RF Explorer 3G+ IoT Shield for Arduino

SKU 114990813

RF Explorer 3G+ IoT modules are ready to use, advanced Spectrum Analyzer devices you can configure and control any way you want, from an Arduino, Raspberry Pi, or any other programming platform.

Description

RF Explorer 3G+ IoT modules are ready to use, advanced Spectrum Analyzer devices you can configure and control any way you want, from an Arduino, Raspberry Pi, or any other programming platform.

These modules are cost-effective platforms to develop your own customized Spectrum Analyzer, Power Detector, RF activity alarm, RF sniffer, RF QA test bench, etc.

Programmability and network capabilities of the hosting platform enables remote control and diagnosis scenarios, fully automated RF alarm systems, advanced assistance for unattended detection requirements such as those of radio operators, cell towers and HAM stations.

RF Explorer 3G+ IoT boards are delivered in two modes configuration modes:

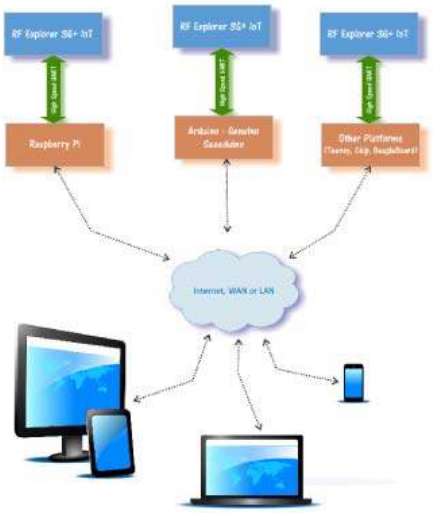
Raspberry Pi
Arduino and compatible boards (3.0 – 3.3V only)

We recommend Raspberry Pi mode for advanced usage and more powerful libraries, and Arduino for simpler, non-Linux software libraries related development.

For best flexibility, these two boards can be easily re-converted between modes by soldering a required connector:

Raspberry Pi Hat can be converted to Arduino Shield by soldering standard 0.1” male headers to the PCB
Arduino Shield can be converted to Raspberry Pi Hat by soldering a 13x2 0.1” female header to the PCB

Designed in this way, it is easy to reconvert the board to a different hosting platform with no extra cost if you have different needs down the road.



Furthermore, other platforms such as BeagleBone, Chip, Chipkit, Teensy all them can easily control a RF Explorer 3G+ IoT by manually connecting to a standard UART port.

Features

Design and customize your own Spectrum Analyzer, RF Detector, RF Sniffer, etc
Open source design, open source libraries and examples
Supported by all Arduino and Seeeduino 3.3V boards.
Suggested platforms:

Arduino DUE (best performance)

Seeeduino (lower cost and size)

IMPORTANT: Do not use on 5V Arduino boards or will damage the IoT Shield
Flexible board: can be connected to a Raspberry Pi by soldering a compatible female header
Recommend to select SMA antennas for specific application
For future firmware upgrades, or if you are using a small form-factor Arduino and want UART connection to PC - you should get a USB CP2102.

Specification

Includes the advanced 3G+ MWSUB3G RF Explorer module	
Frequency band coverage	15-2700 MHz
Antenna connector	Standard SMA 50 ohms
Advanced selectable internal input stage	Normal, LNA, 30dB Attenuator
Amplitude resolution	0.5dBm
Dynamic range	-130dBm to +10dBm
Absolute Max input power	+30dBm
Average noise floor level (typical with LNA enabled)	-120dBm
Frequency stability and accuracy (typical)	+-10ppm
Amplitude stability and accuracy (typical)	+-3dBm
Frequency resolution	1Khz
Resolution bandwidth (RBW)	automatic 3KHz to 600KHz
Power consumption	100-500mW
All modules are factory calibrated	

Part List

1 x RF Explorer 3G+ IoT shield for Arduino