Technical Data WiFi Main Module

Radio channels	WiFi: 2.4GHz 802.11 b/g/n, 20MHz 11n/13n 1 x 1 ISM receiver: 433.92MHz
Security protocols	WEP, WPA/WPA2 Personal, HTTPS
RF output power	802.11b 16.5dBm +/-1.5dBm
802.11g 14.0dBm +/-1.5dBm	
802.11n 12.75dBm +/-1.5dBm	
Sensitivity	WiFi: -97dBm typical sensitivity @ 1Mbps
Power supply	7-12V/1A
Operational temperature	-20'C til 55'C
Operating humidity	Max. 80% RH (non-condensing)
Measurements	125 x 80 x 47 (without ISM antenna)
WiFi antenna: Build in	
ISM antenna: 162mm	
Weight	145 grams
Ingress protection	IP67
Disposal	According to the WEEE directive

Only use power adapters approved by ThermIT.

Retail grade WIFI access points (AP's) normally allow outgoing connections made by this device (port 31314). If the local WiFi network is locked down by IT professionals:

- Use a specific proxy version of this product instead, and open for the device MAC address to DHCP with DNS to reach these destination IP's for outbound connections: 34.213.32.193 and 34.212.205.35 both TCP port 8888

IT professionals FAQ:

- Use 2.4GHz 802.11b/g/n, 20MHz, WEP, WPA/WPA2 Personal, DHCP, DNS, TLS1.2
- WEP/WPA2 Personal (aka WPA2-PSK) use standard encryption TKIP/ AES
- WPA/WPA 2 Enterprise, WPA-802.1X, WPA with RADIUS server are not supported
- APs with DNS relay mode activated may cause problems, deactivate to fix it
- The non-proxy version use port 31314 and may fall-back to ports 80, 443, 993
- No cross-network connections are made between two or more devices
- Only outbound HTTPS connections with encryption are made to the cloud servers
- IPv6 is not supported and not needed for always making outbound connections
- Cloud URL's do not use wildcard. Instead of whitelisting these, use the proxy version
- Keep-alive messages are sent when necessary, also in short timeout networks
- For security reasons the device itself can never act as an Access Point

Network setup:

Normal secure setup with SSID and Password is used.
Network where you need Username and password without SSID will not work.

“If MAC Whitelist is used, no network password is needed, only SSID.”

Function

The WiFi main module receives and stores data from the sensors on a running basis. Data are internally stored with sensor ID and temperature.

The main module connects to the local WiFi network to reach an external server and deliver data every 60 minutes. The data sent, are the latest data received from each sensor during that period.

Place the main module as freely as possible with open space around the antenna. Preferably on a shelf a couple of meters off ground, so the WiFi signal is as strong as possible.

Do not place the main module and sensors in areas with other units with interfering signals around 433 MHz, such as walkie-talkies, pagers and other equipment.

The main module is connected to a local WiFi network by performing a BlinkUp procedure using the ThermIT App for Android and iOS. In the menu choose “blink up”, enter the WiFi network name (SSID) and password, press “BlinkUp” and follow directions of the App.

Just after the BlinkUp the main module blinks green on success or red if it failed for a couple of seconds.

The main module blinks green in the first minute after power-on (or after BlinkUp) when it has connection to a local WiFi network and can reach our server.

After the first minute the main module blinks blue to indicate it is ready to receive sensor data transmissions.

To initiate sending data now, press the “Send” button in the ThermIT App for Android and iOS, often used during the installation process. Data will normally be available immediately on the Webax Portal.

The main module default period of sending data, can be adjusted in the in the ThermIT App for Android and iOS.

If the main module lights constant blue, it indicates that the unit could not reach our server last time it tried. Check the connection to the internet on the local network.