

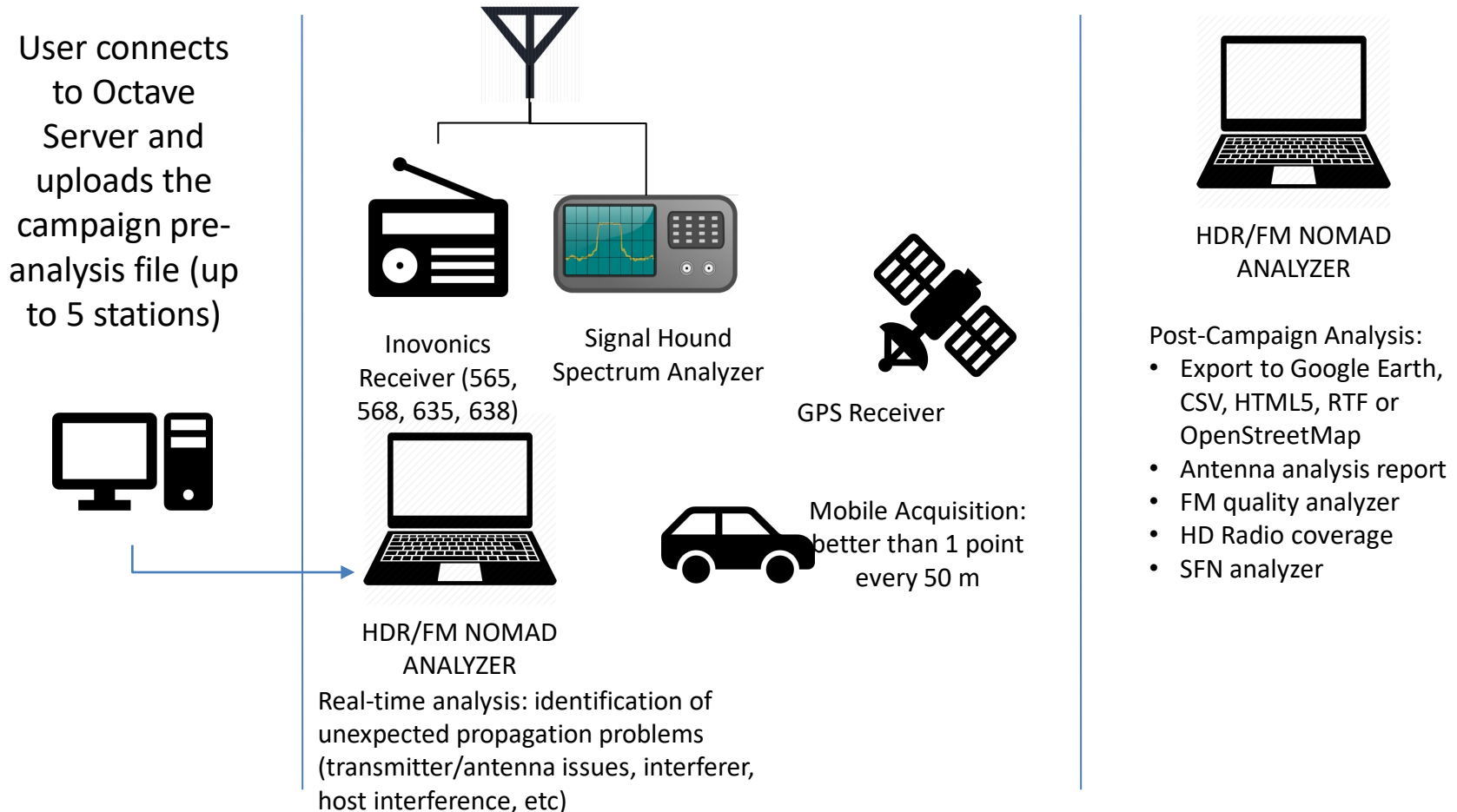


# NOMAD HDR/FM ANALYZER V2

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Hardware Specifications

# Basic Operating Principles



# Nomad Hardware Kit

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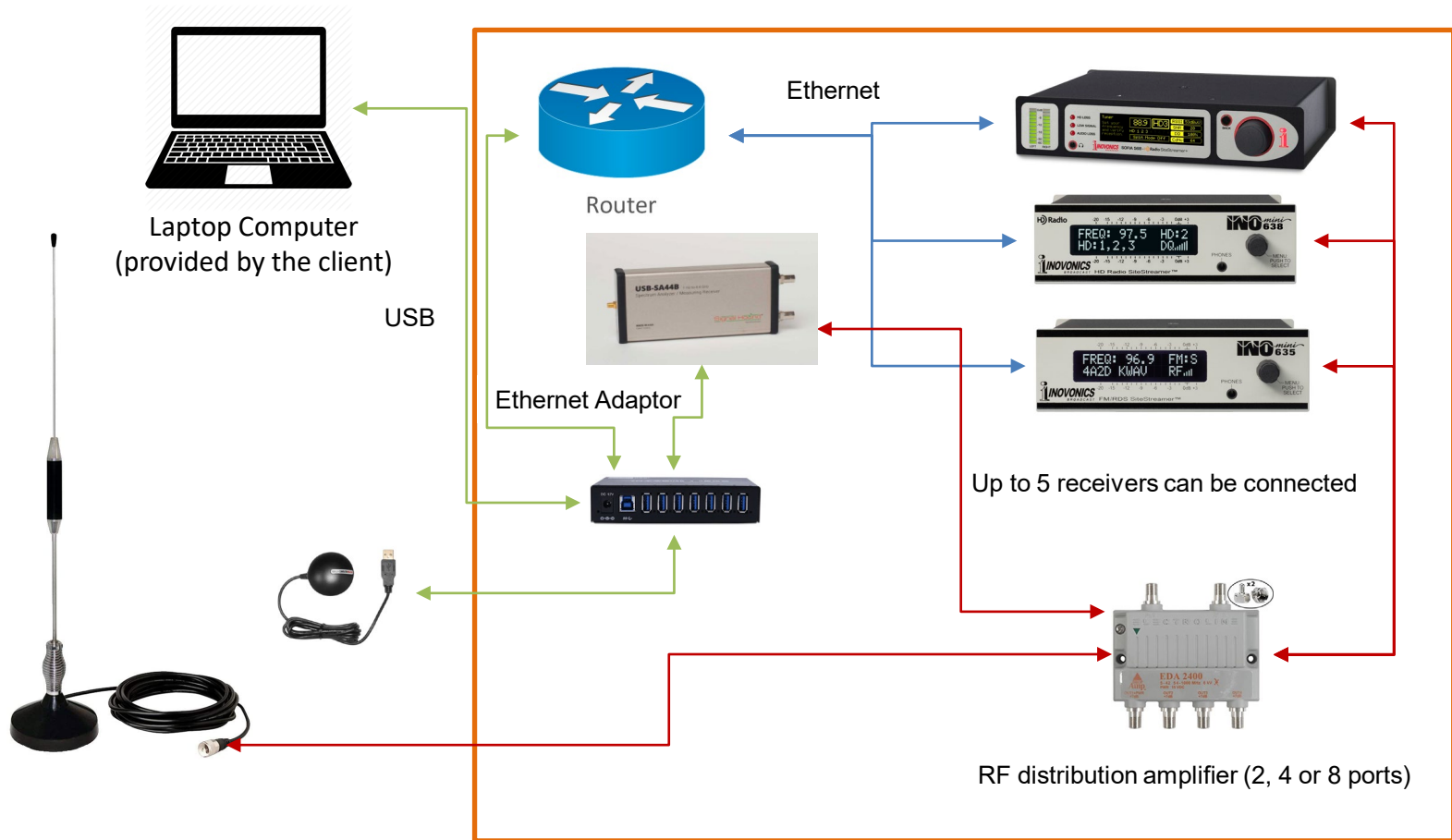


The system comes fully mounted and calibrated in a transportable Gator 3U or 4U (depending on the options on number of receivers) Light Weight Rack Bag.

This bag is suitable for carry-on air transportation and an optional Pelican case can be supplied for check-in luggage.

Note: the example on the left shows a dual HDR/FM and DTV Nomad kit.

# Connectivity Diagram



# GPS System Characteristics

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GPS: US Global Sat BU-353-S4 (or compatible)

- Output rate: 5 hz
- Chipset: Star IV
- Accuracy: <2.5 m
- WAAS enabled (North America)
- Max speed: 1854 km/h
- Power: 60 mA (USB)

# Receiving FM Antenna

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Antenna base: Firestik K11 – Heavy Duty Magnet Mount

**31"**  
**STAINLESS STEEL**  
**AM/FM ANTENNA**  
**3/8 X 24" CONNECTOR**



31" FM Receiving antenna

The antenna and mount are calibrated at Octave Communications for the complete FM band (average gain of -3 dBd)

# RF Distribution System

Depending on the number of optional receiver, we will be using on of the following Electrolyne distribution amplifier:

- EDA-2200 (2 ports)
- EDA-2400 (4 ports)
- EDA-2800 (8 ports)



The gain is corrected in the Nomad application settings.

The detailed fact sheet is available here:

[https://electroline.com/fact\\_sheets/eda/950-0014\\_New\\_EDA-2000\\_fact\\_sheet.pdf](https://electroline.com/fact_sheets/eda/950-0014_New_EDA-2000_fact_sheet.pdf)

Power Consumption: 200 mA at 15 VDC

Maximum Input: +10 dBm (130 dBuV/m)

# Spectrum Analyzer

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Signal Hound USB-SA44B

<https://signalhound.com/products/usb-sa44b/>

Main specifications:

- Noise floor at 100 MHz: -161 dBm
- Dynamic pre-amp control
- Max Amplitude: + 10 dBm



# Ethernet Switch

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All devices are accessible directly via the ethernet switch

Different model can be used depending on hardware requirements

Power Consumption: 0.9 W

# FM/HDR Receivers



Nomad supports the following Inovonics Broadcast receivers:

- Sofia 568 (HD and FM)
- Sofia 565 (FM only)
- INOmini 638 (HD and FM)
- INOmini 635 (FM only)

The Sofia receivers comes with a better audio quality, more metrics, artist experience (HD Radio), etc. Please contact us to understand the difference between the 2 products.

Typical power requirements:

- Sofia: 450 mA at 15 VDC
- INOmini: 115 mA at 15 VDC

# System Power Consumption

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The total power consumption when operating 5 Sofia receivers is approximately 45W – 80W.

The user's laptop will generally require between 60W to 100W (peak).

The kit + laptop usually work perfectly with a 250 W power inverter (not provided with the system), which can be connected directly to the 12 VDC car outlet.