PLUS Wideband Antenna family

Model: RA100-IPX

700MHz to 3000MHz frequency range.

Excellent efficiency over the whole frequency range.

Very suitable for IoT-applications and supports Bluetooth, Wi-Fi, 2G, 3G, 4G/LTE, LPWAN, ZigBee as well as GPS and more.

Overview

Full IoT Frequency Range

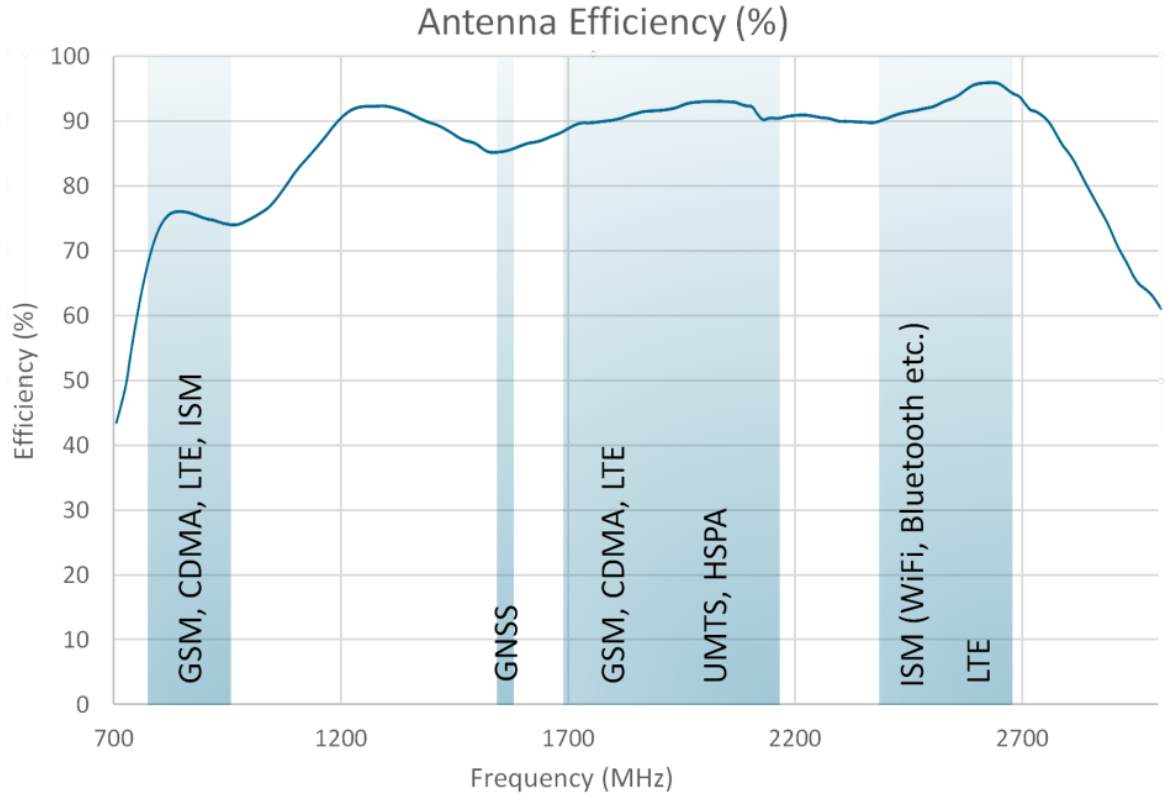
The PLUS antenna from ShortLink is an excellent omnidirectional true wideband antenna, specially designed for the entire range from 700 to 3000 MHz. This makes it easier to launch a product for the global market because the same antenna supports all frequency bands in this range.

That is, no matter which communication protocols you intend to use in your product, such as Bluetooth, ZigBee, LPWAN (LoRa, Sigfox, Weightless etc), Wi-Fi, 2G, 3G, 4G/LTE, NB-IoT and more, the PLUS antenna will work very well.

High Efficiency

The high efficiency of the ShortLink PLUS wideband antenna enables market leading performance, giving your wireless product excellent range.

Furthermore, it does not need an external ground plane to achieve full performance, due to its design, and thanks to the possibility to re-tune the antenna with aid of existing tuning network. This can reduce both the size and number of other components in the system, thus simplifying system design.



Specification PLUS antennas

Antenna Characteristics

Model	RA100- IPX (UFL/IPX)
Frequency Range*	700MHz to 3000MHz
Peak Gain at 2.4GHz	+3 dBi
Impedance	50 ohms
Design	Omnidirectional
Size	100x32 mm *(± 0,2 mm)*
Thickness	0,8 mm
Antenna Colour **	Black
Connector	UFL/IPX connector on PCB
Operating Temperature	-40 to +85°C
Certifications	CE, RoHS

** Detailed frequency response specified later in this document*

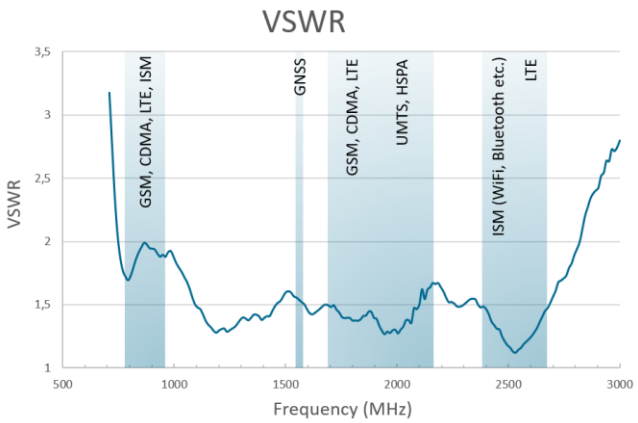
*** Custom colours available on request*

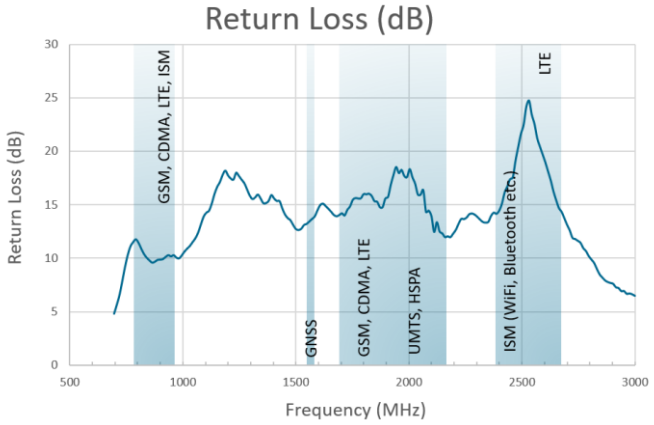
Free Space Frequency Response RA100-IPX

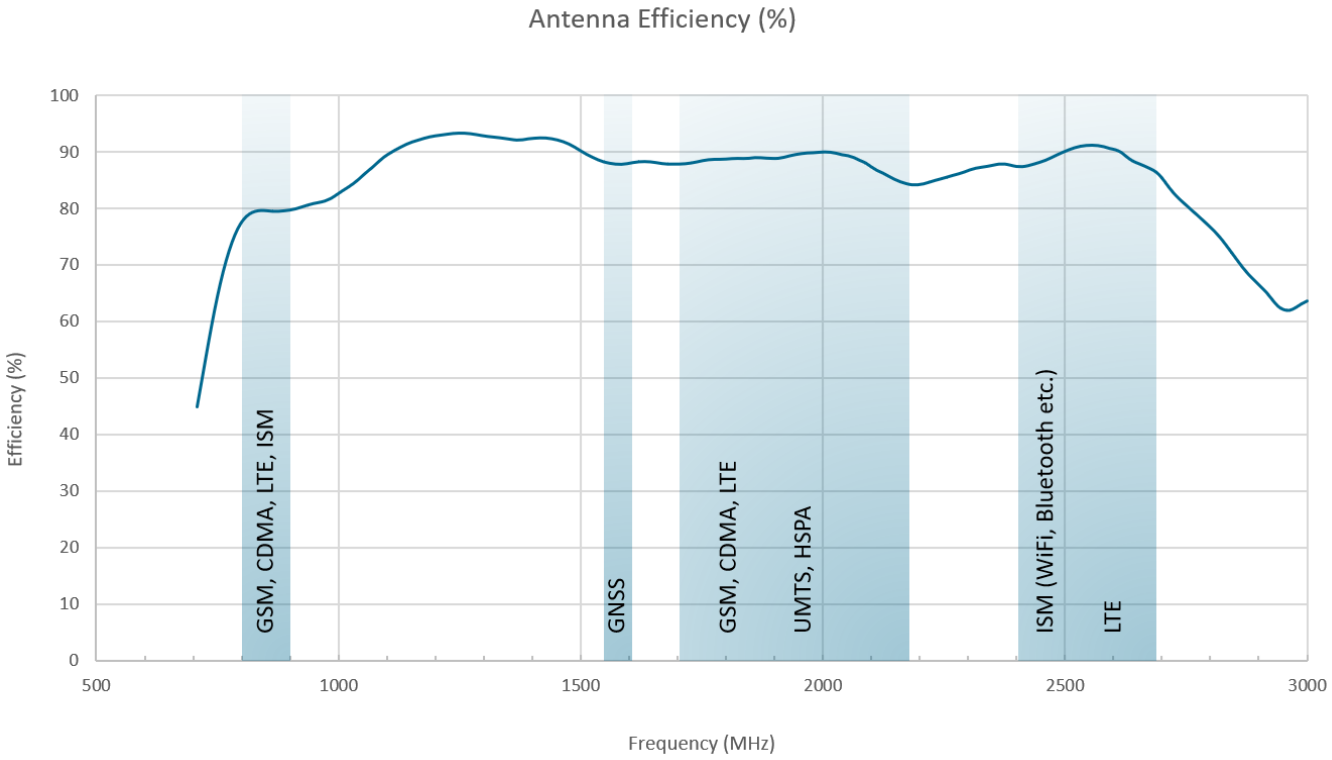
Band (MHz)	800-900	1500-1600	1700-1900	2100	2400	2600-2700
Standard	GSM, CDMA, LTE	GNSS	GSM, CDMA, LTE	UMTS, HSPA	ISM	LTE
Frequency (MHz)	791-960	1559-1610	1710-1990	1755-2170	2400-2500	2500-2690
Avg Efficiency (%)	79	88	90	88	85	88
Avg VSWR	1.9	1.8	1.4	1.4	1.3	1.3
Avg Return Loss (dB)	10.1	10.9	15.5	15.5	17.7	17.7

PLUS Antenna Characteristics, RA100-IPX

The antenna characteristics below are based on a standard matching network in free space. For optimum performance in a specific user case, it is possible to customize the antennas matching network. Please contact ShortLink for further information.

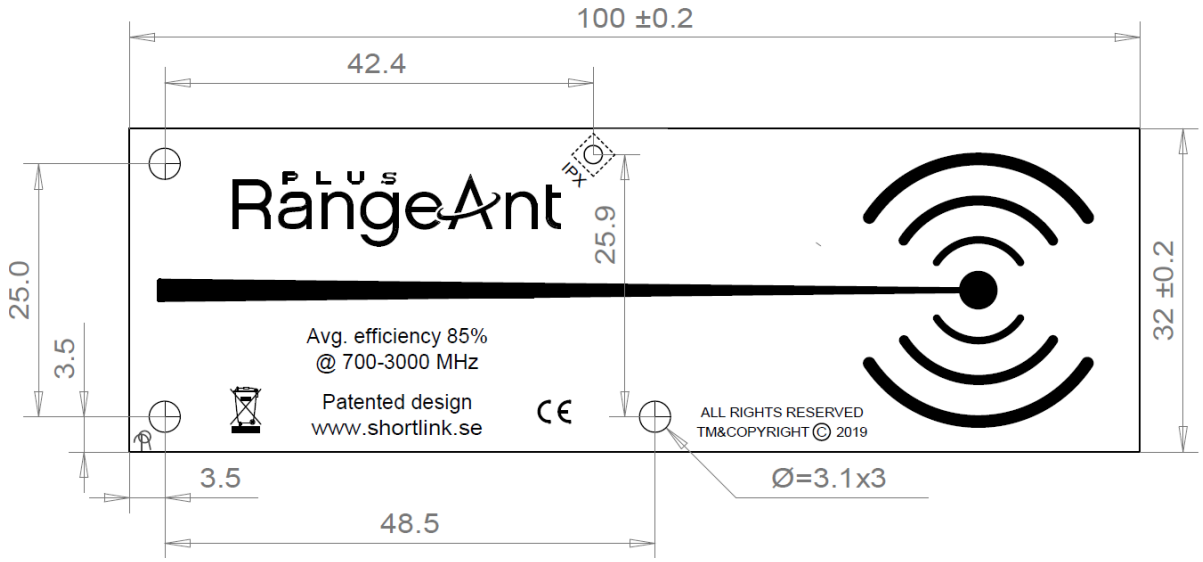






Mechanical Drawings

Mechanical Drawing, PLUS RA100-IPX (UFL/IPX connector on PCB)



Ordering Codes

RA100 - XXX - XX - 01
(1) (2) (3) (4)

(1) Family

RA100 = RangeAnt PLUS 100mm Omnidirectional IoT Antenna family

(2) Connector

IPX = UFL/IPX Connector

(3) Matching Network

NM = No matching network on PCB
M = Matching network on PCB

(4) Revision Number

01 = Revision Number 01

Contact

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