



# USER MANUAL

FCA WL/WS PASE System MY2021 Model:WXRFBM1



The WXRFBM1 (Radio Frequency Hub Module) is an electronic body controller that provides Passive and Active entry and start to the vehicle. The module communicates with the other vehicle electronic devices via CAN FD. The communication of the RFHM module and the KeyFOB is done via LF antenna coils mounted inside and outside the vehicle (If equipped). The device is available in the 433.92 MHz internal antenna (92 mm) and 433.92 MHz external antenna (Fakra Connector) version.

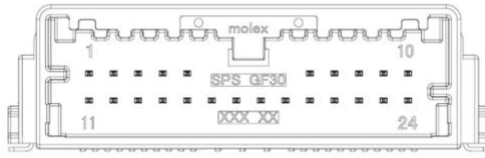
The RFHUB system is a Passive Start and Entry (PASE) system that provides enhanced customer convenience and security via a customer carried, passively or actively enabled FOBIK communicating with the vehicle control module RFHUB. A valid KeyFOB allows access to the vehicle's passenger compartment, access to the trunk, and use of the vehicle's ignition controls.

The RFHUB System includes an RFHUB Module, an Ignition Module (KIN) containing the Base station and Transponder coil, and a KeyFOB.

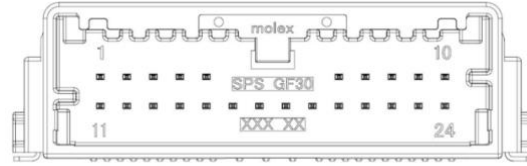
Use of the ignition controls is provided through a Keyless Ignition Node module (KIN) located in the vehicle.

The LF antenna coils are driven by an LF Driver. The antenna components form a series resonance circuit with a low Q factor. The purpose of the antenna is to generate magnetic fields which are high enough to transmit data to the KeyFOB and accurate enough for location recognition of the KeyFOB (outside/inside the vehicle). The KeyFOB receives and processes this transmitted data. The KeyFOB then sends its ID confirmation and data to the RFHM module via a 433.92MHz RF signal. The RFHM also receives RKE information from the KeyFOB for Keyless Access to commands such as "Lock", "Unlock" and "Remote Start" and receives TPMS RF Telegrams from TPMS sensors embedded in the tires. The RFHM is designed to withstand and operate properly at the environmental extremes typically encountered in a vehicle's passenger compartment.

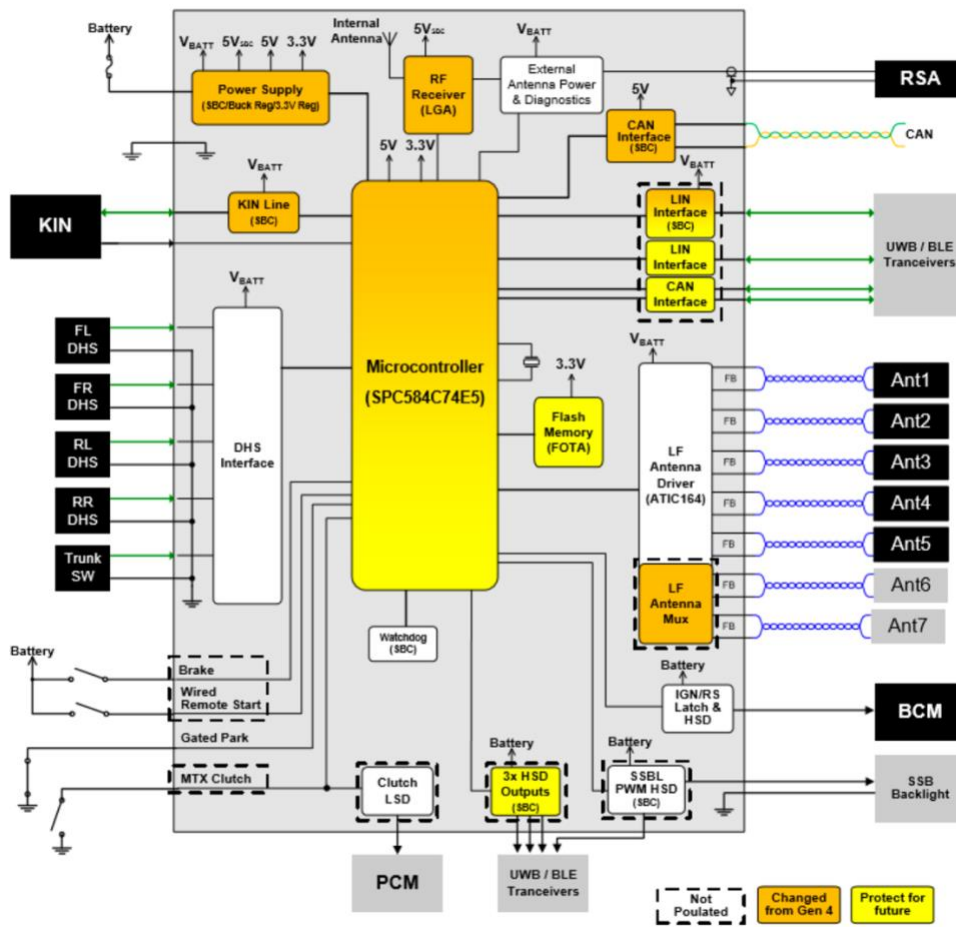
The FCA RFHM WL requires 2 different connectors to interface with the user and other modules



Molex 34897-9240/34897-8240 (view looking into connector opening)  
Mates with Molex 34824-0244



Block Diagram



MY21 WL RFHM

## Components on board

Microprocessor	Internal Clock 120MHz
Crystal Oscillator	40 MHz
RF Receiver	433.92 MHz
LF Transmitter	125 kHz
CAN Transceiver	2 Mbps
LIN Transceiver	19.2 Kbps

## Technical data

Operating Voltage	6V to 16V
Max Current Consumption	250 mA
Operating Temp range (°C)	-40 to 85°C
Measurements (LxWxH)	153.5X101.7X29mm
weight (g)	130.4g (internal antenna) / 134.7g (external antenna)
Carrier Frequency	433.92 MHz
Bandwidth	240 kHz
Number of Channels	1 Channel
Type of Modulation	ASK and FSK
Antenna Type	Internal antenna: 92 mm Loop antenna / External antenna:
Fakra connection	
Antenna Gain	Internal Antenna: -6 dB / External Antenna: NA

## Manufacturer

**Continental Automotive GmbH**  
Siemensstr. 12, 93055 Regensburg, Germany

## Regulatory information

### - FCC/ISED Owner Manual statement of compliance

NOTE: If **the device itself** is smaller than 8 cm x 10 cm, the statements of compliance may be included in the device or vehicle owner/operator manual. However, if **the device itself** is larger than 8 cm x 10 cm, then it is required to have **at least** the first paragraph below placed on the **device label or housing**.

This device complies with Part 15 of the FCC Rules and with Industry Canada's licence-exempt RSSs. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.

Cet appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée à condition que l'appareil ne produise pas de brouillage préjudiciable et qu'il accepte tout brouillage, même celui susceptible d'en compromettre le fonctionnement.

Note: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

### - Taiwan

取得審驗證明之低功率射頻器材，非經核准，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。

低功率射頻器材之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。

前述合法通信，指依電信管理法規定作業之無線電通信。

低功率射頻器材須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。