Appendix A: Agency Certifications

FCC Certification

The AW900MR OEM RF Module complies with Part 15 of the FCC rules and regulations. Compliance with labeling requirements, FCC notices and antenna regulations is required.

Labeling Requirements

In order to inherit AvaLAN's FCC Certification, compliance requires the following be stated on the device and within its operation manual:

FCC ID: R4N-AW900MR 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.

Label Warning WARNING The Original Equipment Manufacturer (OEM) must ensure that FCC labeling requirements are met. This includes a clearly visible label on the outside of the final product enclosure that displays the contents shown in the figure below.

Figure A.1. Required FCC Label for OEM products containing the AvaLAN AW900MR OEM RF Module
Contains FCC ID: R4N-AW900MR
The enclosed 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.

FCC Notices

Adherence to the following is required:
IMPORTANT: The AW900MR OEM RF Modules have been certified by the FCC for use with other products without any further certification (as per FCC section 2.1091). Changes or modifications not expressly approved by AvaLAN could void the user's authority to operate the equipment.
IMPORTANT: OEMs must test their final product to comply with unintentional radiators (FCC section 15.107 and 15.109) before declaring compliance of their final product to Part 15 of the FCC Rules.
IMPORTANT: The AW900MR OEM RF Modules have been certified for fixed base station and mobile applications. If modules will be used for portable applications, the device must undergo SAR testing.

NOTE:
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 receiving module.
• Connect the equipment into an outlet on a circuit different from that to which the receiving module is connected.
• Consult the dealer or an experienced radio/TV technician for help.

Antenna Warning WARNING: This device has been tested with Reverse Polarity SMA connectors with the antennas listed in Table 1 Appendix A. When integrated into OEM products, fixed antennas require installation preventing end-users from replacing them with non-approved antennas. Antennas not listed in the tables must be tested to comply with FCC Section 15.203 (unique antenna connectors) and Section 15.247 (emissions).

FCC-Approved Antennas (900MR MHz)

Fixed Base Station and Mobile Applications

AvaLAN Modules are pre-FCC approved for use in fixed base station and mobile applications. When the antenna is mounted at least 20 cm (8") from nearby persons, the application is considered a mobile application.

Portable Applications and SAR Testing

When the antenna is mounted closer than 20 cm to nearby persons, then the application is considered "portable" and requires an additional test be performed on the final product. This test is called the Specific Absorption Rate (SAR) testing and measures the emissions from the module and how they affect the person.

RF Exposure

(This statement must be included as a CAUTION statement in OEM product manuals.)

WARNING: This equipment is approved only for mobile and base station transmitting devices. Antenna(s) used for this transmitter must be installed to provide 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.

To fulfill FCC Certification requirements:

1. Integrator must ensure required text [Figure 1] is clearly placed on the outside of the final product.
2. AW900MR Module may be used only with Approved Antennas that have been tested with this module.

Antenna Type	Type	Maximum Gain
Omni directional	Monopole	≤ 8dBi
Directional	Panel	≤ 12.5dBi
Directional	Yagi	≤15dBi

Table 1. Type certified Antennae:

IC (Industry Canada) Certification

Labeling requirements for Industry Canada are similar to those of the FCC. A clearly visible label on the outside of the final product enclosure must display the following text:

Contains Model AW900MR Radio, IC: 5303A-AW900MR

Integrator is responsible for its product to comply with IC ICES-003 & FCC Part 15, Sub. B - Unintentional Radiators. ICES-003 is the same as FCC Part 15 Sub. B and Industry Canada accepts FCC test report or CISPR 22 test report for compliance with ICES-003.