

# **TWM-1885**

# Wireless Addressable Coordinator Installation & User Manual

**Revizyon Tarihi: 15/09/2021 Rev:01** 



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#### 1 - General

TWM-1885 Wireless Addressable Coordinator is an access control unit that integrates wireless devices with Teknim Addressable fire alarm system for monitoring and controlling fault and fire conditions.

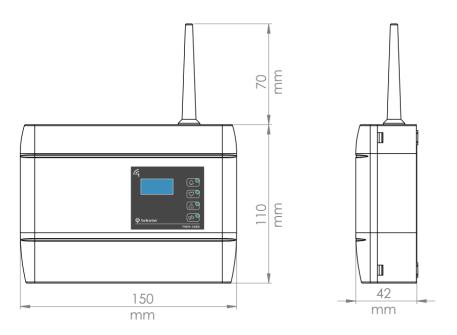
TWM-1885 Wireless Addressable Coordinator can directly connect to a loop line, communicates with addressable panel through Flashlink protocol and does not require external power. With a simple definition, it serves as FLASHLINK-TLPWAN protocol converter.

(1) TLPWAN (Teknim Low Power Wide Area Network) is a wireless communication protocol developed by Teknim, in which devices with low power requirements can communicate stably and reliably in larger areas using two-way communication.

(2) FLASHLINK, is an uninterrupted and reliable communication protocol developed by Teknim that performs data communication between the loop board and addressable devices over the power line.

## 2 - Technical Specifications

Loop Supply Voltage	18Vdc – 35Vdc
Average Consumption	10mA (@24Vdc)
Operating Frequency	868 MHz
Output Power	14 dBm (25 mW)
Communication Distance	Up to 500 m (open space)
Number of Channels	10
Total number of Wireless Device Support	31 (5x Routers and 26x Devices)
Number of Routers That Can be Connected Consecutively	5
Number of Routers That Can be Connected to a Coordinator	4
Individually	
Humidity	95% RH
Operating Temperature	-10 − +55°C
Size (mm)	150 mm x 110 mm x 42 mm + 70 mm Antenna
Material	White Color, ABS Plastic
Cross-section of the Cable Used	0.4mm <sup>2</sup> ~ 1.5mm <sup>2</sup>
Weight	185 ar



#### 3 - Installation

Please follow the steps below for installation.

## 3.1 - Mounting

To establish a healthy communication between the coordinator and the devices, pay attention for following conditions:

- Choosing a proper communication channel will make the communication between the devices
  more stable. Channel selection can be made automatically or manually. If manual selection is
  to be made, initially all transmissions in the environment must be detected with the RFanalyzer and according to this, relatively the most available channel must be preferred. See
  programming section for manual channel selection.
- The environmental factors such as high voltage lines, structural elements such as columns and beams, big metal objects, computers, network lines, other cable lines, etc. may interrupt the connection between the devices. Devices should be mounted at a distance of at least 2 meters from such factors.
- There must be at least 2 meters of distance from each wireless device.
- If possible, it must be mounted at least 2 meters high from and parallelly to the ground. The antenna must remain at an angle of 90 degrees to the ground.
- It must be operated under the proper ambient conditions indicated in technical specifications. Otherwise, the operating performance will be affected.
- A suitable location must be preferred by considering the communication distance. Communication distance can be seen in technical specifications.

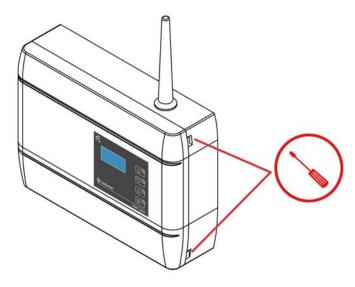


Figure 1 - Open the Cover

The mounting holes of the module are located under the module cover. To access those, the cover must be opened by gently pushing through the holes on the right side of the module by using a flathead screwdriver.

## 3.1.1 - Cable Holes

The holes must be prepared before wall mounting. For this, holes must be open on the round points marked on the product housing. Before open the holes, the electronic cards must be removed. The tabs holding the cards must be pulled gently to remove the cards.

Once the electronic cards are removed, a gentle pressure must be applied behind the point to be broken open to leave a space underneath by using a thick screwdriver to break open the holes. The cards can be reinstalled and fixed after this procedure.

## 3.1.2 - Wall Mounting

Mark the wall according to the 4 screw holes seen below and bore 4 holes on the wall by using a drill according to the diameters of the wall plugs included in the pack. Insert the wall plugs into the bored holes and fix the module on the wall by screwing it onto the wall.

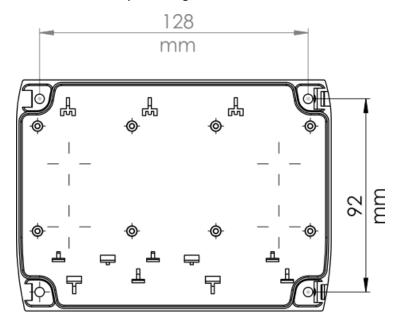


Figure 2 – Mounting Hole Sizes

## 3.2 - Antenna Installation

Ensure a proper installation of the antenna in order to provide a good communication between devices. Otherwise, there may be distance problems and communication performance losses.

There are two superposed cards connected to each other in the module: The upper one is TLPWAN-RF card, while the other serves as the Flashlink interface and control card. The antenna terminal is located on the TLPWAN-RF positioned as the lower card. Pass the wire antenna through the antenna input of the box and fix it on the terminal to the right as shown in the figure. Make sure that the terminal screw is firmly tightened. An antenna that is not fixed properly may cause performance loss.

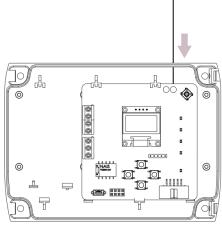


Figure 3 – Antenna Wire Installation

Once the wire antenna is fixed into its place, push the antenna housing into the antenna input tightly to fix it into its place.

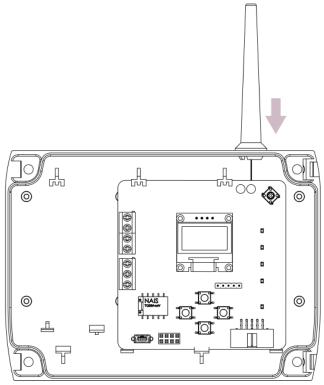


Figure 4 – Antenna Housing Installation

#### 3.3 - Network Cable Connection

Pass the cables through the cable holes and strip their ends at a proper length, then make "in" and "out" connections as shown in the following connection diagram. Make sure that the terminal screws are tightened firmly.

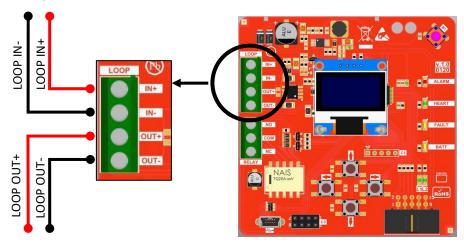


Figure 5 – Network Connection Diagram

## 3.4 - Relay Cable Connection

Addressable Wireless Coordinator module has the activation feature. The conditions during which the relay on the Addressable Wireless Coordinator module will be active/passive can be determined by selecting the output activation feature on the addressable fire alarm panel. The output activation type can be selected as "General Alarm, General Siren, General Fault, Zone Alarm, Zone Siren, Zone Fault".

Make the relay connection as shown in the following connection diagram if the output activation feature will be used.

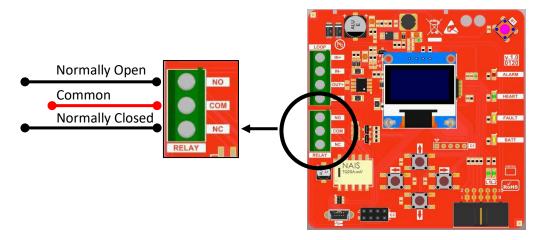


Figure 6 – Relay Connection Diagram

#### **3.5** - Module Interface

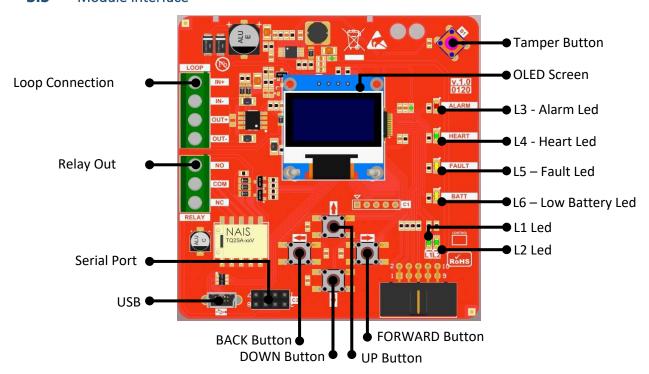


Figure 7 – Module Card Detailed Interface

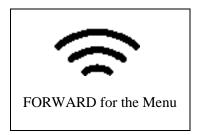
- Loop Connection: Used for connection to addressable panel loop line.
- Relay Out: Used for the output activation feature adjusted on the addressable panel.
- Serial Port: Used for software updates.
- USB: Used for monitoring and analysis programs.
- Tamper Button: Used for detecting if the cover is opened. When the cover is opened, this will be shown as a fault on the addressable fire alarm panel.
- OLED Screen: The screen will not work in sleep mode. It will be activated in case of any alarm, fault or when the cover is opened. Programming menu can be accessed on this screen.
- Alarm Led: It shows any alarm state on the wireless system.
- Heart Led: It shows that the module is operating, and the wireless network is set.

- Fault Led: It shows any fault state on the system.
- Low Battery Led: It lights when the battery of any wireless devices is low.
- L1 Led: It lights when connection to wireless network is activated.
- L2 Led: It lights when there is an ongoing process.
- BACK Button: Used for going back on the menu or for cancelling.
- DOWN Button: Used for proceeding on the menu or for decreasing a value on the menu.
- UP Button: Used for going back on the menu or for increasing a value on the menu.
- FORWARD Button: Used for going to a menu that is selected or for approval purposes.

## 3.6 - Programming Menu

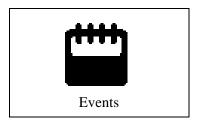
Addressable Wireless Coordinator module menu will be explained under this topic.

If there are no events on the system when the menu is opened or the upmost menu is selected by using the BACK button, the following main screen will be displayed initially:



#### 3.6.1 - Events

It is the section where instant events occurring in the system are listed. The events are listed under three categories; "Alarm", "Fault" and "Warning".



To enter the menu: "Main Screen" > FORWARD > "Events" > FORWARD

Events
>1.Alarm
2.Fault
3.Warning

Any category can be selected from the "Events" screen shown above, and the devices under the selected category will be listed. Example: "Fault" category is selected in the following figure and the devices in fault state are listed.

Fault (2)

>1.Coordinator

ID:18850601200001

2.Detector

ID:18502001200015

To navigate through the device list, use the DOWN and UP buttons on the menu. Go to sub-menu by pressing the FORWARD button to read the details of faults. Example: Coordinator is selected, and its fault detail is displayed. On the address line, the number in brackets indicates the address in the system and the other number indicates the address in the wireless system. On the following lines, the fault states of the respectively selected devices are listed. If there are more than one fault states, they will be listed one under the other.

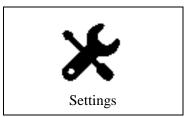
18850601200001

>1.Address: (1)0

2. Tamper Active

#### 3.6.2 Settings

This is the menu which device address, number of devices, channel, language, and screen contrast settings are made.



To enter the menu: "Main screen" > FORWARD > DOWN > "Settings" > FORWARD

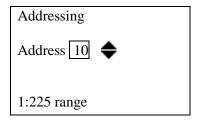
Settings

- >1.Addressing
- 2.Number of Devices
- 3.Channel
- 4.Language
- 5.Contrast

### **3.6.2.1 - Addressing**

The address range within which the Addressable Wireless Coordinator module will be displayed on the Addressable Fire Panel is determined with the "Addressing" setting. To enter the addressing screen, navigate through the settings menu by using UP and DOWN buttons and select the "Addressing" menu.

Use the UP and DOWN buttons to change the address value by increasing or decreasing the value. Press FORWARD button to approve and see the "Successful" inscription on the screen. Press BACK button to exit from the menu or to cancel the changed value. Address value cannot be selected higher than 225.

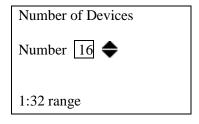


As explained in the technical specifications, "31" devices can be connected to the Addressable Wireless Coordinator. A wireless system, together with the Addressable Wireless Coordinator module, covers a total address of "32" max. Example: The address value selected as "10" above will allow new devices to be added between 10 and 41 in the Addressable Fire Alarm panel in a situation that "31" wireless devices are added to the system. (The number of devices was selected as 32)

## 3.6.2.2 - Number of Devices

Number of devices is a value being used together with the addressing value. It determines how many devices can be added after the address selected from the "Addressing" menu on the Addressable Fire Alarm panel. Select the "Number of Devices" menu by navigating on the settings menu by using UP and DOWN buttons.

To change the number of devices, increase or decrease the value by using UP and DOWN buttons. Press FORWARD button to approve and see the "Successful" inscription on the screen. Press BACK button to exit from the menu or to cancel the changed value. Number of devices can be selected "32" the most.



Example: The number of devices selected as "16" in the above figure, allows new devices to be added within the address range of 10 and 25 on the Addressable Fire Alarm panel. (Addressing value is selected as 10) Even if "31" devices are added in the wireless system, if the number of devices is selected as "16", then only the first 16 devices can be listed on the fire alarm panel.

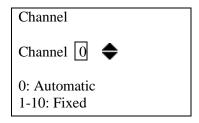
#### 3.6.2.3 - Channel

Each small frequency range obtained by dividing the frequency range reserved for TLPWAN into 10 segments corresponds to one channel. Each wireless system having its own independent channel allows the wireless systems to communicate in the same environment without any data interference.

On the channel screen, the channel that a new wireless system (PAN) to be established will communicate through can be selected. As indicated in technical specifications section, TLPWAN

wireless systems can communicate through "10" channels. To enter the Channel screen, navigate through the settings menu by using UP and DOWN buttons and select "Channel" menu.

To change the channel value increase or decrease the value by using UP and DOWN buttons. Press FORWARD button to approve and see the "Successful" inscription on the screen. Press BACK button to exit from the menu or to cancel the changed value. Address value can be selected as 10 the most. "O" value allows the most available channel from the RF direction to be determined and automatically selected.

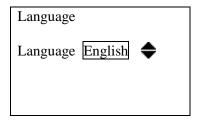


Example: The channel value selected as "0" above, provides all channels to be scanned during the wireless system setup and allows the most available channel to be selected automatically.

## 3.6.2.4 - Language

The language of the Addressable Wireless Coordinator module can be changed with this setting. To enter the Language screen, navigate through the settings menu by using UP and DOWN buttons and select "Language" menu.

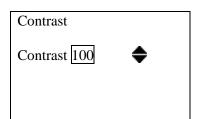
To change the language, navigate through the language options by using UP and DOWN buttons. Press FORWARD button to approve and see the "Successful" inscription on the screen. Press BACK button to exit from the menu or to cancel the changed value.



#### 3.6.2.5 - Contrast

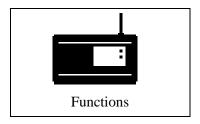
The screen contrast value can be changed with this menu. To enter the Contrast screen, navigate through the settings menu by using UP and DOWN buttons and select "Contrast" menu.

To change the contrast value, increase or decrease the value by using UP and DOWN buttons. Press FORWARD button to approve and see the "Successful" inscription on the screen. Press BACK button to exit from the menu or to cancel the changed value. The contrast value can be selected within the range of 0-255. Decreasing the contrast value will reduce the OLED screen's current consumption.



#### **3.6.3** - Functions

Functions menu allows the settings such as wireless system setup, reset, connection permission to be made



To enter the menu: "Main screen" > FORWARD > DOWN > "Functions" > FORWARD

**Functions** 

- >1. Setup PAN
- 2. Delete PAN!!
- 3. Connection Permission
- 4. Reset PER

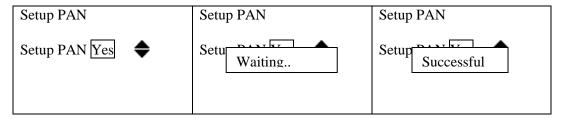
## 3.6.3.1 - Setup PAN

Setting up a new wireless system can be made from this menu. PAN is an abbreviation used in the network terminology and it stands for Personal Area Network.

A wireless system (PAN) is initially needed for the wireless devices to be connected to a network. If there is a network set, the "Heart Led" blinks. If no network is set, the "Heart Led" is off. Thus, the "Heart Led" can be used as the indicator of a set network.

To enter the Setup PAN screen, navigate through the functions menu by using UP and DOWN buttons and select "Setup PAN" menu.

To setup PAN, select "Yes" or "No" by using UP or DOWN buttons and press FORWARD button to complete the operation. This operation may take some time, therefore the warning "Waiting.." will be shown on the screen. Once the PAN Setup operation is completed, the warning "Successful" will be displayed on the screen and this warning will disappear after 2 seconds. The result of the PAN setup operation can be verified by checking the "Heart Led". The screenshots of this operation can be seen below.



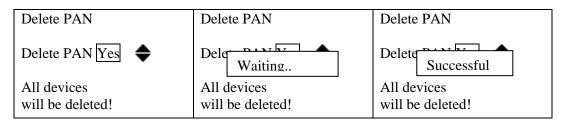
Once the PAN setup operation is completed, the wireless devices can now be connected to the newly established wireless network. The PAN connection permission must be activated for the devices to be connected to the newly established PAN.

#### 3.6.3.2 - Delete PAN!!

A previously established PAN (Wireless Network) can be deleted from this menu. PAN deletion operation does not affect other wireless networks, but only deletes the devices connected to it and the settings and gets prepared for a new PAN to be set.

To enter the PAN deletion screen, navigate through the functions menu by using UP and DOWN buttons and select "Delete PAN!!" menu.

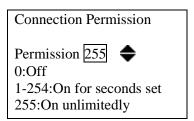
To delete PAN, select "Yes" or "No" by using UP or DOWN buttons and press FORWARD button to complete the operation. This operation may take some time, therefore the warning "Waiting.." will be shown on the screen. Once the Delete PAN operation is completed, the warning "Successful" will be displayed on the screen and this warning will disappear after 2 seconds. The result of the Delete PAN operation can be verified by checking the "Heart Led". The screenshots of this operation can be seen below.



#### 3.6.3.3 Connection Permission

The connection permission must be activated on the wireless network initially for a wireless device to connect to the wireless network. This permission operation can be carried out from "Connection Permission" menu. To enter the connection permission screen, navigate through the functions menu by using UP and DOWN buttons and select "Connection Permission" menu.

Increase or decrease the value by using UP and DOWN buttons for changing the connection permission. Press FORWARD button to approve and see the "Successful" inscription on the screen. Press BACK button to exit from the menu or to cancel the changed value.



Connection permission can be adjusted with or without time limit. The value within "1-254" range will determine for how many seconds the connection permission will be on. This period restarts after each new connection operation and allows device connection without the need for the user to activate connection permission repeatedly. However, the value "255" provides the connection permission to be on for an indefinite period. The value "0" must be chosen to turn off the connection permission again. Activating the connection permission with a time limit can be considered as a measure taken against the connection permission to be left on without time limit.

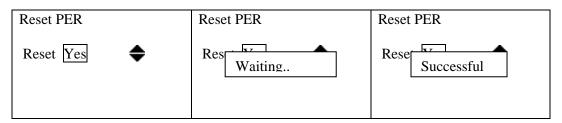
"L1" led lights continuously as long as the connection permission is on.

#### 3.6.3.4 - Reset PER

PER is an abbreviation being used in the communication technology. It stands for Packet Error Ratio. It indicates the ratio of the number of erroneous packets sent by the device from the beginning to the total number of packets sent.

PER values play a role as an important indicator to understand the healthy operation of the wireless system. PER values of devices may increase at the system installation phase due to reasons such as attaching, detaching, energy, etc. Therefore, in some cases, PER values may need to be reset. To enter Reset PER screen, navigate through the functions menu by using UP and DOWN buttons and select "Reset PER" menu.

Select "Yes" or "No" by using UP and DOWN buttons for resetting the PER values of all devices and the operation is carried out by pressing FORWARD button. The screenshots of this operation can be seen below.



#### 3.6.4 Device List

The list of the devices connected to the wireless network can be accessed from this menu. Address values, RSSI value, battery status, number of successful and unsuccessful data transmissions and device deletion operations are carried out on the "Device Detail" screen under "Device List".



To enter the menu: "Main screen" > FORWARD > DOWN > "Device List" > FORWARD

Device List

1.Coordinator\*
ID:18850601200001
>2.GC Module
ID:18871702200013

To navigate through the device list, use the DOWN and UP buttons. Press FORWARD button and move towards the sub-menu in order to view device details.

18871702200013	18871702200013
>1.Address:(2)24966	5.HW: 1.0.0
2.RSSI: -23dB	6.SW: 1.0.0
3.Battery: 98%	7.Ping: 20s
4.PER: <2%	8. Reset PER
5.HW: 1.0.0	>9. Delete

Example: GC Module is selected and the device detail is viewed.

#### **Device Details Screen:**

- 1. The device's address in the addressable system and in the wireless system
- 2. RSSI value. RSSI, is an abbreviation being used in RF terminology. It stands for Received Signal Strength Indicator. It is a measurement value of the current power of the radio signal received by the device. This value is directly related to the distance between the receiver and the transmitter as well as to other environmental factors. Refer to the "Signal Strength" table for RSSI value ranges.
- 3. Battery status is scaled between 0 and 100. "Battery Low" warning will be generated for the devices having a battery status less than 25%.
- 4. PER is an abbreviation being used in the communication terminology. It stands for Packet Error Ratio. It indicates the ratio of the number of erroneous packets sent by the device from the beginning to the total number of packets sent. Distance and environmental factors are the mains reasons of data transmission failures. Initially the RSSI values are checked on the devices having high PER values. In case the RSSI values are within normal limits the device is removed from its place and taken to a point that is close to the coordinator and the change in PER value is observed. Device battery is taken out and installed back again after a while for resetting the PER value or it can be reset by using the "Reset PER" option from the device menu. If the PER value still continues to increase the RF intensity in the environment must be checked. In such case, the PAN might have been setup on a wrong channel or other PANs may be taking too much space on this channel.
- 5. HW indicates the hardware version.
- 6. SW indicates the software version.
- 7. Ping time, indicates the frequency that the devices will communicate with the connected coordinator/router. A shorter ping time means that the coordinator will communicate with the device faster and that reduces battery life. In order to adjust ping time, press FORWARD on the menu selected to proceed to the ping time adjustment page. More detailed information about ping time can be found under "Ping Time" topic.
- 8. Reset PER is used for resetting the PER value of the device selected. Menu usage is explained under the "Reset PER" topic under the functions. When this menu is accessed from the device selected, only the selected device PER value will be reset.
- 9. "Delete" is selected to deleting this device from the wireless network and the operation is approved by pressing the FORWARD button. The inscription "Successful" will be displayed on the screen if the operation is successful while "Unsuccessful" will be displayed otherwise. The place of the deleted device will be shown blank on the list. The deleted device cannot send data to the coordinator anymore. It needs to be connected back again.

#### 3.6.5 - Information

Module software and hardware versions, PAN details are viewed under this screen.



To enter the menu: "Main screen" > FORWARD > DOWN > "Information" > FORWARD

Information	Information
>1.16 Device	4.SW: 1.0.0
2.4 Router	5.PAN Set
3.HW: 1.0.0	6.Channel: 4
4.SW: 1.0.0	7.PAN ID: 10
5.PAN Set	>8.TX Power: 14dBm

#### **Information Detail Screen:**

- 1. Number of battery-operated devices in the wireless system.
- 2. Total number of coordinator and routers.
- 3. Hardware version of the module.
- 4. Software version of the module.
- 5. If PAN is set, the inscription is "PAN Set"; if PAN is not set the inscription is "No PAN".
- 6. Indicated the channel on which the PAN is set.
- 7. Each PAN has its own PAN ID. This value is selected randomly during the PAN setup operation between "1-65535" as a unique number. If more than one PAN needs to be set on the same channel, PAN ID prevents data traffic between PANs from interfering. In other words, PAN ID is an identity number that indicates the PAN which should receive the data transmitted within a wireless system.
- 8. Tx Power is the power value of the radio signals transmitted from the RF circuit in "dBm".

## 4 - Ping Time

Ping time indicates the frequency that the devices will communicate with the connected coordinator or router. A shorter ping time means that the coordinator will communicate with the device faster and that reduces battery life.

Example: A wireless sounder having a ping time of 30 seconds will receive and operate the sound command in 30 seconds.

### Ping times of devices:

Device Type	Adjustable Ping Time	Default Ping Time
Multi-detector	120s	120s
Fire Button	120s	120s
Input/Output Module	10-120s	20s
Sounder/Flasher	10-120s	10s

Ping times and battery life relations of devices:

Device Type		Ping Time / Battery Life						
	10s	10s 20s 60s						
Multi-detector	-	-	-	8 years				
Manual Call Point	-	-	-	10 years				
Input/Output Module	3 years	5 years	8 years	10 years				
Sounder/Flasher	3 years	5 years	8 years	10 years				

#### Maximum 10 sounders/flashers or input/output modules can be connected to one PAN!

In order to adjust the ping time, initially select a device from the device list and select "Ping:xxs" from the device menu and press FORWARD button to proceed to the ping adjustment page.

18871702200013	Ping
5.HW: 1.0.0	
6.SW: 1.0.0	Ping 20 <b></b>
>7.Ping: 20s	
8. Reset PER	
9. Delete	10-120 seconds

Increase or decrease the value by using UP and DOWN buttons for changing the ping time. Press FORWARD button to approve and see the "Successful" inscription on the screen. Press BACK button to exit from the menu or to cancel the changed value.

## 5 - Quick Menu Access

General structure of the module menu is shown in the following diagram.

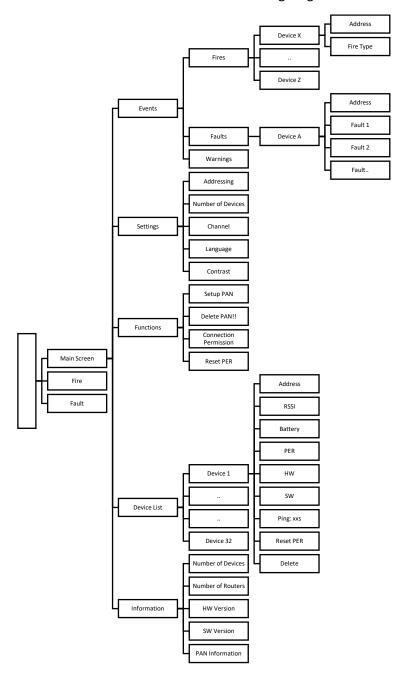


Figure 8 – Quick Access Menu

## **6** - Events and Indicators

The events of all devices in the wireless system and the way they are displayed are given in the tables below.

Wireless Detector	L3	L4	L5	L6	OLED
Smoke Alarm	Yes	-	-	-	Yes
Temperature Alarm	Yes	-	-	-	Yes
Pollution Alarm	-	-	Yes	-	Yes
Temperature Increase Alarm	Yes	-	-	-	Yes
Low Battery Alarm	-	-	Yes	Yes	Yes
Loss Fault	-	-	Yes	-	Yes
Tamper Fault	-	-	Yes	-	Yes

Wireless Manual Call Point	L3	L4	L5	L6	OLED
Manual Call Point Alarm	Yes	-	-	-	Yes
Low Battery Error	-	-	Yes	Yes	Yes
Loss Fault	-	-	Yes	-	Yes
Tamper Fault	-	-	Yes	-	Yes

Wireless Input Output Module	L3	L4	L5	L6	OLED
Input Alarm	Yes	-	-	-	Yes
Input Open Circuit Fault	-	-	Yes	-	Yes
Input Short Circuit Fault	-	-	Yes	-	Yes
Output Active Warning	-	-	-	-	Yes
Low Battery Error	-	-	Yes	Yes	Yes
Loss Fault	-	-	Yes	-	Yes
Tamper fault	-	-	Yes	-	Yes

Wireless Sounder	L3	L4	L5	L6	OLED
Low Battery Error	-	-	Yes	Yes	Yes
Loss Fault	-	-	Yes	-	Yes
Tamper Fault	-	-	Yes	-	Yes

Wireless Router	L3	L4	L5	L6	OLED
Loss Fault	-	-	Yes	-	Yes
Tamper Fault	-	-	Yes	-	Yes

Addressable Wireless Coordinator	L3	L4	L5	L6	OLED
PAN Set	-	Yes	-	-	-
RF Card Loss Fault	-	-	Yes	-	Yes
Tamper Fault	-	-	Yes	-	Yes

## 7 - Signal Strength Table (RSSI Table)

RSSI is an abbreviation being used in RF terminology. It stands for Received Signal Strength Indicator. It is a measurement value of the current strength of the radio signals received by the device. This value is directly related to the distance between the receiver and the transmitter and also to the other environmental factors. It represents the signal strength that a device has while communicating with a coordinator or a router.

This table shows what the RSSI value shown in the device list means. It must be observed that the RSSI values remain within the limits shown in this table before a device is physically placed in a location. Low signal strength will lead to an unhealthy communication and a low battery life.

Signal Strength (RSSI Value)	Description
Below -90dBm	No Connection
Between -90 and -75 dBm	Weak Connection
Between -75 and -60 dBm	Normal Connection
Over -60 dBm	Good Connection

#### 8 - Quick Installation

This section explains how to quickly set up a wireless system step-by-step. Setup and programming topics must be read carefully to carry out these operations.

- 1. Fix the antenna and antenna housing.
- 2. Mount the module on an appropriate place.
- 3. Connect the loop cable to the "Loop Terminal" for supply and fire alarm panel communication.
- 4. Set the starting address to be shown on the addressable panel from "Addressing" screen.
- 5. Set the number of devices to be available on the wireless system from "Number of Devices" screen.
- 6. Set PAN from "Set PAN" screen for setting up the wireless system.
- 7. Turn on the connection permission from the "Connection Permission" screen to adding devices to the wireless system (for connecting devices to PAN).
- 8. Make sure that the wireless devices are connected to PAN as described in the installation & user manual of each device.
  - Example: Install the batteries of the wireless detector and verify that the device has started by observing the red and green LEDs lighting respectively. Then, press the "A" Connection Button for "5" seconds and start the connection operation. This operation takes approximately between 20 and 60 seconds. See the "Device connected" inscription on the screen at the end of connection operation.
- 9. Once the device connection operations are completed, turn off the connection permission from the "Connection Permission" screen.

#### 9 - Software Update

You may download the software files of all wireless devices under the "Firmware & Software" section of www.teknim.com web site and carry out the update operation by using "Teknim Updater" software.



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#### 21 1922-CPR-1596

EN 54-18:2005, EN 54-18:2005/AC:2007
Fire Detection And Fire Alarm Systems (Input/Output Devices)
EN 54-17:2005, EN 54-17:2005/AC:2007
Fire Detection And Fire Alarm Systems (Short Circuit Isolators)
EN 54-25:2008, EN 54-25:2008/AC:2010, EN 54-25:2008/AC:2012
Components Using Radio Links
TWM-1885

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<sup>\*</sup>In compliance with AEEE regulations. This product is manufactured from recyclable and reusable high quality parts and materials. Therefore, do not dispose of the product together with domestic or other wastes at the end of its service lifetime. Take it to a drop-off point for the recycling of electrical and electronic devices.