

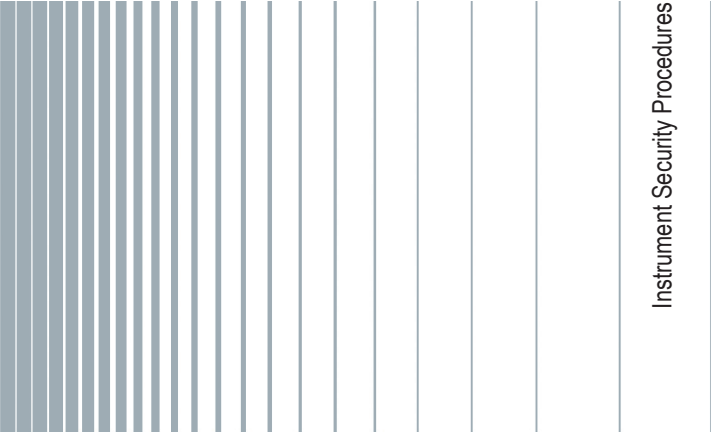
R&S®NRP-Z5

USB Sensor Hub

Instrument Security Procedures



1178.4753.02 – 01



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1 Overview

In many cases, it is imperative that the R&S NRP-Z5 USB Sensor Hubs are used in a secured environment. Generally these highly secured environments do not allow any test equipment to leave the area unless it can be proven that no user information leaves with the test equipment. Security concerns can arise when devices need to leave a secured area e.g. to be calibrated or serviced.

This document describes the types of memory and their usage in the R&S NRP-Z5. It provides a statement regarding the volatility of all memory types and specifies the steps required to declassify an instrument through memory clearing or sanitization procedures. These sanitization procedures are designed for customers who need to meet the requirements specified by the US Defense Security Service (DSS).

2 Instrument Models Covered

Product name	Order number
R&S NRP-Z5	1146.7740.02

3 Security Terms and Definitions

Clearing

The term "clearing" is defined in Section 8-301a of DoD 5220.22-M, "National Industrial Security Program Operating Manual (NISPOM)". Clearing is the process of eradicating the data on media so that the data can no longer be retrieved using the standard inter-

faces on the instrument. Therefore, clearing is typically used when the instrument is to remain in an environment with an acceptable level of protection.

Sanitization

The term "sanitization" is defined in Section 8-301b of DoD 5220.22-M, "National Industrial Security Program Operating Manual (NISPOM)". Sanitization is the process of removing or eradicating stored data so that the data cannot be recovered using any known technology. Instrument sanitization is typically required when an instrument is moved from a secure to a non-secure environment, such as when it is returned for service of calibration.

The memory sanitization procedures described in this document are designed for customers who need to meet the requirements specified by the US Defense Security Service (DSS). These requirements are specified in the "Clearing and Sanitization Matrix" in Section 14.1.16 of the ISFO "Manual for the Certification and Accreditation of Classified Systems under the NISPOM".

Instrument declassification

The term "instrument declassification" refers to procedures that must be undertaken before an instrument can be removed from a secure environment, for example when the instrument is returned for calibration. Declassification procedures include memory sanitization or memory removal, or both. The declassification procedures described in this document are designed to meet the requirements specified in DoD 5220.22-M, "National Industrial Security Program Operating Manual (NISPOM)", Chapter 8.

4 Types of Memory and Information Storage in the R&S NRP-Z5

The USB Sensor Hub contains various memory components.

The following table provides an overview of the memory components that are part of your instrument. For a detailed description regarding type, size, usage and location, refer to the subsequent sections.

Memory type	Size	Content	Volatility	User Data	Sanitization procedure
USB hub controller	17 x 8-bit configuration registers	Used by USB hub controller to operate USB interface	Volatile	No	None required (no user data)
EEPROM	2 kbyte	Configuration: <ul style="list-style-type: none"> • Vendor-ID • Product-ID 	Non-volatile	No	None required (no user data)

4.1 Volatile Memory

The volatile memory in the instrument does not have battery backup. It loses its contents as soon as power is removed from the instrument. The volatile memory is not a security concern.

Removing power from this memory meets the memory sanitization requirements specified in the "Clearing and Sanitization Matrix" in Section 5.2.5.5.5 of the ISFO Process Manual for the Certification and Accreditation of Classified Systems under the NIS-POM.

USB hub controller

The USB hub controller uses 17 8-bit registers inside to operate the USB interface. The USB hub controller does not hold user data nor can the user access the storage.

Sanitization procedure: None required (no user data)

4.2 Non-Volatile Memory

The USB Sensor Hubs contain various non-volatile memories. Out of these, only the Flash memory contains user data.

EEPROM

The EEPROM of the USB hub controller has a size of 2 kbyte. It contains information related to the USB hub controller, such as vendor-ID and product-ID. The EEPROM does not hold user data nor can the user access the EEPROM.

Sanitization procedure: None required (no user data)

5 Instrument Declassification

Since there is no user data stored inside, the USB Sensor Hub does not need a declassification procedure.

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R&S®NRP-Z5 is indicated as R&S NRP-Z5.