# Technical Manual for the RF Add-on Modules

Version 1.00



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## Introduction

This manual contains technical documentation allowing easy installation and use of the RF add-on modules. For programming information please consult the RTCU Programming Documentation and/or the RTCU IDE Online help.

RF add-on modules allows the RF enabled RTCU units to expand the I/O capabilities using short to middle range wireless communication technology in the ISM frequency band.

Wireless connectivity is becoming a feature of choice for many applications, today. By using an off-the-shelf embedded wireless module, the customer gets the benefit of using field proven RF hardware and protocol software to ensure the best performance possible. RF functionality of the RTCU units are designed to effortlessly interface with virtually any control, command, or monitoring applications for building automation systems, security systems, and industrial applications. The easy configurable network allows adapting to changing floor plans and requirements in a matter of minutes. New sensors and devices can be added to the network, as fast as they can be mounted.

The highly sophisticated RF protocol offers bidirectional communication with increased operational reliability and improves the basis for an extensive range of devices. Additionally the bidirectional communication ensures, that the tasks are received and accomplished correctly.

Currently the following RF add-on modules are supported by the RF enabled RTCU X32 units:

| Manufacturer | Model | Description | Typically used with: |
|---|---|---|---|
| eQ-3 AG | HM-RC-4-B / HM-RC-4 | 4 buttons remote control | CX1, AX9 |
| eQ-3 AG | HM-RC-Key3 | 3 buttons remote control | CX1, AX9 |
| eQ-3 AG | HM-PBI-4-FM | 4 channel push button remote | AX9 |
| eQ-3 AG | HM-LC-SW2-FM | 2 channel flush-mount switch adaptor | AX9 |
| eQ-3 AG | HM-LC-SW1-PI | 1 channel socket switch adaptor | AX9 |
| eQ-3 AG | HM-WDS30-T-O | Outdoor temperature sensor | CX1, AX9 |



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## Installation

The add-on modules can be setup in matters of minutes. Please refer to the technical manual of the respective add-on module for technical specifications and how to interface the module with the external connections. This section will explain interfacing the add-on modules with the RF enabled RTCU X32 units.

Please make sure, that the add-on module has the necessary power supply connected properly and ready to go. The information of installation and setup can be found in the respective add-on module's technical manual at http://www.homematic.com.

In order to be able to initiate communication between the wireless units a pairing, also called learning, need to be performed. The add-on modules have a push-button to be pushed in order to switch to the "learning mode". Location of the push-button can be found in the technical manual of the add-on module. In this mode, the module will send a pairing request that will be answered by the RTCU unit. The RTCU unit does not have any particular push button in order to switch to the pairing mode. This is done by the software. For additional information on how to listen for the pairing request, and how to communicate with the add-on modules please refer to the RTCU online help.

Please note that when pairing with the eQ HM-WDS30-T-O the actual pairing has not taken place no matter the configuration. The device will continuously transmit the current temperature with intervals of between 120 and 180 seconds.



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