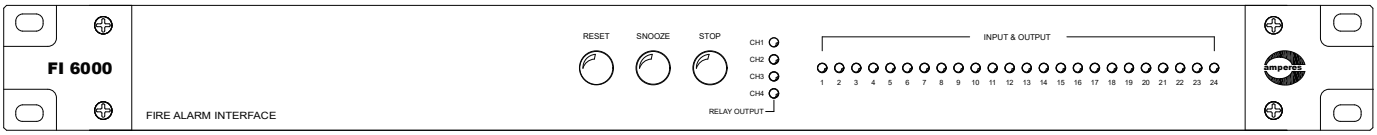
INSTRUCTION MANUAL

FI6000 MKII

Fire Alarm Interface



Thank you for choosing another quality product from Amperes Electronics

Product in Summary

FI6000 is on version II, which is an upgraded product allowing convenience to the installer to perform setup through its web browser. Key features are maintained or improved, making it a suitable and inevitable product for fire alarm interface to your PA system.

As part of regulatory requirements, such as EN54 or BS5839 Part 8, it is necessary that voice alarm to be initiated whenever a fire detection is initiated and the messages are to be broadcasted in orderly manner, from warning to final evacuation order.

FI6000 MK II allows the user the flexibility to setup message activation in relation to the zone (s) triggered. It is suitable for UART communication with other Amperes products such as TD6400 or MR1301 MK II or applying it with other brands with its dry contact outputs to perform any activity. Bicolour indicating LEDs are available for quick visual monitoring.

Please keep this manual for future reference and we trust that FI6000 MK II will perform beyond your expectations.

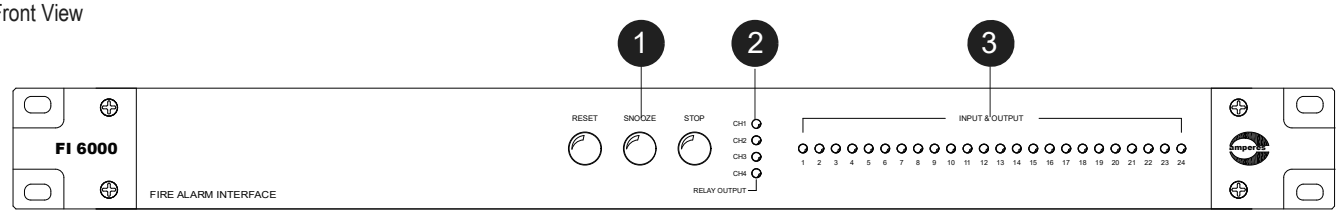
Scan to view catalogue and latest updates

Ver 3 / 0525

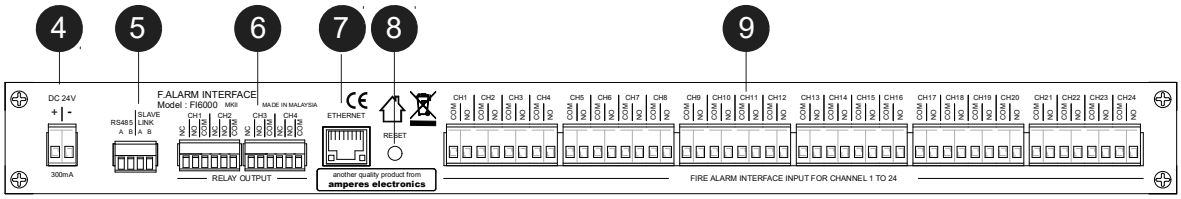
In our support towards conservation of environment, we will no longer print manuals to be accompanied with each product. Please view through web browser and print them only when necessary.

Parts Identification

Front View



Rear View



1. RESET, SNOOZE, STOP BUTTONS

The switches are used to manage the alarm as :

RESET : Reset the device which is to reset all tasks
SNOOZE : Temporary stop the execution of tasks
STOP : Stop execution of current task

2. RELAY INDICATORS

LEDs to indicate which relay contact is currently active.

3. CHANNEL INPUT LED INDICATORS

These bi-colour LEDs represent the status of the individual channel.

Green : Channel is enabled but not active
Red : Channel is enabled and activated
Blinking : Alternated blink of green and red indicates the channel is active but in snooze or stop mode.
Off : Channel is disabled.

4. DC POWER CONNECTOR

Use a 24V 0.5A rating power source, with Amperes PS9400 regulated power supply recommended.

5. RS485 DATA PORT

RS485 data port is used to interface with other Amperes products. The slave link is a dedicated port to link to FI6001 channel extension link (to be available in future).

6. RELAY CONTACTS

The 4 dry contacts are available to trigger external devices and the activation can be programmed in accordance to the triggered channel.

7. ETHERNET PORT

It is to access the device via Chrome, Edge, Firefox web browser (for configurations and can be connected directly to a PC / Notebook or through a network switch.

8. RESET BUTTON

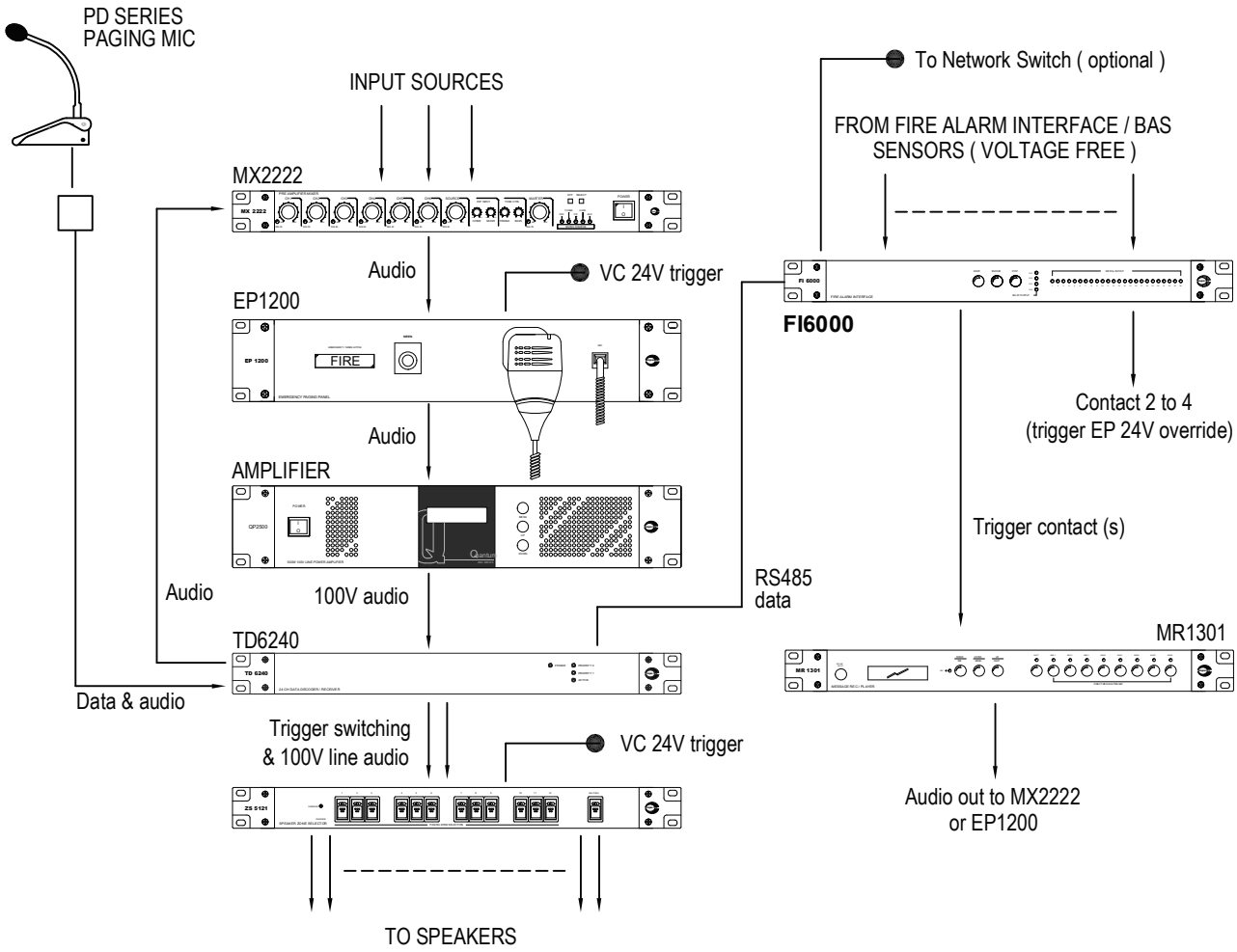
It is used to reset the device, enter bootloader mode or restore to factory default configuration.

9. CHANNEL INPUT CONNECTORS

24 channels of external connections to sensors / link to BAS / FAS with dry contact (voltage free).

Schematic Diagram

CONVENTIONAL SYSTEM



In the above application, FI6000 MKII shall be used to generate systematic auto voice announcement according to the preset zones. The inputs section shall be connected to external sensors or Fire Alarm System and in any event, it shall trigger the required zone via TD6240 / ZS5121 and plays required message via MR1301 MKII.

RS485 data from FI6000 MKII can be used to trigger TD6240 or TD6400 as well as MR1301 MKII.
Additional dry contact port of FI6000 can be used to trigger Volume Control overriding (through EP1200).

The sequence of activities (tasks) has to be set accordingly to avoid loss of communication. Such as, when channel 2 is triggered :

> Trigger EP VC Override >> Trigger Zone 1,3,4 >>> Trigger Message 1

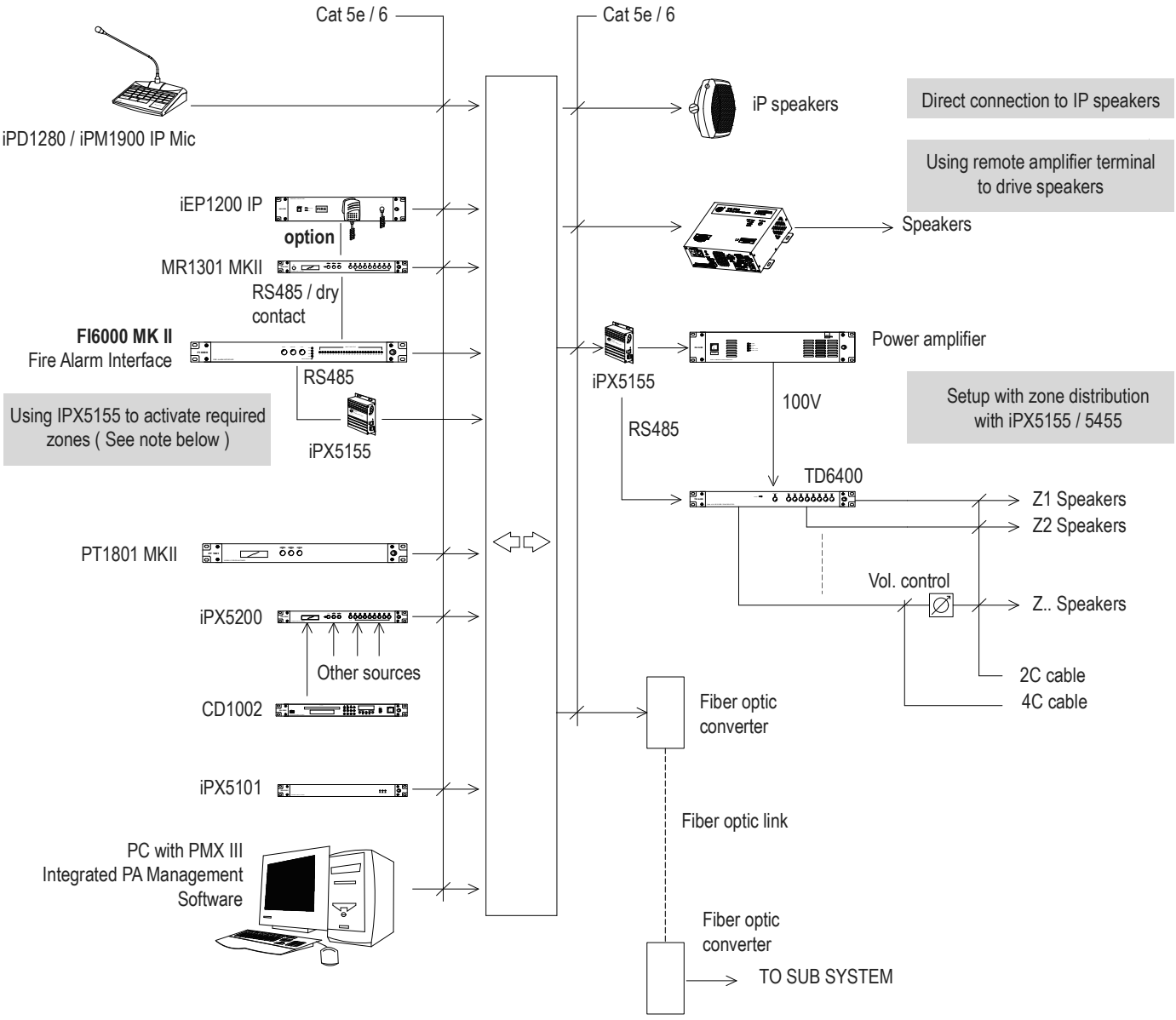
The sequence can be set using internet browser via ethernet connection. Once configuration is completed, the PC or notebook can be disconnected and the device will operate independently.

Note :

VC overriding relay can be triggered via various means, either through EP1200, directly from FI6000 relay contact or ZS relay contact. They can be paralleled to provided multi point override triggering.

Schematic Diagram

IP SYSTEM

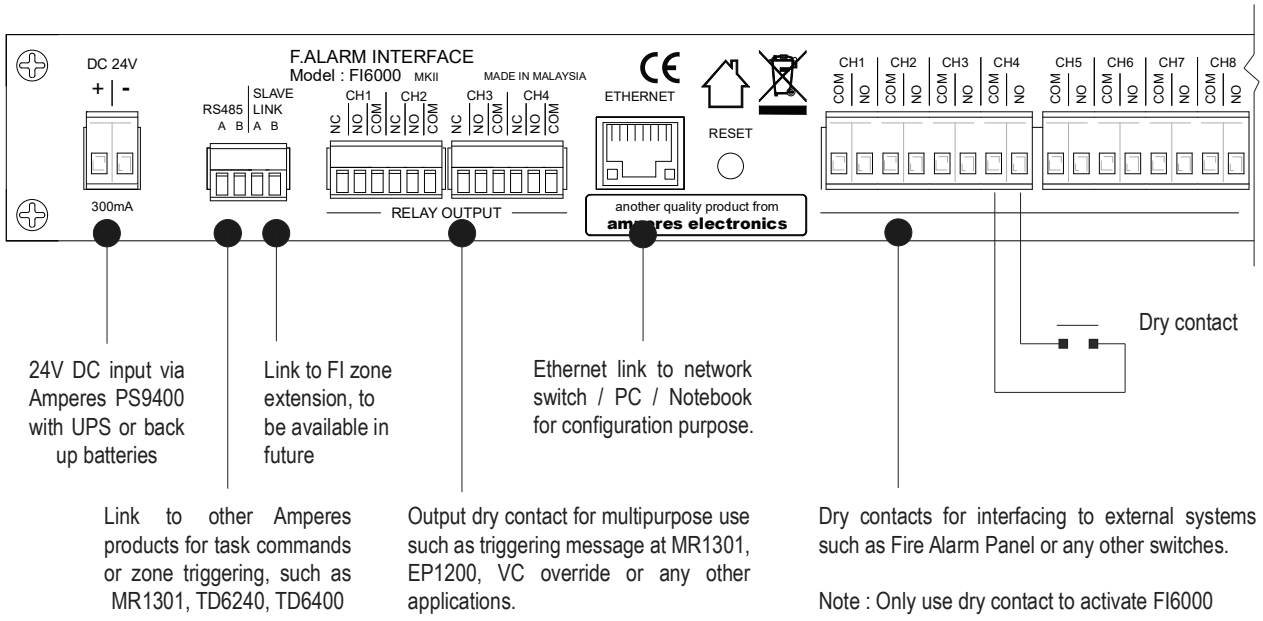


The above schematic shows application of FI6000 MKII in IP PA system. It is used to activate required message in MR1301 with 2 options :

Specific zone triggering :
It will require iPX5155 to activate zones as configuration done at FI6000 in accordance to channel triggered, and thereafter will broadcast the relevant message. Connection to iPX5155 will be only RS485. Connection of MR1301 to iEP1200 will not be required.

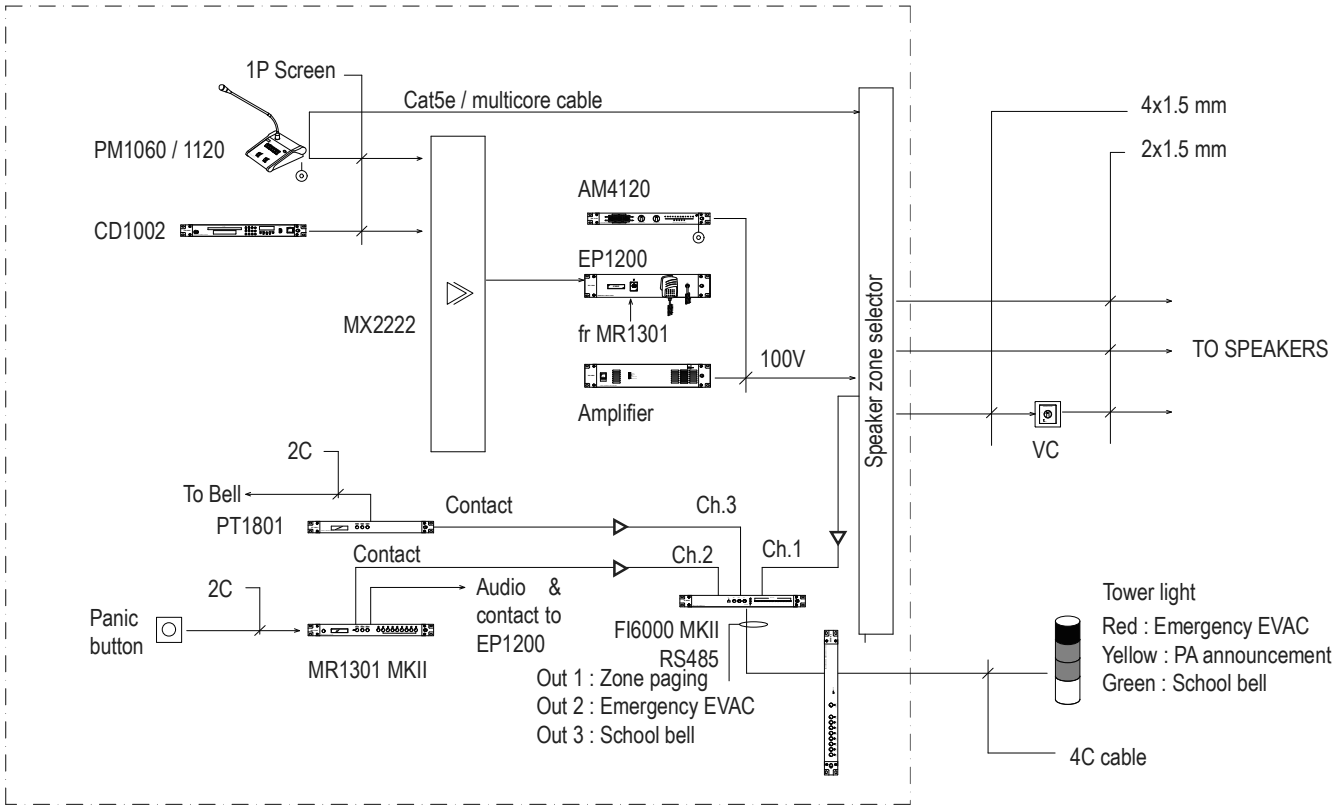
All Call zone triggering :
If no specific zone triggering required upon activation of FI6000, you may omit iPX5155 and utilize the all zone call feature at iEP1200.

Connecting the Unit



Application Note :

Although FI6000 MK II is intended to be used with Fire Alarm System, its application is not limited as specified. It can be used as a tool to generate a sequence of functions by using the dry contacts as activation point. See example below :



The above schematic shows application of FI6000 to activate tower lights of 3 colours to supplement audio paging. Activation of panic button or message by timer will both broadcast audio as well as light indication. This configuration can be applied to hearing impaired institution.

Web Configurations

The device requires some configurations before operating, which is performed in the web browser.

Enter the default address at 192.168.0.100. The default Username and Passwords are both “ admin ”

You may need to change this later to avoid address conflicts and for security reason.

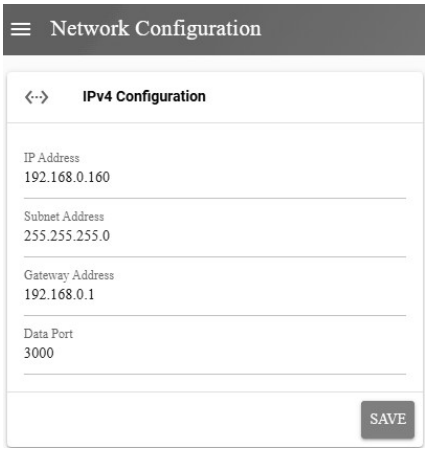
Landing page

DEVICE INFO

Information on this tab shows the device’s information such as firmware version, serial number, the build date, and related network information.

No action is required in this tab.

NETWORK CONFIGURATION

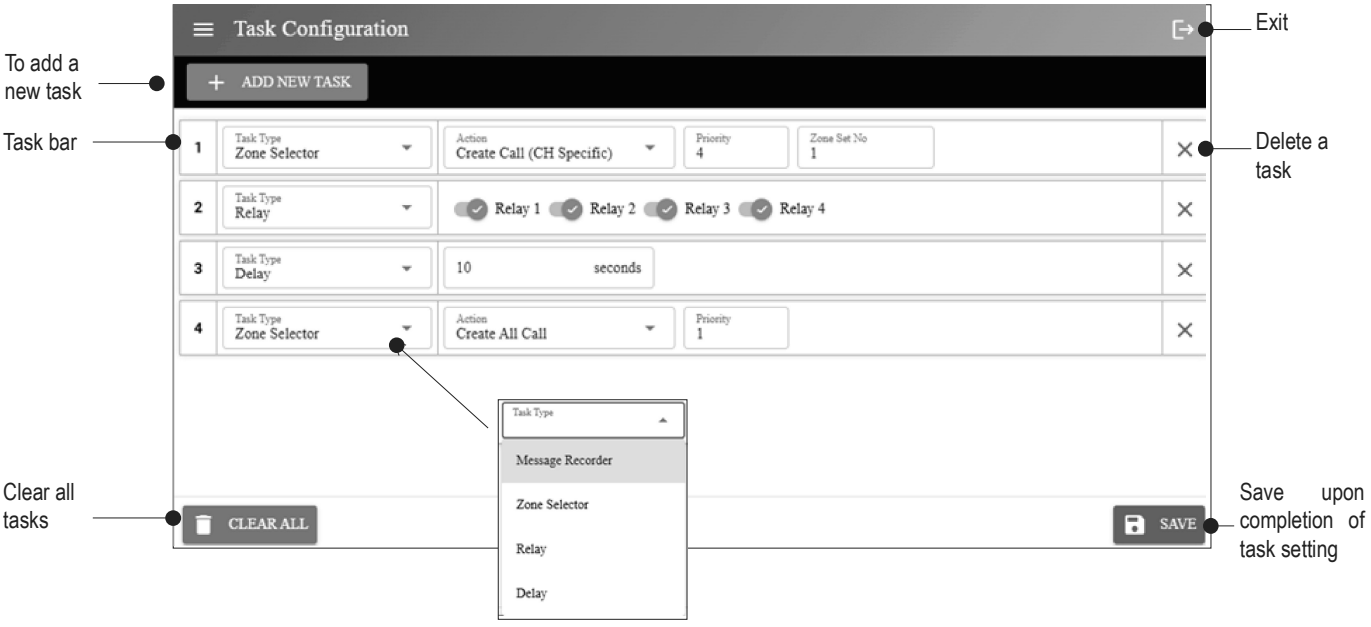


Assign a new address to the device. Leave the data port unchanged. FI6000 MK II supports various class of IP address.

Click “ SAVE ” after changing the parameters.

TASK CONFIGURATION

Whenever FI6000 is triggered, it will perform tasks set here in sequence, irrespective of which input channel is activated. At task type, there will be several options to select what the device will work on.

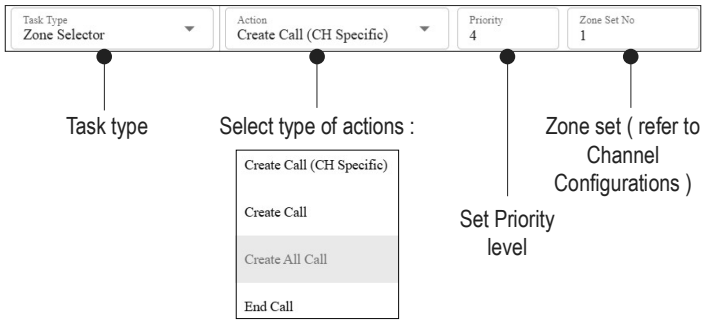


Web Configurations

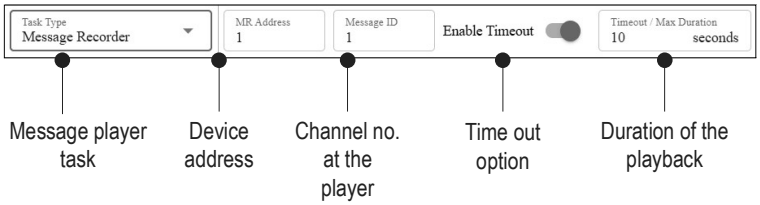
Task type : Zone selector

Zone Selector task type will trigger the zones created at Channel Configurations for the particular trigger zone. It can be channel specific (set of zones) or All Call.

Whenever zone calling is created, it is always recommended to add End Call task to dactivate the zones or else the zones will stay active until the next channel get triggered.

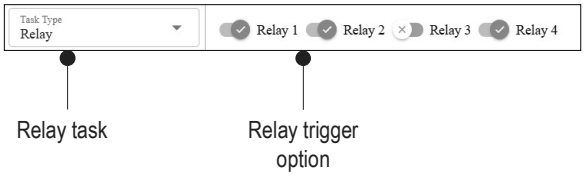


Task type : Message Recorder



FI6000 can be used to trigger message player (Amperes MR1301) via RS485, triggering specific message file at specific device if more than one MR1301 are installed.

Task type : Relay



There are 4 relay contacts available at the back of the device which can be used for variety of purpose such as :

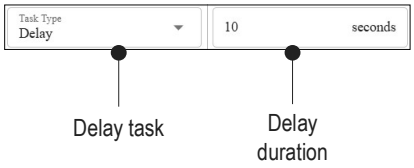
- Trigger volume controller overriding
- Powering up external indicating devices, ie. tower light, beacon, sounder
- Interface with other brand of equipment

The max contact rating for the relay is 3A.

Task type : Delay

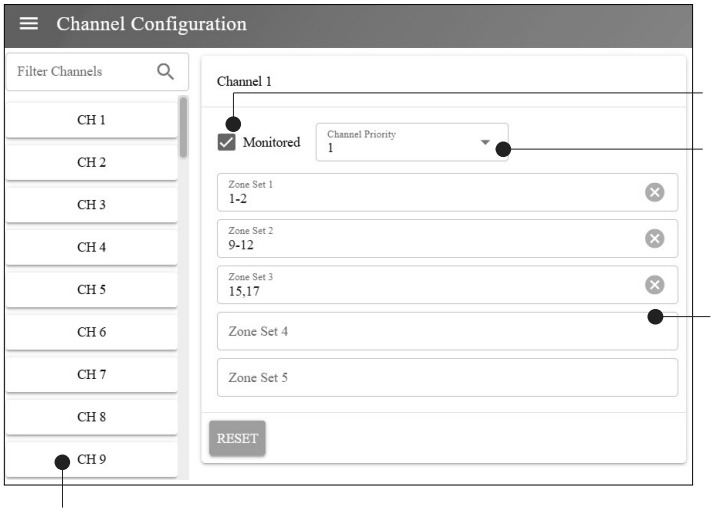
The delay option allows a period of inactivity between tasks before executing the next action. Do note that the previous task will still be active unless turned off such as zone triggering.

Example : if the previous task triggers a zone and playing a message, the zone will still be in ON state after completing the announcement when the delay function kicks in.



CHANNEL CONFIGURATION

The channels refer to the input ports which receive dry contact from external devices such as fire alarm panel, panic switch or any other triggering devices. Upon receiving a contact, the device will trigger the sequence of task in Task Configuration with zone triggering set at this page.



Check this box means the channel will be monitored and under normal condition, the LED will turn Green. If unchecked, the LED will be off.

Priority setting determine which channel to run when 2 or more channels being triggered simultaneously. When priority takes over, the ongoing task will be terminated and FI6000 will re-execute the tasks from beginning of the task list. In default setting, lower channel will have higher priority over higher channels.

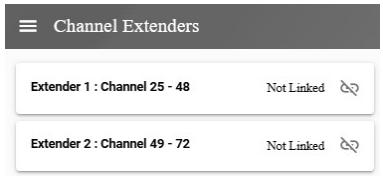
Set of zones for each channel which will be activated when the channel is triggered.

Click the SAVE CHANNELS to save all channel settings once configurations are done. Ensure no channel is active when saving, else the new configurations will not be saved.

Web Configurations

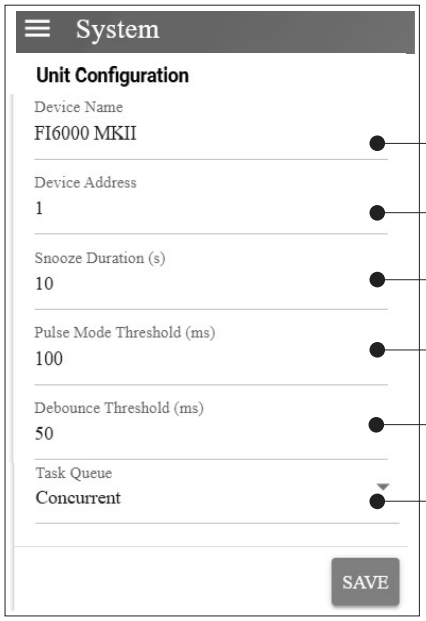
CHANNEL EXTENDERS

This is used to connect the Master controller to extension unit (Amperes FI6001). This extension feature will be available in future, to cater for more input triggering channels.



SYSTEM

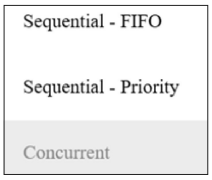
Device configurations under this tab includes the device address setting and task activation behavior, access login, firmware update and back up & restore functions.



Unit Configuration

Simple configuration for naming and addressing the device, setting the duration for snooze and calibration for triggering method to avoid false activation.

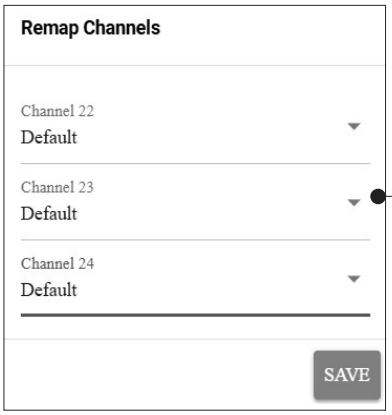
- Set a unique name to the device especially when more than one unit is installed.
- Assign an address to the unit which must be unique for serial communication with other devices in the RS485 bus.
- Set a snooze timer when the front snooze button is pressed with duration up to 1800 seconds (30 mins)
- Channel activation can be set as pulse or latch mode. Adjust this value when a pulse mode trigger is used, try several times to ensure proper activation.
- Debouncing value is used to avoid false triggering especially when mechanical switching is used to trigger the device. Max threshold is 500 ms or 0.5 secs.
- This determine how the device will react when two or more channels are activated simultaneously.



FIFO - First In First Out which the first channel triggered will complete its tasks before the next to take over.

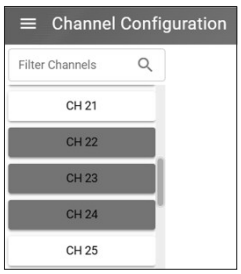
Priority - Trigger will be subjected to the priority level set at the channel

Concurrent - Allows more than one channel to activate concurrently.



Remap Channels

Channel 22, 23 and 24 are 3 unique channels that can be configured to have Stop, Snooze and Reset function, This allow other device to remotely activate these function via dry contact. To trigger the function, they need not hold for 5 seconds.



When these channels are used for the above special functions, they will be highlighted in red to indicate that the channels are no longer used as a normal channel.

Web Configurations

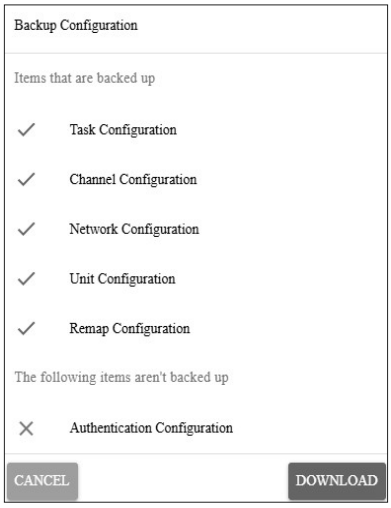
Set new user and password

Always change the password and safely keep them for future reference. If password is forgotten, you may need to reset the device which will revert to factory defaults.

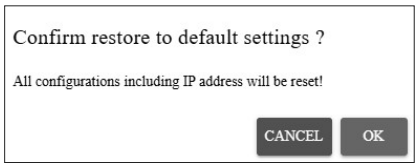
Firmware Updates

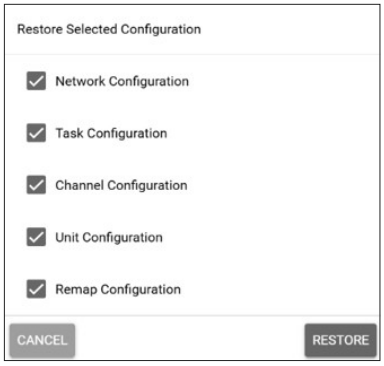
Please refer to the section : Firmware Updates at page 12.

Backup and Restore



Backup Configurations allows you to save the settings as listed in the pop up window. Press Download and save as FI6000 MKII DD-MM-YY.json file.



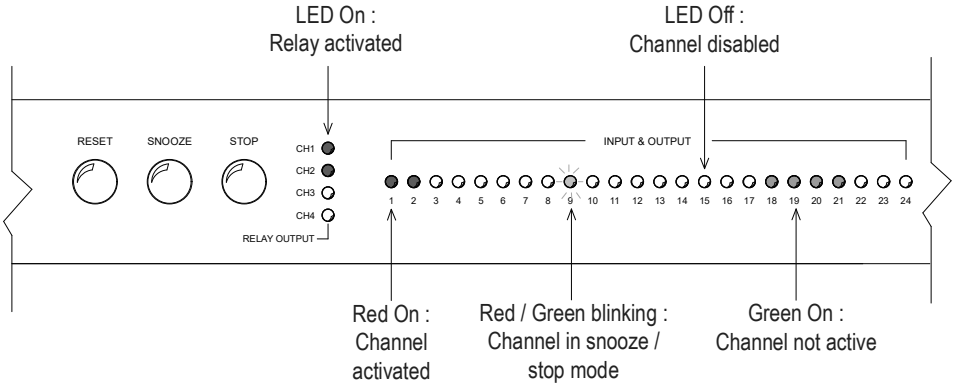


Once the back up file is selected, you shall be prompted on the configurations to the restored. You may choose to deselect certain configuration. Click Restore to start restoration.

Operating the Unit

FI6000 MK II is normally linked to Fire Alarm Panel which provide dry contacts to the input channels.

When the dry contact is closed, either on pulse detection or momentary contact, it will activate the sequence according to the configurations set and activation of zones related to each input channel.



Snooze

When activated, the user may want to check the actual condition to determine if the triggering is true or false. As such, he may snooze the activity by pressing the snooze button with duration set during configuration.

LED will blink during snooze period. To exit snooze, hold the Reset button for 5 seconds. FI6000 will restart the last active channel session once the snooze duration elapsed.

Reset

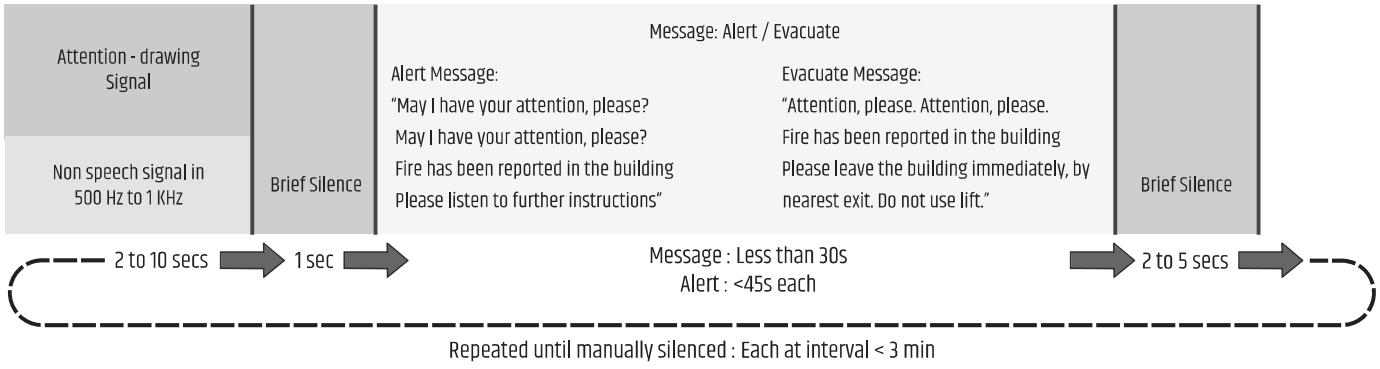
Pressing Reset button for 5 secs will stop all ongoing tasks, reactivate the relay contacts and other devices (eg. MR1301, zone selectors) that were activated by FI6000.

Stop

Hold for 5 seconds to stop all tasks and LED will blink in alternate red / green. Hold Reset button to exit this mode.

Recommended Message Sequence

Usage of FI6000 MK II is very much related to zone activation and the related message. As a general guidance, the chart below suggested the proper pre-recorded message announcement. (Source : BSI publication / SS546).



The period of silence may depend on reverberation time (RTs) of the area.

Alert Message : shall be repeated in sequence until it is manually or automatically superseded by an Evacuation message, an emergency Standby message or a False Alarm message.

Emergency Standby message : shall be repeated in sequence until it is manually or automatically superseded by an Evacuation message or Safe-to-Stay message.

All messages : shall be repeated in sequence for at least 2 cycles. Thereafter, it shall be repeated at intervals of not more than 2 min.

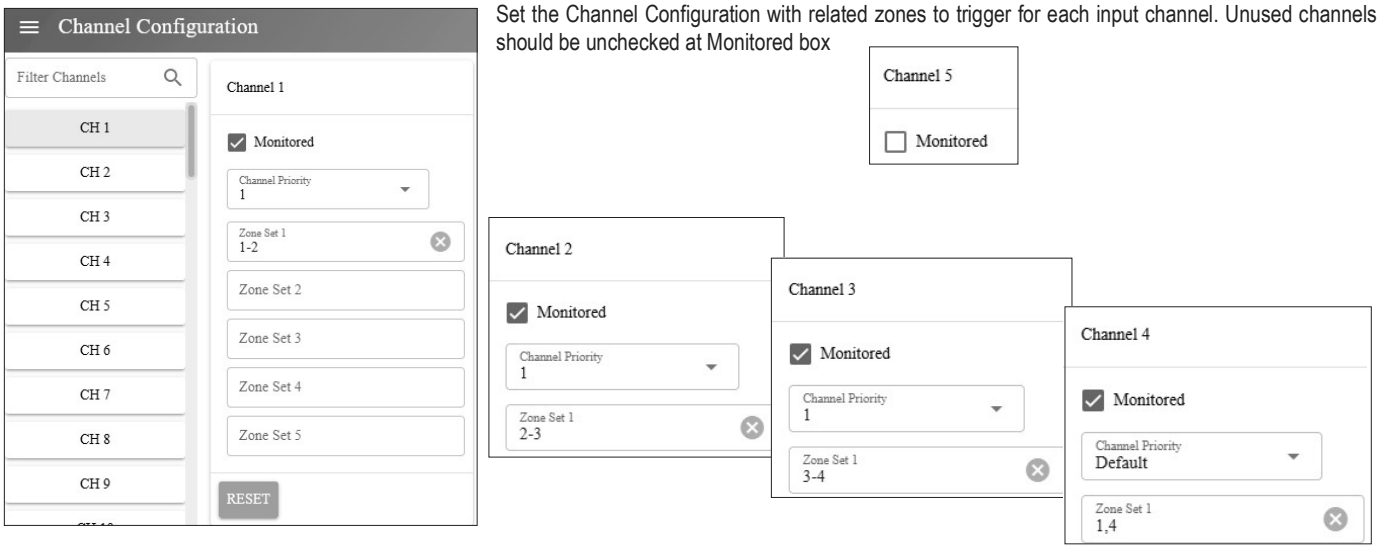
Sample Configurations

Below is a sample configuration of tasks with presumptions of :

Channels used :	Requirement	Message playback to follow guidelines as per BS5839 Pt 8 / SS546
1 - Zone 1,	Ch 1 trigger, to activate Zone 1, 2	
2 - Zone 2,	Ch 2 trigger, to activate Zone 2, 3	Message 1 : Initial tone / message
3 - Zone 3,	Ch 3 trigger, to activate Zone 3, 4	Message 2 : Initiate after 5 minutes from Message 1 if no manual interactions
4 - Zone 4	Ch 4 trigger, to activate Zone 1, 4	Message 3 : Emergency tone 5 minutes after message 3

Upon activation, it should override external volume controller, which is connected via Relay 1, and external indicator light connected to Relay 2. Message player MR1301 MKII will be connected via RS485.

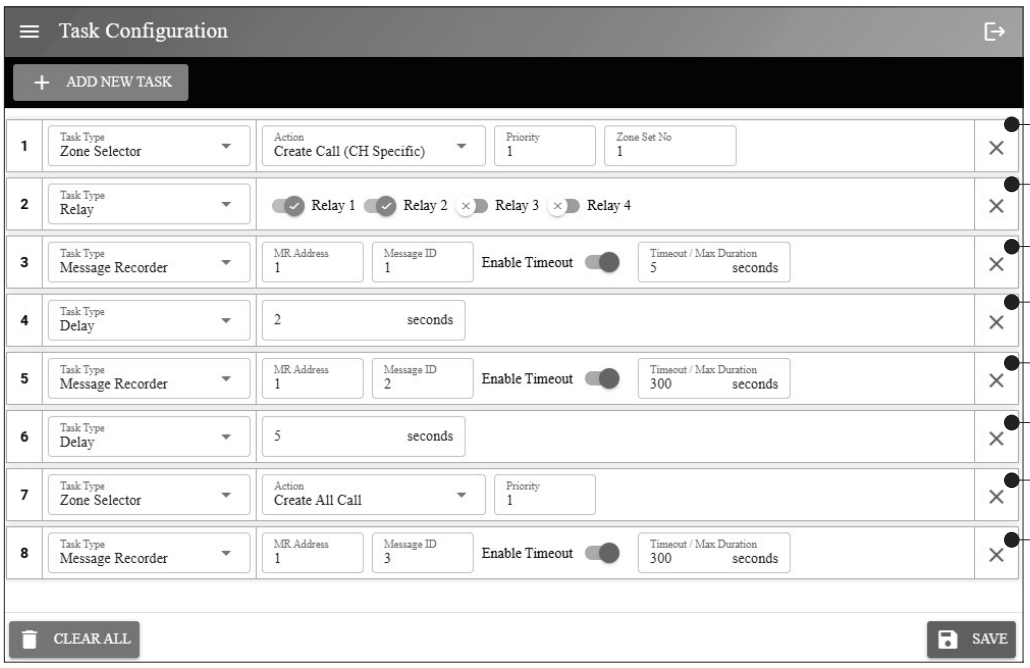
Channel configuration



Set the Channel Configuration with related zones to trigger for each input channel. Unused channels should be unchecked at Monitored box

Task Configuration

Max number of tasks can be set is 20. The configuration below is not definite and is subjected to the requirement by relevant authority. FI6000 will run the tasks from 1 till the end and will not repeat unless a new trigger is available at the input channel.



- Trigger specific zones set at each channel
- Latch relays
- Play alert tone at Mem 1 file located in MR1301
- Silent for 2 seconds
- Play Alert Message at Mem 2 file located in MR1301, 5 min max
- Silent for 5 seconds
- Trigger All Call when the fault persists with no interruptions
- Play EVAC Message at Mem 3 file located in MR1301 with durations can be unlimited until manual human interruption

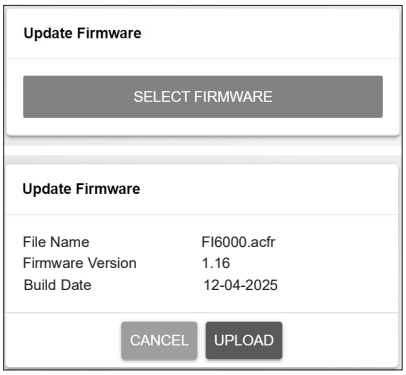
Save the setting for the configurations to take effect.

Firmware Updates

System firmware shall be updated once in a while when new features are available or to fix bugs.
There are two methods of firmware updating :

Update firmware in Normal Operation Mode

1. Open a browser and type in the FI6000 MKII IP Address. The default address is 192.168.0.100 or the latest IP address set during configurations.
2. Under “System” page look for “Update Firmware” section as shown in below.



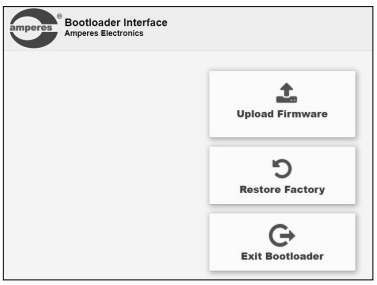
Click “ SELECT FIRMWARE” and choose a binary file with “.acfr” extension. Click “UPLOAD”. Once the update is completed, the browser should enter the login page.

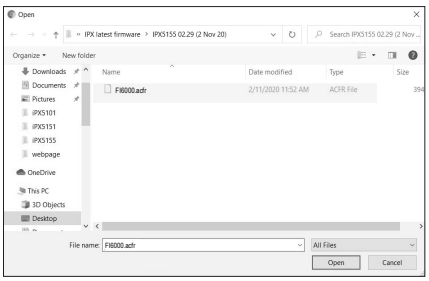
Update firmware in Bootloader Mode

If the FI6000 MKII “hanged”, it is required to perform system reset by :

1. Hold the rear RESET button until the front panel Relay Output CH1, CH2, CH3 red LEDs lit. Release the Resert button and thereafter FI6000 will enter booloader mode.
2. Open a browser and enter the IP address 192.168.0.100. A web page as shown below shall appear.
3. Select “ Upload Firmware ”, choose a binary file with “ .acfr ” extension and click “UPLOAD”
4. Once the uploading is completed, the browser shall enter the login page.

Click the Upload Firmware button to find the updated firmware file.

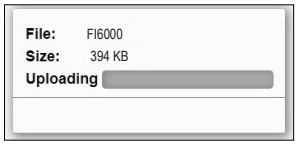




Find the updated firmware file.

Ready to upload, click Upload button to upload the firmware.

Updating progress



After finish updating firmware, the browser automatically restart

Technical Specifications

Operating voltage	24V DC
Power consumption (DC)	
- Idle	1 W
- Active	5.8 W
Current consumption (DC)	
- Idle	40 mA DC
- Active	240 mA DC
Data connection	
- RS485	2 way Phoenix, 19.2 kbps
- LAN	Ethernet 10 / 100 Base-T
Inputs (trigger)	24 channels dry contact
Output Relay contact	4 channels
Contact rating	24V DC / 120V AC, 3A
LED indicators	24 input channels LED indicator
	4 relay contact LED indicator
Software interface	Google Chrome, MS Edge
Dimensions	482 x 44 x 180 mm
Weight	1.9 kg

The specifications may be changed when necessary in line with our continuous product improvement policy without prior notice.

Warranty Conditions

Only Amperes Electronics Service Centres are allowed to make warranty repairs : a list of Amperes Electronics authorized service centres may be asked by the purchaser or send directly to Amperes Electronics Sdn Bhd at 70 Jalan Industri PBP3, Tmn Perindustrian Pusat Bandar Puchong, 47100, Puchong, Selangor. This warranty is not valid if repairs are performed by unauthorized personnel or service centres.

Eligibility :
Amperes Electronics' Service Center will accept any device send in for repair / checking purchased from any of our dealers. Some dealers may have the right to refuse repair / service / checking for any device not purchased from them directly.

Coverage
This warranty covers only repairs and replacement of defective parts, due to defects of components or workmanship during product warranty period. For any product purchased exceeding the warranty period, a cost of repair shall be presented and will only proceed to rectifications upon agreed value. If the owner decides not to proceed, a minimal checking fees will be applied.

Exclusions
This warranty does not cover damages caused by misuse, negligence in application as well as using the product with power supply voltage other than shown on the product, or any other power supply source / adapter not recommended by the manufacturer.

This warranty does not cover damages caused by fire, earthquakes, floods, lightning and every cause not directly related to the unit.

This warranty certificate is valid only for the described product, and is not valid if modifications are made on this certificate or identification labels applied to the unit or any other modifications to the physical unit other than its intended usage.

Duration / Warranty Period
This warranty covers all the material and manufacturing defects and is valid for a period of 36 months from the date of purchase or for a specified period in countries where this is stated by a national law. In this case, the extension is valid only in the country where the product is purchased.

Cost of Claiming Warranty
Cost and risk of transportation as well as removal and installation of the product from the main system are for the account of the purchaser. This warranty shall not extend to the replacement of the unit.

Limitations
This warranty does not include any indemnity in favor of the purchaser or the dealer for the period out of use of the unit, moreover the warranty does not cover any damages which may cause to the people and things during the use of the product. Our liability is limited to the cost of the product

Amperes Electronics Sdn Bhd is not obliged to modify previously manufactured products under warranty if the design changes or improvements are made.

The purchaser is deemed to agree to the above warranty conditions once the product packaging is unpacked., Otherwise the product shall be returned to the seller in proper original condition.

Disclaimer

Information contained in this manual is subjected to change without prior notice and does not represent a commitment on the part of the vendor. Amperes Electronics Sdn Bhd shall not be liable for any loss or damages whatsoever arising from the use of information or any error contained in this manual.

It is recommended that all services and repairs of this product to be carried out by Amperes Electronics or its authorized service agents.

Amperes products must only be used for the purpose they were intended by the manufacturer and in conjunction with this operation manual.

Amperes Electronics Sdn Bhd cannot accept any liability whatsoever for any loss or damages caused by service, maintenance or repair by unauthorized personnel, or by use other than that intended by the manufacturer.

CERTIFIED QUALITY MANAGEMENT SYSTEM
UNITED REGISTRAR OF SYSTEMS URS ISO 9001
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