

#### Approvals

| Author            | Date | Engineering | Date | Manufacturing | Date |
|-------------------|------|-------------|------|---------------|------|
|                   |      |             |      |               |      |
| Quality Assurance | Date |             |      |               |      |
|                   |      |             |      |               |      |

#### 1. OBJECTIVE

This document describes the requirements to use Masimo Wifi Module I Limited Modular Certification within Masimo Instrument products.

#### 2. BACKGROUND

The Masimo Wifi Module I (24412) is a dual band Wifi/Bluetooth module with and SDIO interface for Wifi and UART interface for Bluetooth. 24412 has been Limited Modular certified which will allow for a reduction in test expenditures and time for transmitter type testing for Instruments that employ it as a Wifi/BlueTooth interface.

#### 3. REFERENCE

24412 Masimo Wifi Module I Board Assembly, RoHS  
18046 Antenna, 50 ohms, 2.4, 4.9, 5.2, 5.8 GHz, RoHS  
(EtherTronics Pressta 9000129 antennae)

#### 4. RESPONSIBILITY

Engineering is responsible for establishing and maintaining this document.

#### 5. MATERIALS AND EQUIPMENT

None

**6. REQUIREMENTS FOR USE**

To use the 24412 Limited Modular Certification, the product must use the antennae 18046 that the certification was issued with. The product label must use the following identifiers containing MWM1 (em, double-u, em, one):

FCC ID:VFK-MWM1 Model – [device model such as Rad9]

IC:7362A-MWM1 IC Model:MWM1

The product manual must include the following ID's and Wireless specifications as well:

Wireless Radio

FCC ID:VFK-MWM1 Model – [device model]

IC:7362A- MWM1 IC Model: MWM1

**Wireless Specifications**

| <b>Communication (Wi-Fi)</b>          |                                                                                                                               |
|---------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| Type                                  | WLAN Radio: IEEE 802.11 a/b/g                                                                                                 |
| Frequency                             | 802.11a: 5180-5240 MHz, 5745-5825 MHz<br>802.11b/g: 2412-2462 MHz                                                             |
| Max Peak Output Power                 | WLAN 17 dBm                                                                                                                   |
| Classification of Output Power Rating | Conducted                                                                                                                     |
| Output Power Type                     | Fixed at the Factory                                                                                                          |
| Modulation Types                      | OFDM, BPSK, CCK                                                                                                               |
| Modulation Signals                    | Analog and Digital                                                                                                            |
| Available Data Rates                  | 802.11a - 6, 9, 12, 18, 24, 36, 48, 54 Mbps.<br>802.11b - 1, 2, 5.5, 11 Mbps.<br>802.11g - 6, 9, 12, 18, 24, 36, 48, 54 Mbps. |
| <b>Communication (Bluetooth)</b>      |                                                                                                                               |
| Type                                  | Bluetooth                                                                                                                     |
| Frequency                             | 2402-2480 MHz                                                                                                                 |

| Communication (Wi-Fi)                 |                                                                                        |
|---------------------------------------|----------------------------------------------------------------------------------------|
| Max Peak Output Power                 | Bluetooth 1.3 dBm                                                                      |
| Classification of Output Power Rating | Conducted                                                                              |
| Output Power Type                     | Fixed at the Factory                                                                   |
| Modulation Types                      | DHS                                                                                    |
| Modulation Signals                    | Analog and Digital                                                                     |
| Available Data Rates                  | Bluetooth 1 Mbps                                                                       |
| Security and Authentication           |                                                                                        |
| Encryption                            | 64/128-bit WEP, Dynamic WEP, WPA-TKIP, WPA2-AES                                        |
| Authentication                        | Open System, Shared Key, Pre-Shared Key (PSK), 802.1X: LEAP, PEAP, TTLS, TLS, EAP-FAST |
| Radio Compliance                      |                                                                                        |
| USA                                   | FCC ID: VKF- MWM1<br>Model - [device model]                                            |
| Canada                                | IC:7362A- MWM1<br>IC Model: MWM1<br>RSS-210                                            |
| Europe                                | EN 300 328<br>EN 301 893<br>EN 301 489-1<br>EN 301 489-17<br>R & TTE Directive         |

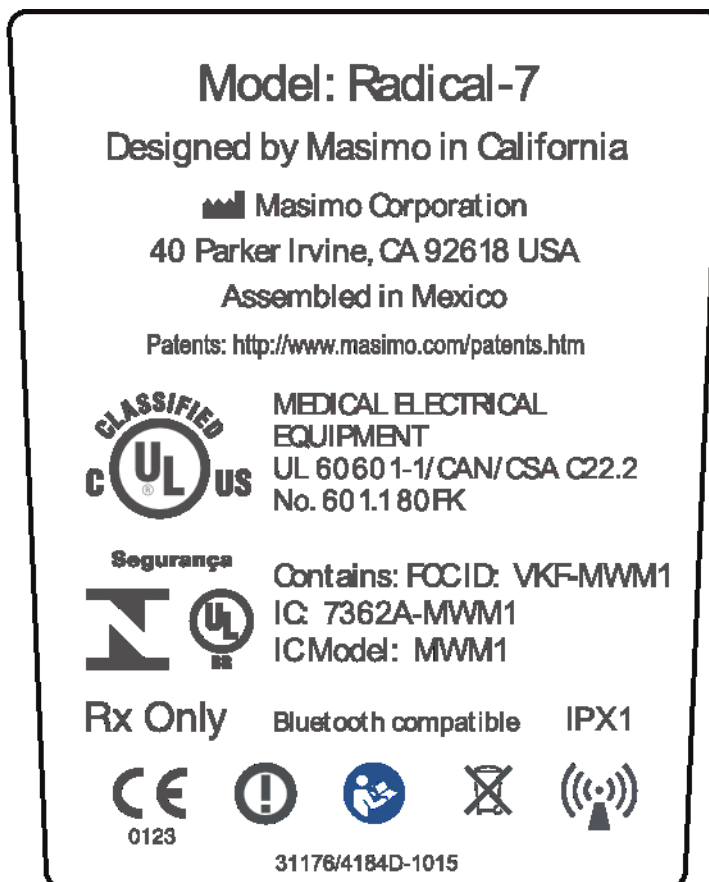


Figure 1. Sample label depicting MWM1 ID.

The product manual must include the following text:

*This device complies with part 15 of the FCC Rules. 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.*

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

*In accordance with international telecommunication requirements, the frequency band of 2.4 GHz and 5.15 to 5.25 GHz is only for indoor usage to reduce potential for harmful interference to co-channel mobile satellite systems.*

*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.*

*In order to maintain compliance with FCC regulations, shielded cables must be used with this equipment. Operation with non-approved equipment or unshielded cables is likely to result in interference to radio and TV reception. The user is cautioned that changes and modifications made to the equipment without the approval of manufacturer could void the user's authority to operate this equipment.*

*To satisfy RF exposure requirements, this device and its antenna must operate with a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.*

*This Class B digital apparatus complies with Canadian ICES-003.*