.40.01
- 3) Go to the Edit Device tab and select "Add Device"
- 4) Manually add the device:

The name needs to be the same as the name programmed with the EntelliGuard Manager Toolkit software, and it needs to have the right Modbus Address (Slave ID)

**Add Device** [X]

Device Name:

Modbus Address:

Figure 9. Adding Device

## EntelliGuard Manager Gateway

### Monitoring

To monitor a breaker, simply go to the “Trip Unit Overview”. Here one will be able to see the breaker status and metering information. The user will also be able to see the reactive, real and apparent power as measured by the trip unit. The breaker metering information is constantly pulled so that a user is able to see the effects that different loads have on their system.



Figure 10. Trip Unit Overview Monitoring Breaker

To view breaker settings, event logs or breaker information, tab to the top right menu icon and a list of Trip unit menus will be displayed.

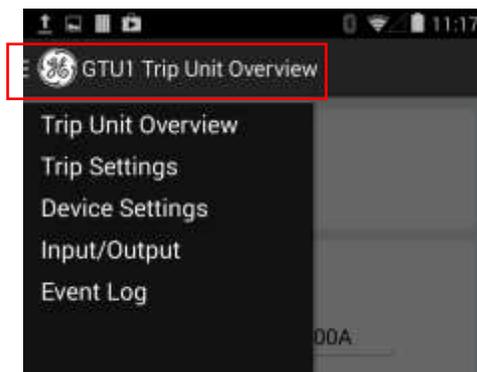


Figure 11. Trip Unit Menu

### Trip Setting

The breaker settings can be viewed by selecting “Trip Settings”. This will load the breaker protection settings on the mobile device.

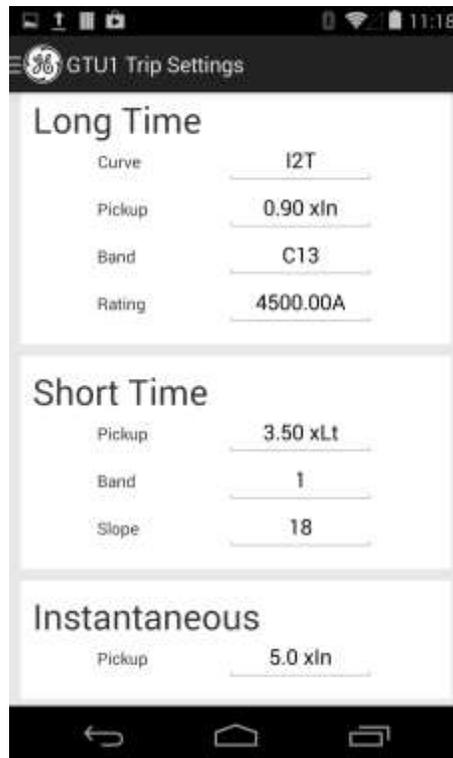


Figure 12. Breaker Setting

### Device Setting

The trip unit configuration settings can be viewed by selecting “Device Settings”. This gives an overview of the breaker configuration.



Figure 13. Device Settings

## EntelliGuard Manager Gateway

### Input/Output

Here the user will have an overview of the available input/output available for the breaker.

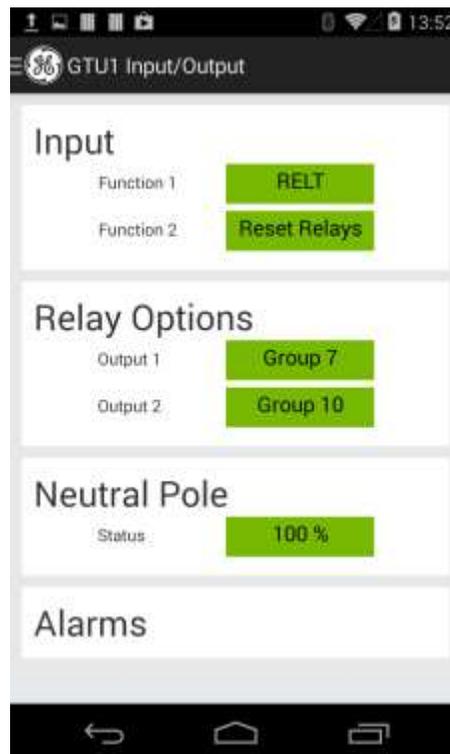


Figure 14. Input and Output Screen

### Trip History and Events

The Breaker trip history and events can be viewed by selecting “Event Log”. The breaker is able to record up to ten trip events. Event Log displays the name of the event (Short time Trip, Over Voltage...etc.) and gives an insight of the current level and the affected phase.

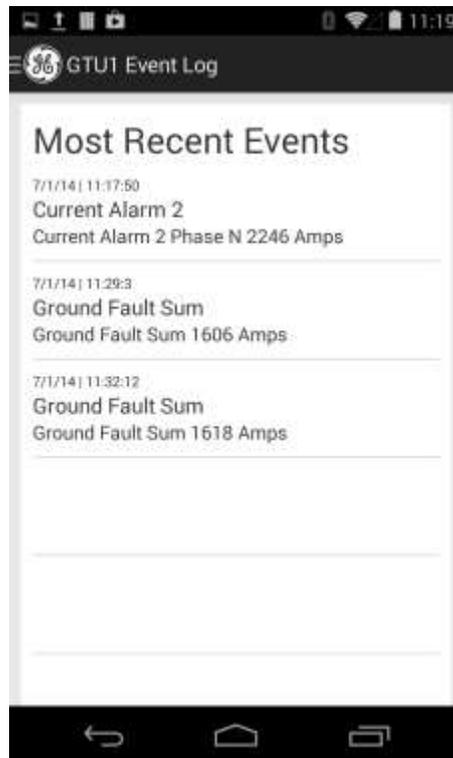


Figure 15. Event Log

### Downloading Software Update

Software updates will be available on the EntelliGuard Manager Gateway website. To update the gateway, complete the following steps:

- 1) With a computer or laptop connect to the "Manager\_Access\_pt" Wireless Signal
- 2) Open Firefox or Chrome browser and type the following URL: 192.168.40.01
- 3) Go to the Gateway Settings
- 4) Under firmware download, click the Choose File button and select downloaded file

The gateway will automatically update.

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