

USER MANUAL



EVO Remote M1

MAN_000002_en(M1)
ED: 1.1 - July 2017

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2 Description

The M1 device is composed by a WiFi module which integrate a web-server for its configuration.

Using a device with WiFi connectivity (PC, smartphone or tablet), you can receive in real time some parameters concerning the stove or boiler which is connected on. It also allows the direct control of the stove, such as switching on and off, and changing the operating mode remotely.

Supported electronic boards are listed below:

- EVO LED RTC from V5.0
- EVO LCD from V6.3
- EVO GLCD from V6.3
- V8 from V.8.73
- V8RE from V.8.01

dpremove software is available for Android and iOS operating systems. To download it, refer respectively to the Google Store and the Apple Store.

3 Installation

The device can be set either horizontally or vertically directly on the wall or on a standard 503 support, using only the attachment points available on the bottom of the container.

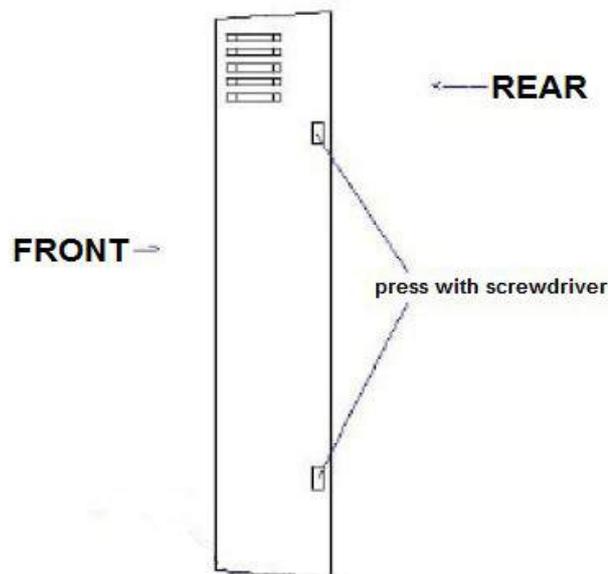
To do this is sufficient to lift the back of the container with a small screwdriver, as shown on the picture below.

Before using the device, read this user manual carefully.



Don't secure the module in direct contact with the metal walls of the stove, to prevent damage to the container and disturbances in the wireless communications.

The manufacturer disclaims any responsibility for any damage due to a wrong use not in accordance with the instructions contained in this manual.



There are two types of connectors to perform the connection between the device and the stove/boiler. In both cases, the connection must be executed with the devices **disconnected from the power supply**, to avoid damage to the module itself.

3.1 4 poles black connector type “Amp”



Figure 1

In the case your device has the connector shown in figure 1, it has to be connected directly to the control board of the stove, on its own connector in the circuit board. Its position depends from model of control board.

3.2 4 poles white connector type “minifit”



Figure 2

In the case your device has the connector shown in figure 2, it can be connected to the equivalent connector placed in the rear of the stove, as shown in figure 3 (this figure is only indicative).



Figure 3

4 First Authentication Procedure

The device is composed by 5 command/visualization elements:

Element	Function
WS Button	Start integrated web-server
R Button	Reset
Red LED	Network association
Yellow LED	Data transfer
Green LED	Network connection

When the device is supplied, red and green LED blinking in an asynchronously, to make clear the operative state.

	Green LED	Yellow LED	Red LED
Connected over TCP	Fixed		
RX/TX data transfer	Fixed	Fast blink	
Connect router, no internet	Slow blink		
No connection	Fast blink		
Not associated	Fast blink		Fast blink
Web-Server (WiFi)	Fast blink		Fast blink

Client working mode:

This mode allows the connection with a router in a private WiFi network, and so it allows to communicate with module using an internet connection. Once this mode is activated, the device automatically connect itself to the selected network, signaling the operation success with blinking the green LED, and blinking the yellow one whenever there is a data exchange.

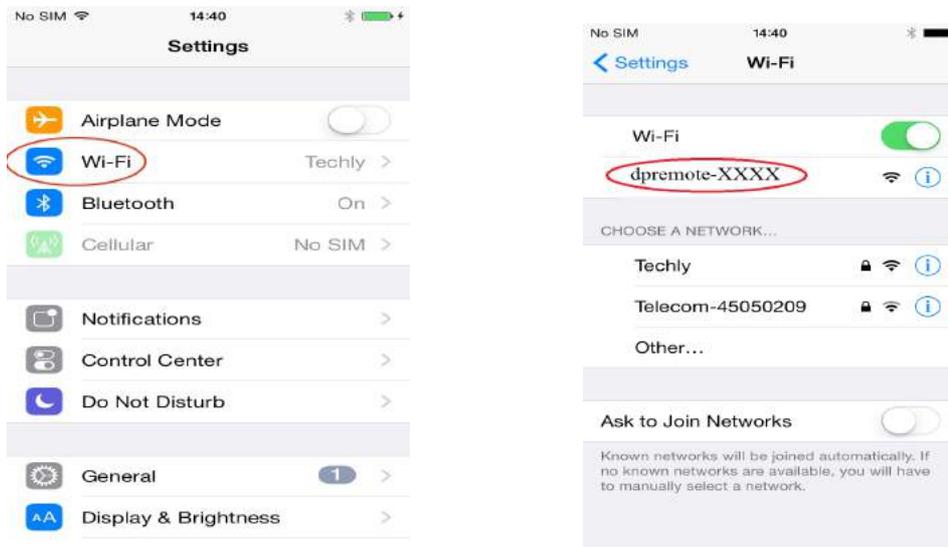
4.1 Webservice

For the module configuration is necessary to start the webservice mode following this procedure:

1. Holding the **WS** and **R** button;
2. Keep holding the **WS** button and release the **R** button;
3. Wait until the green and red LED are blinking quickly (about 6 time per second). Now you can release the **WS** button. From now you have 10 minutes to configure the M1 module, after the module will reboot itself;
4. With a WiFi device (PC, smartphone, tablet), you can connect to the SoftAP network generated by the web-server (**dpremove-XXX** by default).

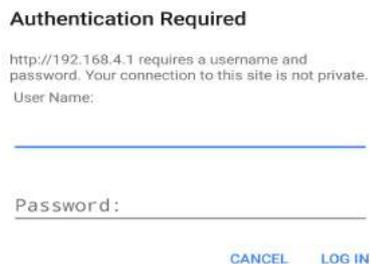


Android Connection



iPhone Connection

5. Open a Web Browser installed on the connected device. This operation doesn't use internet data traffic.
6. Go to the configuration page, writing **192.168.4.1** on the address bar of the browser.



At the first access, WiFi module request an authentication. Insert:

- Username: **user**
- Password: **user**

Then press the **LOG IN** button.

The screenshot shows the DUEPI webserver interface. At the top, there is a logo for 'DUEPI group srl' and the URL 'http://www.duepigroup.com'. Below that, the version number 'Ver. 1.17' is displayed. The main section is titled 'Available Access Point' and contains a 'Scan Networks' button. A table lists several detected networks with their SSIDs, RSSI values, and security types. The 'DUEPI' network is selected. Below the table is a 'Your configuration' section with input fields for SSID (pre-filled with 'DUEPI'), Password, and Security (pre-filled with 'MIXED'). There are 'Save & Exit' and 'Factory Reset' buttons at the bottom.

SSID	RSSI	Security
<input type="radio"/> Techly	-40 dBm	WPA2
<input checked="" type="radio"/> DUEPI	-37 dBm	MIXED
<input type="radio"/> Telecom-Reapeter	-59 dBm	WPA2
<input type="radio"/> Telecom-45050209	-79 dBm	WPA2
<input type="radio"/> WINET_7FD20794	-58 dBm	MIXED
<input type="radio"/> TP-LINK_DUEPI	-32 dBm	MIXED

The webserver is composed by 4 parts:

1. Head

- Image and web page of the producer
- Version number of the webserver

2. Available WiFi Network

By pressing the **Scan Networks** button the WiFi module will search for new WiFi networks, if your isn't displayed;

Pressing the button near the name of the desired WiFi network, the user configuration fields will automatically compiled, except for the password field;

3. User configuration

- **SSID:** WiFi network name. It can be compiled automatically as described above, or you can write manually the network name;
- **Password:** password of the selected network, leave empty if the network is Open, or write the password of the network;
- **Security:** security of the network, it only gives an information to the user;
- **Save & Exit** button: it is used to save the configuration and reboot the module;

4. Factory Reset

This section has only a button, **Factory Reset**, which allows to restore on the WiFi module memory the factory settings, if they were lost.

ATTENTION! This button **DON'T** restore the SSID and password if they were lost, if this is the case you have to restart the webserver and configure the connection.

4.2 Client Network Configuration

If there is a router which is able to generate a private WiFi network, you can set the M1 module to connect to that network automatically. In this way you can control it through an internet connection.

To set the connection to your WiFi private network, follow these steps:

1. Start the integrated web server as described in the paragraph **4.1 Webservice**;
2. Push the **Scan Networks** button if your network isn't displayed;
3. When you found your network, select the button near the name (SSID);
If the network isn't found, you can write its name in the **SSID** field.
4. In the field **password** insert the password of the network (leave empty if is an open network);
5. Push the **Save & Exit** button

192.168.4.1 says:

Press OK to confirm!

Cancel to return to the page!

CANCEL OK

6. Press **OK** and the module will reboot itself with the selected settings;
7. Once rebooted, the M1 module will connect automatically the the selected WiFi network.

5 Create a New Connection

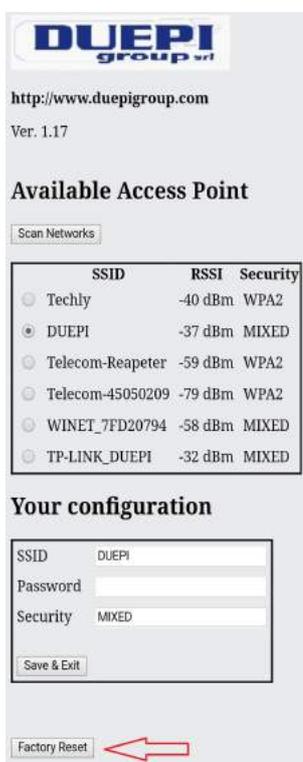
If you want to change the WiFi network settings, follow the steps described in the **4.2 Client network configuration** paragraph.

6 Factory Reset

In the webserver, on the bottom there is a button **Factory Reset**.

Noise on mains supply (for eg. blackout or temporal) could be cause of communication loss and module M1 isn't able to reconnect with the stove.

On this case try to switch off the module or the stove, wait at least 5 minutes and then power on. After this if the green led continue to blink, try to press the button "Factory Reset" present on web page (Webserver mode) in order to reload the factory data.



The screenshot shows the DUEPI webserver interface. At the top, there is a logo for "DUEPI group srl" and the URL "http://www.duepigroup.com" with version "Ver. 1.17". Below this is a section titled "Available Access Point" with a "Scan Networks" button. A table lists several access points with their SSID, RSSI, and Security type. The "DUEPI" entry is selected. Below the table is a "Your configuration" section with input fields for SSID (DUEPI), Password, and Security (MIXED), and a "Save & Exit" button. At the bottom of the page, there is a "Factory Reset" button, which is highlighted with a red arrow.

SSID	RSSI	Security
<input type="radio"/> Techly	-40 dBm	WPA2
<input checked="" type="radio"/> DUEPI	-37 dBm	MIXED
<input type="radio"/> Telecom-Reapeter	-59 dBm	WPA2
<input type="radio"/> Telecom-45050209	-79 dBm	WPA2
<input type="radio"/> WINET_7FD20794	-58 dBm	MIXED
<input type="radio"/> TP-LINK_DUEPI	-32 dBm	MIXED

ATTENTION! The **Factory Reset** button **DON'T** restore the SSID and password if they were lost, if this is the case you have to restart the webserver and configure the connection.

7 Troubleshooting

Problem	Solution
LEDs do not light	Check if the module is connected to the electronic board properly or, if provided, its power pack is connected to a power supply
When I press the WS button, green and red LED don't blink quickly	Disconnect the electronic board and switch off the supply. Wait some seconds and reconnect everything. At the start of the module, hold the WS button until LEDs don't blink quickly
When I start the web server, I can't configure my WiFi network because the module switch off from the configuration mode	The module is programmed to execute the web server for only 10 minutes. At the end of this time, it will reboot itself and will attempt for a connection
I have configured my WiFi network, but the module can't connect to it	Check if the data entered is correct. Check the LED status: if the red LED is blinking, the module can't connect to the desired network due to the low power. Try to go with the module near the router; if the green LED is blinking quickly (about 1 time per second), it is waiting for an IP address from the router; if the green LED is blinking slowly, the module is connected to the network, but is waiting for a TCP/IP connection; As last option, restore the factory configurations as described in paragraph 6
The module doesn't communicate anymore with the DPRemote app	Control your WiFi connection. Control the LED state.

8 Technical Specifications

Operating Voltage	5V from EVO-V8 board with provided cable 9Vdc 1A with optional 6mm Plu-in
Power Consumption	Receiving → 56mA Transmitting → 170mA Sleep → 20uA
Working Temperature	-40°C a +85°C
Connector	Standard 2.54mm (0.1 inch)
Fixing	Directly on the wall or in a 503 standard box
Antenna	Intern
Security	WEP, WPA-PSK, WPA2-PSK
Frequency	from 2.412 to 2.484GHz
Supported WiFi Standard	WiFi certified 2.4GHz IEEE 802.11 b/g/n

9 Warranty

The product is guaranteed for 12 months from the date of installation, as attested to purchase document. The company disclaims any liability for any damage that may, directly or indirectly, to people, things and animals resulting from the failure to follow all the instructions given in this manual and in the warranty provisions available on the website of the company in the download area.

10 Conformity

EN 60950-1:2006 + A11:2009 + A1:2010

EN 50371:2002-03

EN 301 489-1 V1.8.1 (2008-04)

EN 301 489-17 V2.1.1 (2009-05)

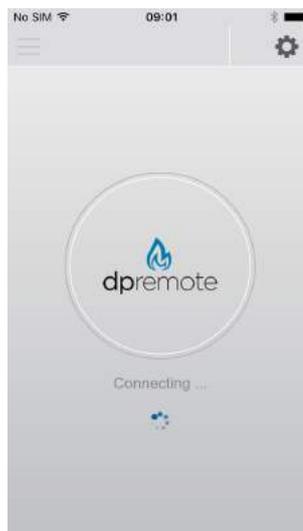
EN 300 328 V1.7.1 (2006-10)

11 dpremove application

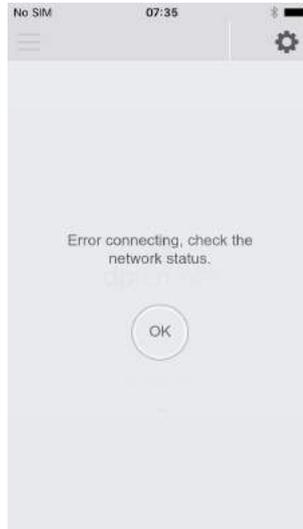
The dpremove application is available to the download for either Android or iOS devices from the respective store, the Google Store and the Apple Store.



At the start, the application shows a picture like this:



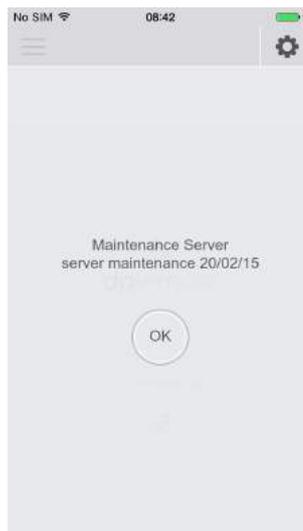
As shown, the application is trying to communicate with the WiFi module, but the first opening will not work, because it was not set correctly.



When it fails to establish a connection with the device, a banner will return periodically as shown in the picture above.

At each start (except the first, because it was not set correctly), will be shown also a message (**if available**) containing some informations about possible server maintenance, producers messages, etc.

In this case there will be a picture like this:



To return at the previous screen, is sufficient to press “OK” button.

To configure the application for a direct connection with the WiFi module, is necessary to enter in the settings screen, by press the right-up button; in the settings you can use only the Remote connection.

11.1 Remote Mode with a dedicated Web Server

The screenshot shows a mobile application interface for configuring remote mode. At the top, there's a status bar with 'No SIM', signal strength, Wi-Fi, time '09:01', and battery. Below is a 'Settings' page with a back arrow and 'PE' in the top right. Two radio buttons are present: 'LOCAL' (unselected) and 'REMOTE' (selected). The 'REMOTE' section contains two groups of input fields. The first group has 'IP Address' (1.2.3.4) and 'Port' (1000). Below that is a 'Device Code' field (123456789) and a 'Stove Name' field (Kitchen) with a checked checkbox. The second group has 'Device Code' (abcdefg) and 'Stove Name' (Sitting room) with an unchecked checkbox. A 'SAVE' button is centered at the bottom.

This mode is based on an access to a dedicated external server, which manages the communications between the WiFi module and the dpremote application.

From the version **2.0.5** was added the possibility to save up to 3 different device code, and for each of them can be choose a name, which will display on the main page.

As shown above, 4 parameters are requested:

1. **IP Address:**

It consists on the IP address or the domain name of the dedicated web server;

2. **Port number:**

As in the Local Mode, it represents the number of the port through which will pass all the communications;

3. **Device Code:**

It is a univocal code that differentiate all the WiFi modules; it is present on the back of the module's box;



4. **Stove Name:**

It's the name assign to a device code, that allows to distinguish, from the next access, to which stove/boiler we are attempting a connection. It's an optional parameter, can be leave empty;

ATTENTION: to use the Remote Mode, you **MUST** register yourself at the web page <http://www.duepigroup.com/prodotti-duepi/dpremove-app-iphone-android/>. After you have done the registration, we will send you an email with the parameters necessary for the Remote Mode.

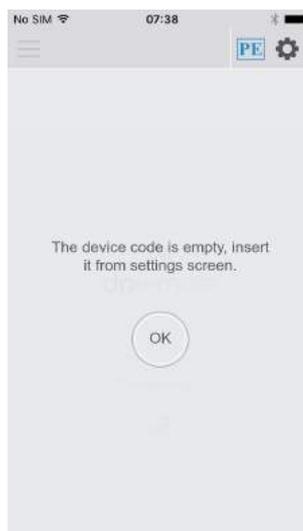
For more informations you can contact the service provider at the email address dpremove@duepigroup.com.

ATTENTION: after setting all the interested fields, **NOT** press “Back” button, because all the data will be lost. To save the choices and start a connection, press “Save” button.



After pressing the “Save” button, the app go to the main page to attempt a connection to the stove/boiler we choose in the setting page.

In the case the device code chosen is empty, or we haven't choose a code, the application will show this message:



In this case, is necessary come back to the setting page and select the relative check box of the stove/boiler we want to connect.

In the case of successful connection to the M1 WiFi module, you can control the stove/boiler with 5 different panels, which are described in the next paragraph.

11.2 Stove/Boiler Control

11.2.1 Ignition / Cooling / Alarm Reset



In this page, available by pressing the button in the middle, you can turn on or off the stove, by pressing the related button; if an alarm occurs, in the middle a Reset button became visible.

You can see, in the top-center part of the figure, the name of the connected stove/boiler. Moreover, on the left side of the setting icon (top-right corner of the figure), there is an icon that indicate if the extended protocol is enabled or not (it will be explained in details in the 11.2.5 paragraph).

11.2.2 Temperature Control



In this page, available by pressing the button in the right, you can see in real time the ambient/boiler temperature (in the top-left square, based on if the board is air (ambient) or hydro

(boiler) type), the tank temperature (only in the hydro type) and set the desired temperature by pressing the + and – buttons.

11.2.3 Power Control



In this page, available by pressing the button in the left, you can see in real time the current working power (in the top-left square), and set the desired power by pressing the + and – buttons.

11.2.4 Parameters

Moreover is possible to access to more parameters of the stove/boiler; to see this parameters, is sufficient to press the button in the top-left corner:



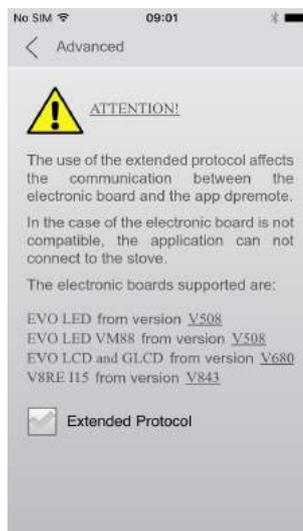
To come back to the main screen, is sufficient to press again the button in the top-left corner.

11.2.5 Extended Protocol

On the previous images, you can see in the top-right corner an icon “PE”, which indicates if the extended protocol is active or not. It was introduced to improve the communications between the app and the EVO Remote WiFi module. Unfortunately, not all the board versions are compatible with the new protocol (but **ALL** the board versions are compatible with the old one), so it can be enabled/disabled from a specific panel, that you can reach from the setting panel (the button in the top-right corner).



Once you are in the protocol panel, you can see this image:



The extended protocol is enabled/disabled changing the selection on the check box.

This panel give you important informations, such as the available board versions:

- **EVO LED** from version **V508**
- **EVO LED VM88** from version **V508**
- **EVO LCD/GLCD** from version **V680**
- **V8RE I15** from version **V843**

If the extended protocol is used with a **non-supported** board, at the moment of the connection you will see the so called “Ghost Connection”, visible in the picture below:



As shown, the application has established a connection with the WiFi module, but can't communicate with the electronic board because they use different protocols, so it's impossible to control the stove/boiler. In this case is sufficient to go to the protocol panel and disable it.

For the supported electronic boards, is suggested to enable the extended protocol.