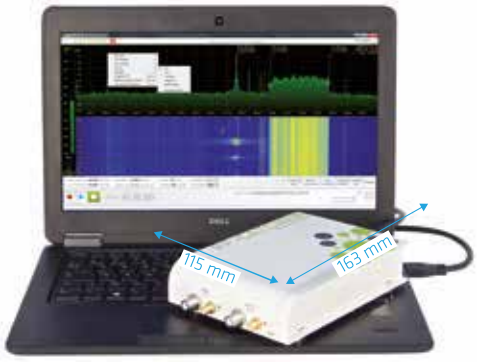
RF-CATCHER Starter Kit

testtree™

COVERING A FREQUENCY RANGE FROM 70 MHz UP TO 6 GHz, **RF-CATCHER** CAN RECORD AND PLAY REAL-TIME RF BANDWIDTH UP TO 55 MHz.

RF-Catcher allows experimentation of a wide range of signals including Radio (FM, DAB...), TV broadcast (DVB-T/T2, C/C2, ISDB-T, etc...), cellular, Wi-Fi, up to satellite signals (DVB-S/S2).
The RF-Catcher is equipped with LNB control for frequency down conversion of Ku/C bands. The integrated GNSS receiver provides precise location information; KML file, metadata, NMEA compatible.

The RF-Catcher is compact, robust, lightweight (600g) and cost-effective: your technicians and engineers can bring it everywhere in their hand bag.



LIGHTWEIGHT (600g)

USB SELF-POWERED & LOW POWER (3W)

Easy to use & Responsive GUI

High degree of parameterization for measures

RSSI (Received Signal Strength Indication)

FFT display for live RF reception/playback
- Spectrum measurements
- Averaging functions
- FFT windows functions

IQ max power

IQ average power

Status indicators
USB: connection (USB2 or USB3)
LOSS: IQ sample loss
IBS: in band saturation (ADC)
OOBS: out of band saturation (LNA)

Frequency setting for capture (Rx) / playback (Tx) **range 70 MHz to 6 GHz**
1 kHz resolution

FFT resolution bandwidth: 30 Hz (for 2 MHz) to 210 kHz (for 55 MHz)

WATERFALL SECTION
Allows detection of bursts & transients (Wi-Fi, 4G, ...)

Rolling Buffer mode for RF capture

LNB configuration for Satellite capture

Trigger mode for synchronized capture/playback between several devices

RF Capture & Playback controls

Sample rate up to 61.44 Msps

Variable acquisition **bandwidth FROM 1 up to 55 MHz**

Gain setting for capture
Attenuation setting for playback

Rx/Tx connector setting: **F or SMA**

AGC (Automatic Gain Control) for RF reception

RF capture file stored on PC: 170 min of 12 Msps bandwidth record = 512GB
NONPROPRIETARY IQ FILE FORMAT

Auto-test control: evaluate the PC performance for RF capture/playback max bandwidth

APPLICATIONS

- Chipset, STB/TV field test debugging (a great tool to support your pre-sales team)
- Easy & simple usage: no need for **RF experts** to capture field RF signals (ex: DAB/FM, TV broadcast, Satellite broadcast, Wi-Fi,...), **your sales force can do it for you anywhere in the world**
- **Handy demonstration setup**: bring real RF sources into your laptop
- RF sources stored on a PC: easy to duplicate/transfer between head-quarter and regional sites
- Radio/TV Broadcast/Telecom RF troubleshooting
- **Test automation** (command line tools)
- Telecommunications Regulation Agencies validation tool

RF-CATCHER Starter Kit

RX MODE

Frequency	
Frequency band	70 MHz to 6.0 GHz
Frequency resolution	1 kHz
Real-time bandwidth	1 MHz to 55 MHz
RBW (Resolution bandwidth)	30 Hz (for 2 MHz) to 210 kHz (for 55 MHz)
Noise Figure	< 8 dB
Phase Noise at 10 kHz	
1200 MHz	-91.3 dBc/Hz
3200 MHz	-85.2 dBc/Hz
5000 MHz	-82 dBc/Hz
Noise Floor / Sensitivity	-110 dBm
IF Band	
ADC resolution	12-bit
Sampling rate	61.44 Msps max
RF Input Characteristics	
Input Dynamic Range	-110 to 0 dBm
Input Level Resolution	1 dB
Max Peak power*	0 dBm
Max DC input*	± 15 V
**Absolute maximum ratings*	
Gain Range (1dB step)	
800 MHz	0 to 74 dB
2300 MHz	0 to 73 dB
5500 MHz	0 to 65 dB
IIP3	
1200 MHz	7.2 dBm
3200 MHz	8.4 dBm
5000 MHz	15.2 dBm
Storage	
512 GB @ 12 Msps	170 min
512 GB @ 24 Msps	85 min
512 GB @ 40 Msps	50 min

TECHNICAL CHARACTERISTICS

2x RF inputs, 2x RF outputs for RF Capture & Playback (SMA/F connectors)*

Frequency range from **70 MHz up to 6 GHz**, resolution 1kHz

Variable bandwidth from 1 up to 55 MHz

Automatic filtering: harmonic suppression for playback, out of band signal suppression for capture

RF reception:
- Status indicators: USB connection / IQ sample loss / In band saturation (ADC) / Out of band saturation (LNA)
- FFT display: Spectrum measurements: FFT resolution, FFT markers insertion / Averaging functions: RMS, min/max hold / FFT window functions: rectangular, Hamming, Blackman, Hann...
- Signal waterfall plot (three-dimensional spectra)
- Power in band measurement

Trigger mode for synchronized capture/playback between several devices

RF capture: variable gain, **automatic gain setting** (AGC), **rolling buffer** mode

RF playback: variable attenuation

Lightweight and compact 163 x 115 x 32 mm, 600 g, 3 W typical power consumption

Connected to PC via USB3.0 connectivity (SuperSpeed) (USB2 backward compatible, but with lower performances due to limited USB2 bitrate)

IQ files stored on the PC: 12 Msps sample rate, 170 min of record = 512GB

Nonproprietary IQ file format, compatible by Matlab software

Integrated GNSS (GPS, Glonass) receiver: KML file, metadata, NMEA protocol

Compatible MS Windows 7/8/8.1/10 (x64 versions only)

**Both input/output connectors cannot be used at the same time*

TX MODE

Frequency	
Frequency band	70 MHz to 6.0 GHz
Frequency resolution	1 kHz
Real-time bandwidth	1 MHz to 55 MHz
Phase Noise at 10 kHz	
1200 MHz	-91.3 dBc/Hz
3200 MHz	-85.2 dBc/Hz
5000 MHz	-82 dBc/Hz
RF Output Characteristics	
Attenuation range	0 to 89 dB
Amplitude resolution	0.01 dB
Power output	5 dBm max
Max DC output	± 15 V

PHYSICAL

Dimensions	163 x 115 x 27 mm 6.4 x 4.5 x 1.2 in
Weight	600 g
Power supply	USB self-powered
Auxiliary power	USB connector (additional power supply for satellite captures using LNB controller)
Power consumption	3W

INTERFACES

RF input	1x SMA-type female - 50 Ω 1x F-type female – 75 Ω (up to 2 GHz)
RF output	1x SMA-type female - 50 Ω 1x F-type female – 75 Ω (up to 2 GHz)
1PPS/Trigger input	1x SMA-type female - 50 Ω
Trigger output	1x SMA-type female - 50 Ω
10MHz	1x SMA-type female - 50 Ω
GPS	1x SMA-type female - 50 Ω
Power & Data	1x USB3 B-Type
Auxiliary power	1x USB3 B-Type

ENVIRONMENT

Operating temperature	-20°C to +55°C
Storage temperature	-20°C to +70°C

PC MINIMUM REQUIREMENTS

Core i5/i7 processor
4 GB of RAM
USB 3.0 connectors
SSD for storage
(Solid State Drive)

Specifications Subject To Change Without Notice

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