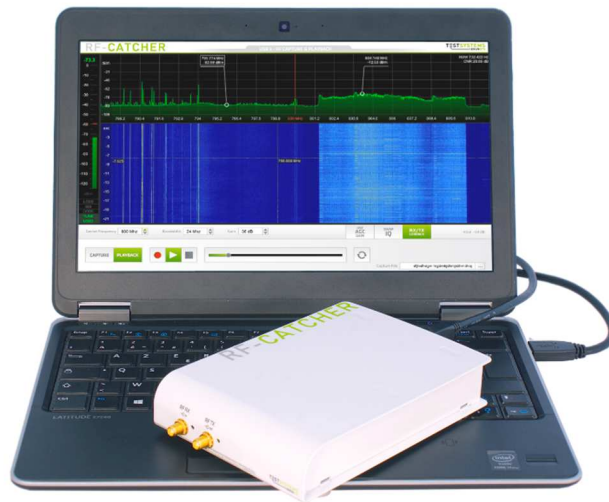


# RF-Catcher



## Quick Start RF-Catcher

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# 1 Introduction

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This Quick Start applies for the RF-Catcher device. This guide includes general information about the RF-Catcher and the software delivered:

- **RF-Catcher Suite:** software used to control the RF-Catcher capture and play functionalities.
- **IQ Converter:** tool for IQ files format conversion.
- **IQ Splitter:** tool for sequence extraction from IQ files.

## 1.1 Product Overview

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**RF-Catcher** is the most compact **RF signals capture and playback device**.

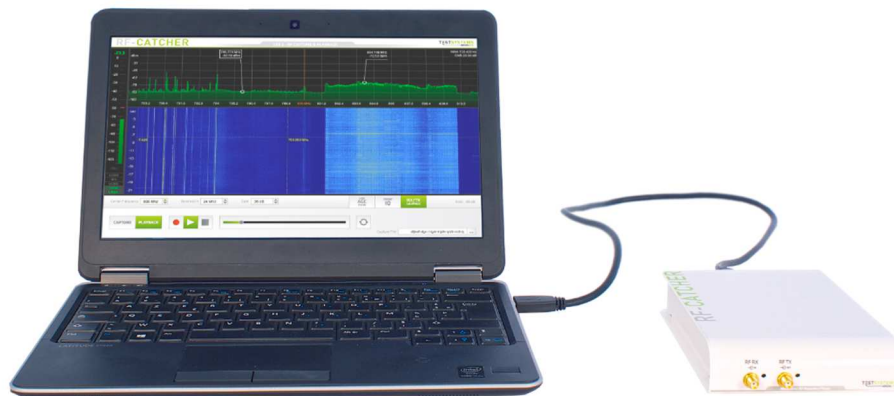
Covering a frequency range from 70 MHz up to 6 GHz, RF-Catcher can record and play real-time RF bandwidth up to 56 MHz.

RF-Catcher allows experimentation of a wide range of signals including Radio (FM, DAB...), TV broadcast (DVB-T/T2, C/C2, S/S2, ISDB-T, etc...), cellular, Wi-Fi. In order to record frequencies superior to 6 GHz (e.g. DVB-S/S2), a down-converter can be used.

It can record signals in variant points/locations and reproduce them later on in laboratories, in order to test reception environment and investigate reception problems.

The integrated GPS receiver allows to have precise location information; KML file, metadata, NMEA compatible.

Portable and compact, the **RF-Catcher** is used along with a PC, running **RF-Catcher Suite** software, through USB3 connectivity.



RF-Catcher Suite provides two additional tools:

- **IQ Converter:** a command-line tool, which provides the conversion between RF-Catcher IQ files and IQW or A74 files: RF-Catcher format to/from IQW or A74 format.
- **IQ Splitter:** a command-line tool, which enables the extraction of a certain sequence from a RF-Catcher IQ capture file.

## 1.2 PC/Laptop minimum requirements

In order to ensure best performances, RF-Catcher Suite should be installed on a computer with at least:

- Core i5/i7 processor
- 4GB of RAM
- USB3 connectors
- SSD for storage (Solid State Drive)

The RF-Catcher device connected to the host PC/laptop is powered via the USB bus. The USB adapter should be plugged to a PC's USB3 connector.

**If using a portable computer, the energy saving mode must be disabled.** The energy saving mode can limit the USB power of the connected device, and possibly degrade record/playback performances.

The RF signal's IQ samples are transferred to the PC via the USB connectivity, and stored on the PC's hard disk, which requires the following minimum configuration:

- Size: more than 128 GB
- Read Speed: 250MB / Sec (Max.)
- Write Speed: 220 MB / Sec (Max.)
- TRIM support (better performances and operating life)

The table hereafter details the total duration of capture that can be stored on SDD of different capacities, for several bandwidths of capture:

		Captured bandwidth			
		8 MHz	16 MHz	24 MHz	48 MHz
SSD capacity	128 GB	67 min	33 min	22 min	11 min
	256 GB	133 min	67 min	44 min	22 min
	512 GB	267 min	133 min	89 min	44 min

### 1.2.1 Laptop reference

The RF-Catcher and RF-Catcher Suite performances have been validated on a Dell Latitude E7250<sup>1</sup> laptop configuration:

- Intel Core i7-5600U Dual Core, 2.6 GHz, 4 MB cache
- RAM DDR3L 8 GB (1x 8 GB) 1600 MHz
- SSD storage 256 GB
- Windows 7 Professional (Professional Windows 8.1) x64
- USB 3.0

It is highly recommended to use the RF-Catcher and RF-Catcher Suite on a laptop configuration providing equal or higher performances than the reference Dell Latitude E7250.

<sup>1</sup> [http://www.dell.com/us/business/p/latitude-e7450-ultrabook/pd?oc=sml147w7p019&model\\_id=latitude-e7450-ultrabook](http://www.dell.com/us/business/p/latitude-e7450-ultrabook/pd?oc=sml147w7p019&model_id=latitude-e7450-ultrabook)

## 1.3 Packing list

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Before proceeding, please check that the box contains all of the following items:

- 1x RF-Catcher device
- 1x USB 3 cable:
  - data exchange between the RF-Catcher and the RF-Catcher Suite
  - RF-Catcher power supply. The RF-Catcher is powered on via the USB 3 connection; there is no need for a 12V power plug.
- 1x USB key, containing:
  - "Software/RfCatcher\_Vx.exe": RF-Catcher Suite installer
  - "User Manual/TESTSYSTEMS\_RF-Catcher\_Suite\_User\_Manual\_x.pdf": RF-Catcher Suite user manual
  - "User Manual/TESTSYSTEMS\_RF-Catcher\_Quick\_Start.pdf": RF-Catcher quick start manual
  - Depending on purchased options:
    - "OPTION/Software/IQConverter\_Vxx.exe": IQ Converter tool installer
    - "OPTION/Software/IQSplitter\_Vxx.exe": IQ Splitter tool installer
    - "OPTION/User Manual/ TESTSYSTEMS\_RF-Catcher\_Tool\_IQ\_Converter": IQ Converter tool user manual
    - "OPTION/User Manual/ TESTSYSTEMS\_RF-Catcher\_Tool\_IQ\_Splitter.pdf": IQ Splitter tool user manual



If any item is missing or has defects, do not install the device and contact our Technical Support team via email ([support@enensystemstest.com](mailto:support@enensystemstest.com)).

## 2 Quick start

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Please refer firstly to the **RF-Catcher Suite** user manual in order to install your RF-catcher device on your PC. This user manual contains detailed information regarding the RF-Catcher installation and operation.

Once your RF-Catcher is installed and ready to operate, you may refer to the IQ Converter or Splitter tools respective user manual.

Also, you may register on the Privileged Area website <http://privileged.enensys.com>, where the latest software release and user manuals are available for clients owning ENENSYS TESTSYSTEMS products.

### 3 Equipment return for repair

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In case of any trouble with one of ENENSYS TESTSYSTEMS products, please report it to our Technical Support team via email ([support@enensystest.com](mailto:support@enensystest.com)). Your request should specify the Serial Number as displayed on the bottom label of the equipment, with a description of the defect, reference of Purchase Order if possible, and your full details.

Upon receiving your request, a support engineer will get in touch with you in order to surely identify the source of the problem. If equipment has to be returned for repair, a RMA<sup>1</sup> number will be provided to you. You will need include the RMA file to the shipping box of the faulty equipment, and mention the RMA number in your communication with our support team. Your equipment will be shipped back to you along with a repair report.

### 4 Upgrades and Privileged Area

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A Privileged Area (<http://privileged.enensys.com>) is available on ENENSYS TESTSYSTEMS' web-site.

All registered user has access to the Privileged Area where general documentation, User Manuals, software and product upgrades can be downloaded.

In order to get access to the Privileged Area, you will have to register on your first access. A serial number of your ENENSYS TESTSYSTEMS equipment will be required in order to validate the account. You will then receive a password that will give you access to the Privileged Area.

### 5 Contact Information

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<sup>1</sup> Returned Material Authorization