

## Declaration of Radio Module Usage, Host Processor Limitations, and Prevention of Unauthorized Usage

Radio Module 5GHz, FCC-ID TTM-105P25T

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### Purpose of this document

The document provides a description of the Host Processor Requirements and Limitations for operation of RADIO MODULE 5GHz (TTM-105P25T), a description of usage applications for RADIO MODULE 5GHz, and explains methods employed to eliminate unauthorized use of radio communication products using RADIO MODULE 5GHz.

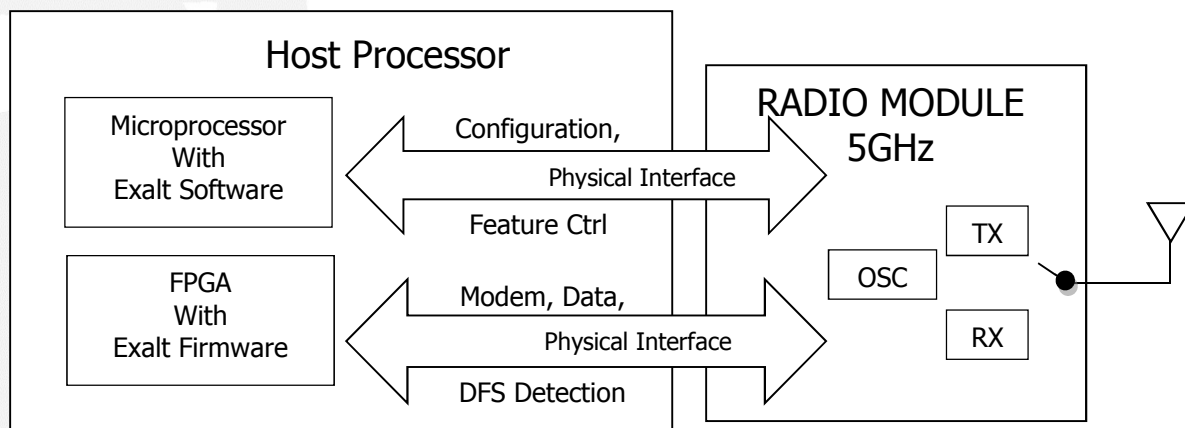
### Host Processor Requirements and Limitations

In order to operate as a radio communication device RADIO MODULE 5GHz requires a Host Processor environment with the following capabilities.

- Physical Interface to communicate with RADIO MODULE 5GHz
- Microprocessor subsystem with Exalt Software load
- FPGA subsystem with Exalt Firmware load

If any of the above is not in place RADIO MODULE 5GHz will be rendered non-functional.

All necessary Host Processor subsystems are Exalt proprietary.



### Radio Module Usage

The RADIO MODULE 5GHz is only used in fixed point-to-point products from Exalt Communications. It is not being offered or sold to any 3<sup>rd</sup> party system integrator.

Exalt does not offer a Physical Interface description or an API that would allow any 3<sup>rd</sup> party to modify the SW load of a radio. The only way a 3<sup>rd</sup> party can affect radio configuration is by means of one of the user interfaces provided by Exalt software. The Software is designed to assure operation within the authorized regulatory limits.

From time to time Exalt provides SW updates to enable new value added features or to fix reported bugs. Such features usually do not impact radio performance. Aside from highly fraudulent hacking,



there is no known way for any 3<sup>rd</sup> party to change a SW load running on an Exalt radio. The only exception is the loading of a complete new SW load, tested and officially issued by Exalt in binary form.

### **Prevention of Unauthorized Usage**

Exalt software uses a proprietary over-the-air protocol which is inherently much safer than standard protocols such as WIFI. The basic protocol uses a coding scheme that assures that a point-to-point radio only communicates with its peer radio hence preventing fraudulent access or eavesdropping. Additionally, Exalt SW offers enhanced radio communication protection based on AES128 or AES256 encryption technology.

Exalt point-to-point radio product that are based on the RADIO MODULE 5GHz require professional installation. For products shipping with antenna connector instead of an integrated antenna, the professional installer is supposed to correctly configure antenna gain and transmission line loss. Exalt provides all necessary information a professional installer may need in user manuals shipping with Exalt radio products.

Formerly, Exalt radio products based on RADIO MODULE 5GHz allowed professional installers to select a Regulatory Domain Key (RDK) to lock in the authorized limits of radio operation for a particular regulatory domain, e.g. US/FCC. This option was removed for all products based on FCC ID TTM-105P25T shipped to US customers to eliminate the potentially unauthorized usage by configuration of another RDK that was intended to be used in a different regulatory domain.

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