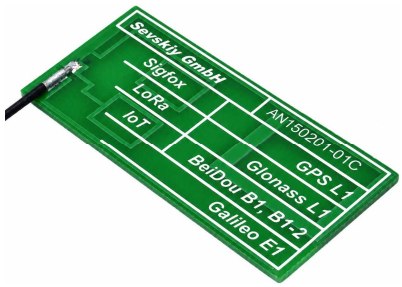
790…924 MHz / 1559…1610 MHz / 2410…2485 MHz PCB Antenna (ISM, GNSS, Wi-Fi 2.4 GHz)



General information

The AN150201-01C is a compact multi-band PCB antenna designed for integration into the different electronic devices such as IoT terminals, GNSS trackers, routers, wireless sensors, and various telemetry equipment. It supports SRD860/ISM915, GNSS upper L-band (1559…1610 MHz), and the 2400 MHz ISM/Wi-Fi band, ensuring dependable operation across multiple modern wireless communication systems.
The antenna is manufactured on an FR-4 substrate and features a coaxial cable and an I-PEX MHF1 / Hirose U.FL (UMCC) compatible connector for quick and reliable integration into RF modules, communication boards, and space-restricted electronic assemblies. Its broadband characteristics, linear polarization, and omnidirectional radiation pattern make it suitable for a wide range of applications, including ISM, RFID, LP-WAN, IoT, GNSS positioning and tracking, industrial monitoring, smart meters, wireless sensors, and Wi-Fi 2.4 GHz connectivity.

Electrical data

Antenna type	Embedded / internal PCB antenna		
5G bands	5, 8, 18, 20, 26, 53, 81, 82, 89		
4G bands	5, 6, 18, 19, 20, 26, 27		
Other frequency bands	SRD860, ISM915, ISM2400, GNSS		
Frequency range [MHz]	790...924	1559...1610	2410…2485
Return loss [dB]	-7	-6	-8
Peak gain [dBi]	-1…1	-2.5…-1	2.5…3
Radiation efficiency [%]	65…85	30…40	65…75
Nominal input impedance [Ohm]	50		
Polarization	linear		
Radiation pattern	omnidirectional		
Maximum input power [W]	5		

Mechanical data

Antenna PCB dimensions [mm]	43 x 20 x 1
Connector type [1)]	IPEX MHF1 / Hirose U.FL (UMCC) compatible [1)]
Cable type and thickness [2)] [mm]	micro coax 1.13 [2)]
Cable length [3)] [mm]	175 [3)]
PCB material	FR4

Additional information

[1)] Other connector types can be offered on request.

[2)] Following cable thicknesses can be used with MHF1 connector: 0.81 mm, 1.13 mm, 1.32 mm, 1.37 mm.

[3)] Other cable lengths can be provided.

Antenna performance was measured using the specified cable length in free space.

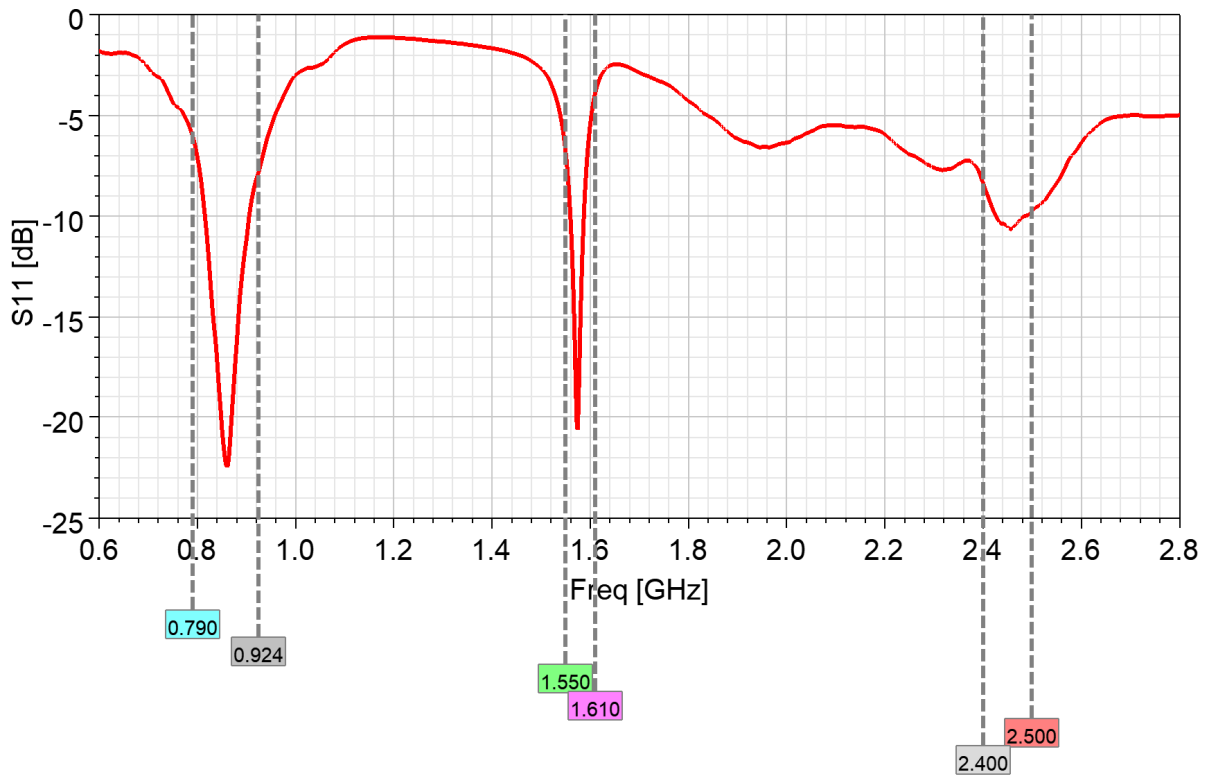
Further customization, electromagnetic simulations and measurements can be offered on request.

The antenna can be additionally equipped with adhesive tape and mounting holes.

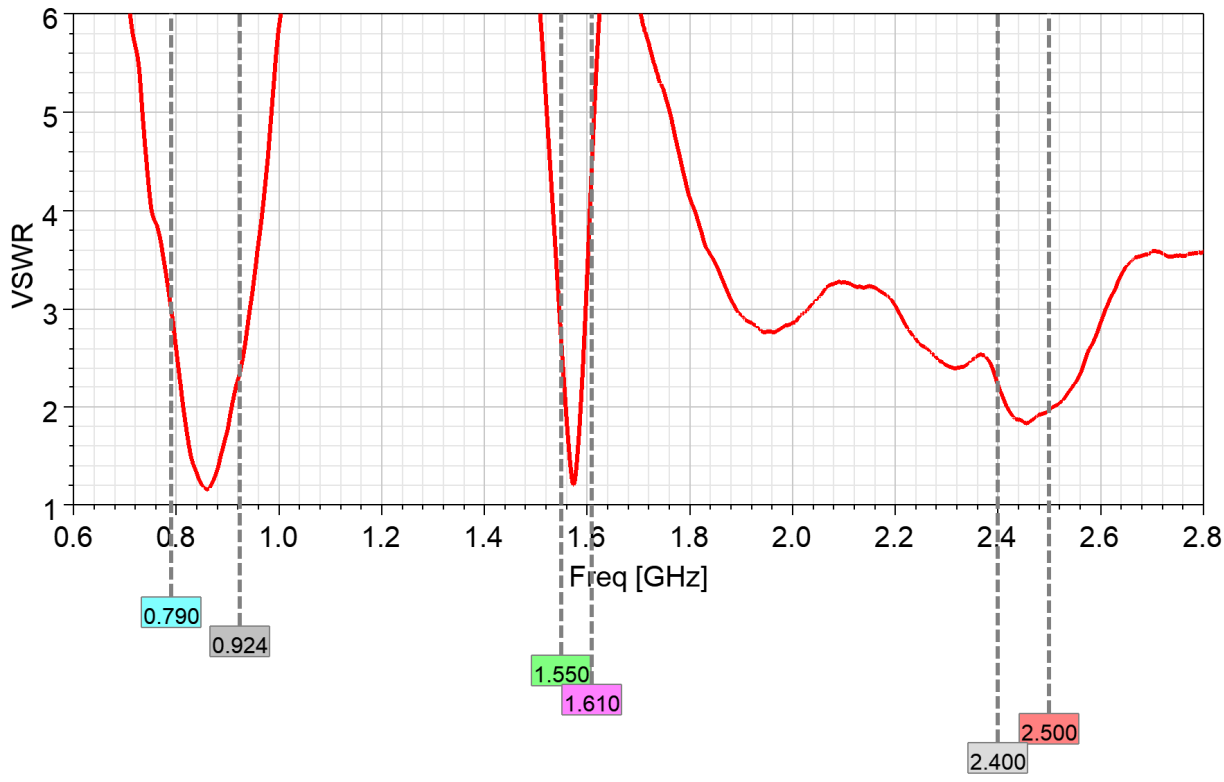
Sevskiy GmbH, CEO: Dr. Sergey Sevskiy
Office: Schatzbogen 43, Munich, Germany
Tel.: +49 89 38-90-7229
Fax: +49 89 38-90-7230
E-Mail: sergey@sevskiy.de
Internet: www.sevskiy.com

790…924 MHz / 1559…1610 MHz / 2410…2485 MHz PCB Antenna (ISM, GNSS, Wi-Fi 2.4 GHz)

Measured input impedance matching



VSWR



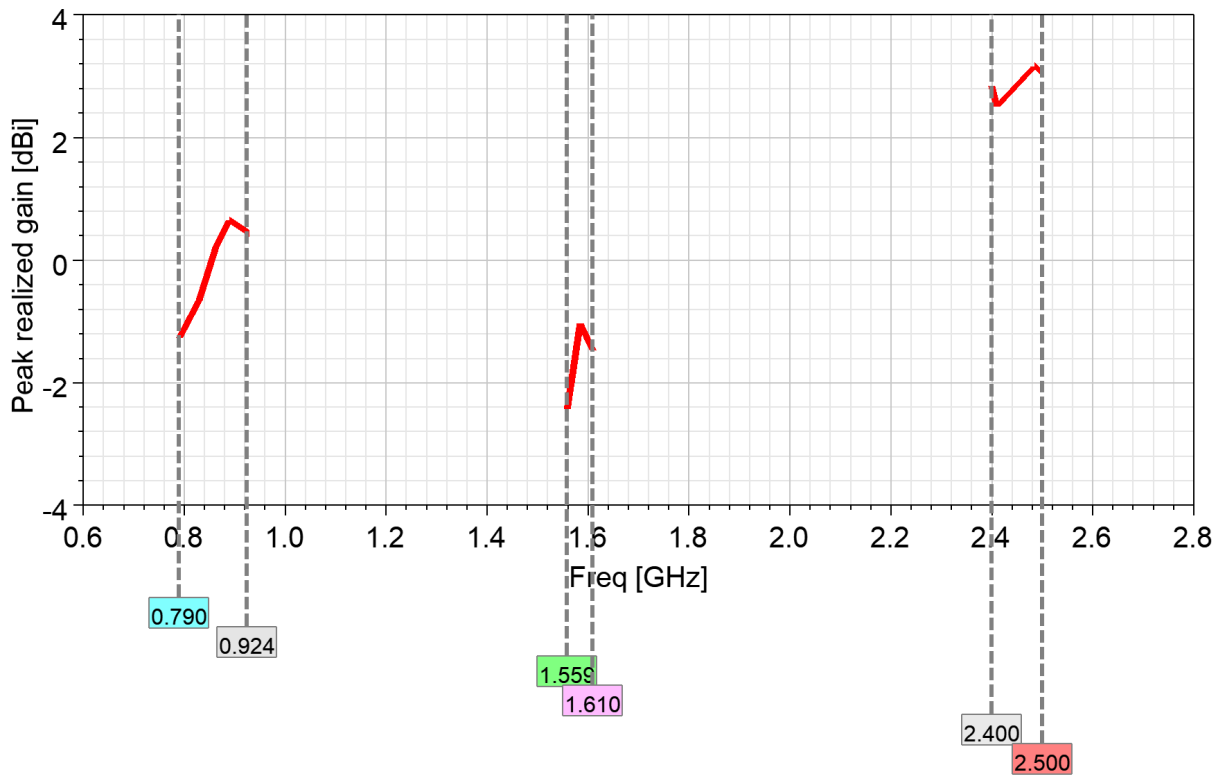
Sevskiy GmbH, CEO: Dr. Sergey Sevskiy
Office: Schatzbogen 43, Munich, Germany

Tel.: +49 89 38-90-7229
Fax: +49 89 38-90-7230

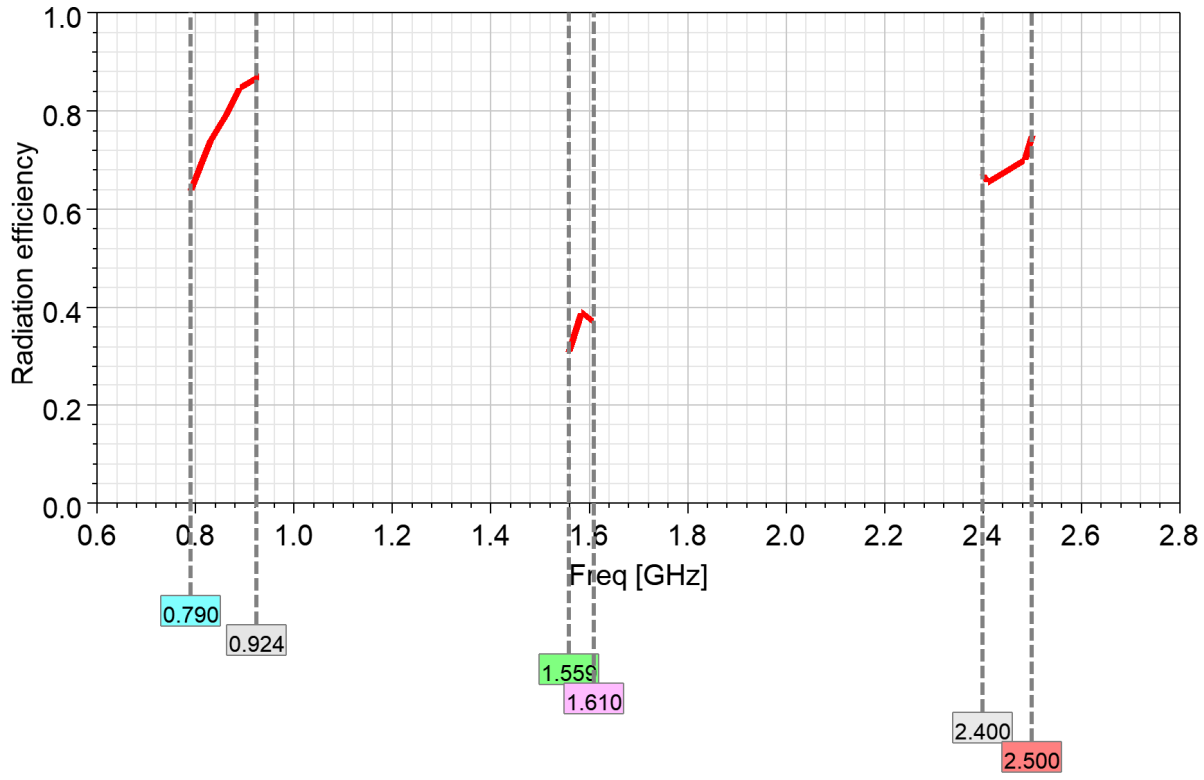
E-Mail: sergey@sevskiy.de
Internet: www.sevskiy.com

790…924 MHz / 1559…1610 MHz / 2410…2485 MHz PCB Antenna (ISM, GNSS, Wi-Fi 2.4 GHz)

Peak realized gain



Radiation efficiency



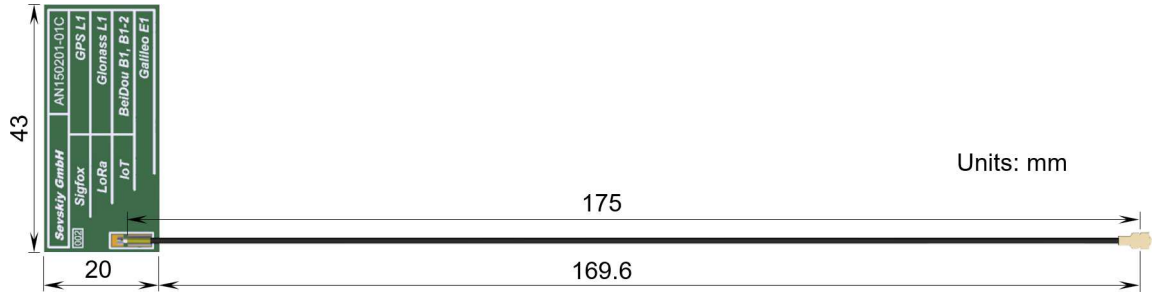
Sevskiy GmbH, CEO: Dr. Sergey Sevskiy
Office: Schatzbogen 43, Munich, Germany

Tel.: +49 89 38-90-7229
Fax: +49 89 38-90-7230

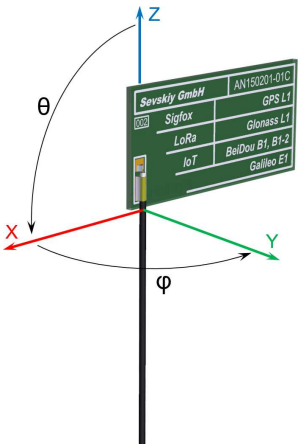
E-Mail: sergey@sevskiy.de
Internet: www.sevskiy.com

790…924 MHz / 1559…1610 MHz / 2410…2485 MHz PCB Antenna (ISM, GNSS, Wi-Fi 2.4 GHz)

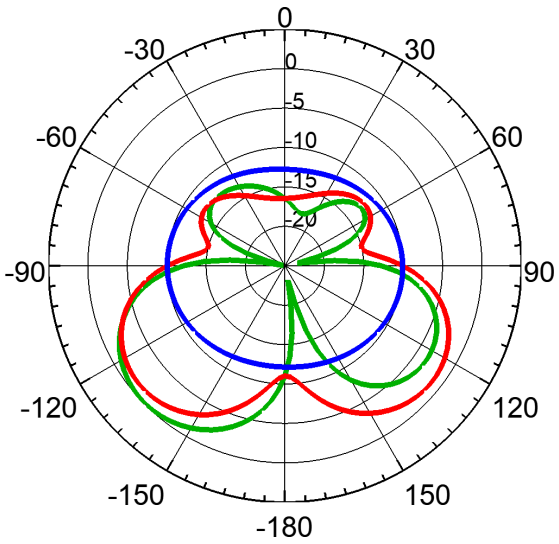
Product dimensions



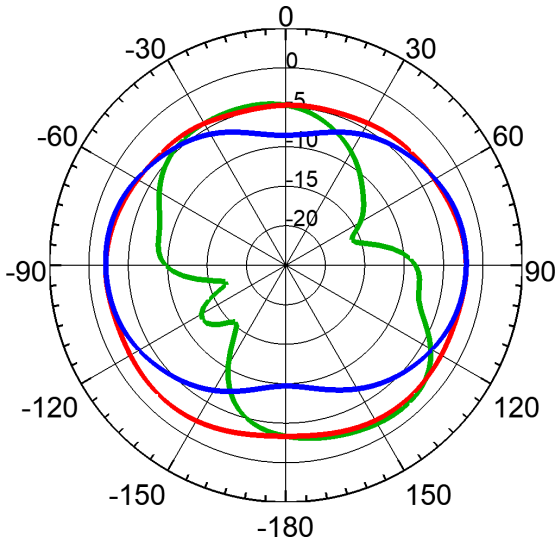
Radiation pattern



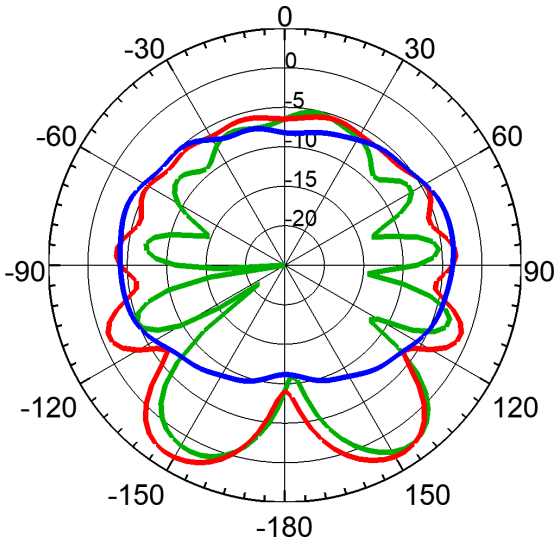
Total realized gain [dBi]
Phi=0°, plane XZ, green curve
Phi=90°, plane YZ, red curve
Theta=90°, plane XY, blue curve



863 MHz



1580 MHz



2485 MHz

Sevskiy GmbH, CEO: Dr. Sergey Sevskiy
Office: Schatzbogen 43, Munich, Germany
Tel.: +49 89 38-90-7229
Fax: +49 89 38-90-7230
E-Mail: sergey@sevskiy.de
Internet: www.sevskiy.com