

Software Release Notes – R6000 Firmware Version 1.0.3

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Introduction

This document describes version 1.0.3 of the firmware for the ThinkRF R6000 family of real-time spectrum analyzers. It is distributed as a single binary file, *ThinkRF_R6000_firmware_v1-0-3.img*.

This version of the R6000 firmware is compatible with all ThinkRF R6000 products,

Refer to the product's [User Guide](#) for detailed instructions on performing a firmware update via the Ethernet connection, which also applies when using the USB connection method. Users developing custom applications that utilize direct SCPI commands can incorporate the firmware update SCPI commands introduced in release v1.0.3.

New Features

The following new feature was added:

1. Users can now initiate a firmware update and device reboot via new SCPI Commands:
 - :SYSTem:FIRMware:STATus?
 - :SYSTem:FIRMware:UPDate
 - :SYSTem:FIRMware:WRITe
 - :SYSTem:REBoot

Enhancements

The following other changes were made:

1. Added support for sending a USB message to clear the halt condition on the CDC control endpoint, effectively clearing all queued USB traffic. Subsequent transfers will start a new VRT packet.
2. The :TRACe:STReam:STARt [id] command now requires sufficient buffer space to store one complete packet before starting. Failure to allocate enough space will result in an error.
3. Updated the calculation for :TRACe:BLOCK:PACKets? MAX to ensure more accurate results.
4. General USB stability enhancements.

Fixed Defects

The following issues were fixed:

1. Corrected the :SENSE:FREQuency:IF? <n> command to return the correct value.
2. Resolved an edge case in GPIO configuration during sweeping, where the settings were not updated as expected.
3. Fixed the GNSS:POSition? query on boot to return the correct value:
512.000000,512.000000,67108863.968750.
4. Addressed an issue where a garbage packet was occasionally emitted when streaming data via USB.
5. RF lock signal is now correctly indicated in the VRT trailers.
6. Improved timestamp synchronization for higher decimation rates, enhancing accuracy by several milliseconds in certain cases.
7. Fixed data desynchronization issues and resolved occasional lock-ups.

Contact us for more information

ThinkRF Support website provides online documents for resolving technical issues with ThinkRF products at <http://www.thinkrf.com/resources>.

For all customers who hold a valid end-user license, ThinkRF provides technical assistance 9 AM to 5 PM Eastern Time, Monday to Friday. Contact us at <https://www.thinkrf.com/support> or by calling **+1.613.271.5451**.

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