antenova

Your Reliable Connection Starts Here

ANTENNAS & GNSS RECEIVERS QUICK GUIDE

A discoverIE Company

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EASY ANTENNA INTEGRATION:
IT'S OUR MISSION

Our antennas are designed for easy integration; using a design methodology called DFI – Design for Integration. Antenova's products deliver exceptional performance and easily integrate within complex and miniaturized designs.

Head to antenova.com for free resources, insights and knowledge for engineers such as:

Quick Guides - Use our printable matrixes to select the most appropriate antennas for your application and design within minutes.

Design Tools - Choose from an array of downloadable and web-based tools developed to fit our customers specifications, saving time during the wireless integration.

eBooks - Get your wireless design right the first time with our handy step-by-step guides.

Technical Articles - Stay on top of the latest RF technology and refresh your knowledge with our easy-to-digest articles on antennas, wireless technologies, applications, and design cycle stages.

5G Hub - Get the latest news, analysis, and guides about the new generation of cellular wireless technology.

Ask Antenova - Tap into the knowledge of Antenova's engineering department and receive insight from an active wireless antenna and RF community.

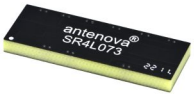
Cellular Antennas

High efficiency antennas with design support given. Antennas for 5G, 4G/LTE, NB-IoT, CAT-M, 3G bands.
Available as **Surface Mount** (SMD) with new dielectric constant substrates and **Flexible PCB** (FPC) antennas with a cable & connector for fixing onto enclosure.

Product Name	**Opaca**	**Minima**	**Allani**	**Curta**	**Inpai**
Part Number	**SR4L104**	**SR4L075**	**SR4L069**	**SR4L096**	**SR4L099**
Mounting Type	SMD Antenna	SMD Antenna	SMD Antenna	SMD Antenna	SMD Antenna
Standard	5G	5G	5G	4G / LTE	4G / LTE
Frequency	617-960 MHz 1420-1660 MHz 1710-2170 MHz 2300-2400 MHz 2500-2700 MHz 3300-4200 MHz 4400-7125 MHz	617-698 MHz 698-824 MHz 824-960 MHz 1710-2170 MHz 2300-2400 MHz 2500-2690 MHz 3300-3800 MHz	617-824 MHz 824-960 MHz 1710-2200 MHz 2300-2400 MHz 2500-2690 MHz 3300-3800 MHz	698-960 MHz 1710-2170 MHz 2300-2400 MHz 2500-2700 MHz	698-960 MHz 1710-2170 MHz 2300-2400 MHz 2500-2690 MHz
Efficiency (%)	55/37/78/42/49/58/53	35/45/60/55/55/60/50	45/55/66/57/63/55	56/66/52/53	49/61/69/55
Dimensions L×W×H (mm)	38.0 x 10.0 x 3.3	40.0 x 10.0 x 3.3	45.0 x 10.0 x 3.3	40.0 x 10.0 x 1.7	35.0 x 8.0 x 3.3
Ground Plane	145.3 mm	129 mm	130 mm	128 mm	100 mm
Clearance	38 x 17.3 mm	40 x 13.25 mm	45 x 13.25 mm	40 x 13.3 mm	40 x 15.3 mm

Cellular Antennas

High efficiency antennas with design support given. Antennas for 5G, 4G/LTE, NB-IoT, CAT-M, 3G bands.
Available as **Surface Mount** (SMD) with new dielectric constant substrates and **Flexible PCB** (FPC) antennas with a cable & connector for fixing onto enclosure.



Product Name	Pharaoh	Lucida	Inversa	Similis	Integra
Part Number	**SR4L073**	**SR4L002**	**SR4L034-L / SR4L034-R**	**SR4C005**	**SR4L049-L / SR4L049-R**
Mounting Type	SMD Antenna	SMD Antenna	SMD Antenna	SMD Antenna	SMD Antenna
Standard	4G LTE	4G LTE	4G LTE	4G LTE	4G LTE
Frequency	698-824 MHz 824-960 MHz 1710-2200 MHz 2300-2400 MHz 2500-2690 MHz	698-824 MHz 824-960 MHz 1710-2170 MHz 2300-2400 MHz 2500-2690 MHz	698-824 MHz 824-960 MHz 1710-2170 MHz 2300-2400 MHz 2500-2690 MHz	824-960 MHz 1710-1990 MHz 2110-2170 MHz 2300-2400 MHz 2500-2690 MHz	791-960 MHz 1710-2170 MHz 2300-2400 MHz 2500-2690 MHz
Efficiency (%)	25/35/80/65/60	45/60/65/50/50	50/50/75/55/42	45/60/55/60/65	45/50/45/35
Dimensions L×W×H (mm)	37.0 x 13.0 x 3.3	35.0 x 8.5 x 3.2	28.0 x 8.0 x 3.3	40.0 x 10.0 x 1.6	23.0 x 8.0 x 3.3
Ground Plane	60 mm	125 mm	130 mm	100 mm	125 mm
Clearance	37 x 16 mm	35 x 11.7 mm	28 x 14.5 mm	40 x 15.3 mm	23 x 14.5 mm

Cellular Antennas

High efficiency antennas with design support given. Antennas for 5G, 4G/LTE, NB-IoT, CAT-M, 3G bands.
Available as **Surface Mount** (SMD) with new dielectric constant substrates and **Flexible PCB** (FPC) antennas with a cable & connector for fixing onto enclosure.

Product Name	Aurata	Latona	Lutosa	Affini	Zhengi
Part Number	**SR4L112**	**SR4C033-L / SR4C033-R**	**SRFL061**	**SRFL064**	**SRFC015**
Mounting Type	SMD Antenna	SMD Antenna	Flexi PCB Adhesive Antenna	Flexi PCB Adhesive Antenna	Flexi PCB Adhesive Antenna
Standard	4G LTE	NB-IoT	5G	5G	4G LTE
Frequency	698-824 MHz 824-960 MHz 1710-2170 MHz	791-862 MHz 824-960 MHz	617-698 MHz 698-824 MHz 824-960 MHz 1420-1520 MHz 1710-2200 MHz 2300-2400 MHz 2500-2690 MHz 3300-3800 MHz	617-698 MHz 698-824 MHz 824-960 MHz 1710-2200 MHz 2300-2400 MHz 2500-2690 MHz	824-960 MHz 1710-1990 MHz 2110-2170 MHz 2300-2400 MHz 2500-2690 MHz
Efficiency (%)	33/32/53	60/65	40/45/55/60/60/65/65/60	45/45/50/60/70/65	50/65/50/50/65
Dimensions L×W×H (mm)	29.0 x 8.0 x 3.3	20.0 x 11.0 x 1.6	95.0 x 15.0 x 0.15	78.0 x 17.0 x 0.15	80.0 x 20.0 x 0.15
Ground Plane	180 mm	115 mm	NA	NA	NA
Clearance	29 x 15 mm	20 x 11 mm	NA	NA	NA

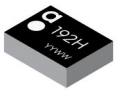
Cellular Antennas

High efficiency antennas with design support given. Antennas for 5G, 4G/LTE, NB-IoT, CAT-M, 3G bands.
Available as **Surface Mount** (SMD) with new dielectric constant substrates and **Flexible PCB** (FPC) antennas with a cable & connector for fixing onto enclosure.

Product Name	Mitis	Moseni	Atta	Armata	Avia
Part Number	**SRFL026**	**SRFL029**	**SRFI079**	**SRFC011**	**SRFC025**
Mounting Type	Flexi PCB Adhesive Antenna	Flexi PCB Adhesive Antenna	Flexi PCB Adhesive Antenna	Flexi PCB Adhesive Antenna	Flexi PCB Adhesive Antenna
Standard	4G LTE	4G LTE	LTE 450	3G	3G
Frequency	698-824 MHz 824-960 MHz 1710-2170 MHz 2300-2400 MHz 2500-2690 MHz	698-824 MHz 824-960 MHz 1710-2170 MHz 2300-2400 MHz 2500-2690 MHz	410-432 MHz 432-434 MHz 434-470 MHz	824-960 MHz 1710-1990 MHz 2110-2170 MHz	824-960 MHz 1710-1990 MHz 2110-2170 MHz
Efficiency (%)	55/65/65/55/70	60/60/65/80/80	60/55/45	40/55/60	45/70/65
Dimensions L×W×H (mm)	110.0 x 20.0 x 0.15	110.0 x 20.0 x 0.15	101.0 x 20.0 x 0.15	30.0 x 28.5 x 0.15	71.0 x 12.5 x 0.15
Ground Plane	NA	NA	NA	NA	NA
Clearance	NA	NA	NA	NA	NA

Bluetooth & WiFi Antennas

Range of Surface Mount and PCB Antennas for 2.4/5 GHz plus 6GHz for WiFi6E/7.



Product Name	Fusca	Rufa	Comata	Mica	Mixtus
Part Number	**A10192H**	**A5839H / A5887H**	**A6111H**	**A5645H**	**A10194H**
Mounting Type	SMD Antenna	SMD Antenna	SMD Antenna	SMD Antenna	SMD Antenna
Standard	WIFI/BT 2.4	WIFI/BT 2.4	WIFI/BT 2.4	WIFI/BT 2.4	WIFI/BT 2.4/5.0
Frequency	2.4-2.5 GHz	2.4-2.5 GHz	2.4-2.5 GHz	2.4-2.5 GHz	2.4-2.5 GHz 4.9-5.9 GHz
VSWR	2:1	1.8:1	2.3:1	1.8:1	1.4:1 / 1.8:1
Efficiency (%)	65	75	45	65	75/60
Dimensions L×W×H (mm)	4.0 x 3.0 x 1.1	12.8 x 3.9 x 1.1	12.8 x 3.6 x 3.3	20.5 x 3.6 x 3.3	10.0 x 10.0 x 0.9
Clearance	4 x 4 mm	13 x 4 mm	On Ground	On Ground	10.4 x 10.4 mm

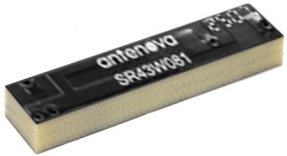
Bluetooth & WiFi Antennas

Range of Surface Mount and PCB Antennas for 2.4/5 GHz plus 6GHz for WiFi6E/7.

Product Name	**Abdita**	**Weii**	**Sharpi**	**Minuta**
Part Number	**SRCW090**	**SRCW004**	**SRC5G027**	**SRC2W006**
Mounting Type	SMD Antenna	SMD Antenna	SMD Antenna	SMD Antenna
Standard	WIFI/BT 2.4	WIFI/BT 2.4	WIFI 5.0	WIFI/BT 2.4/5.0
Frequency	2.4-2.5 GHz	2.4-2.5 GHz	4.9-5.9 GHz	2.4-2.5 GHz 4.9-5.9 GHz
VSWR	1.6:1	1.6:1	3.0:1	2.2:1 / 1.97:1
Efficiency (%)	60.5	70	60	55/50
Dimensions L×W×H (mm)	1.0 x 0.5 x 0.5	1.0 x 0.5 x 0.5	1.0 x 0.5 x 0.5	1.0 x 0.5 x 0.5
Clearance	7 x 7 mm	9 x 4.5 mm	5 x 3 mm	8 x 5 mm

Bluetooth & WiFi Antennas

Range of Surface Mount and PCB Antennas for 2.4/5 GHz plus 6GHz for WiFi6E/7.



Product Name	Serica	Dolo	Mutica	Billi	Petrosa
Part Number	**SR4W035**	**SR4W089**	**SR42W001**	**SR43W078**	**SR42W081**
Mounting Type	SMD Antenna	SMD Antenna	SMD Antenna	SMD Antenna	SMD Antenna
Standard	WIFI/BT 2.4	WIFI/BT 2.4	WIFI/BT 2.4/5.0	WIFI 6E,7/BT 2.4/5.0/6.0	WIFI 6E,7/BT 2.4/5.0/6.0
Frequency	2.4-2.5 GHz	2.4-2.5 GHz	2.4-2.5 GHz 4.9-5.9 GHz	2.4-2.5 GHz 4.9-5.9 GHz 5.925-7.125 GHz	2.4-2.5 GHz 4.9-5.9 GHz 5.925-7.125 GHz
VSWR	1.85:1	1.8:1	1.5:1 / 2.7:1	2:1 / 2.45:1 / 2.45:1	-
Efficiency (%)	65	76	75/65	70/60/65	49/41/38
Dimensions L×W×H (mm)	6.0 x 4.0 x 0.4	7.5 x 4.0 x 0.9	11.3 x 5.0 x 0.8	15.0 x 6.0 x 1.0	24.0 x 4.0 x 5.0
Clearance	6 x 4 mm	7.6 x 6 mm	13.4 x 5.7 mm	16 x 7 mm	On Ground

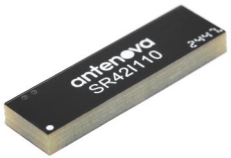
Bluetooth & WiFi Antennas

Range of Surface Mount and PCB Antennas for 2.4/5 GHz plus 6GHz for WiFi6E/7.

Product Name	Zenon	Dromus	Amoris	Lotti	Invicta
Part Number	**SR4W030**	**SRF2W012**	**SRF2W021**	**SRF3W077**	**SRFW082**
Mounting Type	**REFLECTOR** PCB Antenna	Flexi PCB Adhesive Antenna	Flexi PCB Adhesive Antenna	Flexi PCB Adhesive Antenna	Flexi PCB Adhesive Antenna
Standard	WIFI/BT 2.4	WIFI/BT 2.4/5.0	WIFI/BT 2.4/5.0	WIFI 6E,7/BT 2.4/5.0/6.0	WIFI/BT 2.4
Frequency	2.4-2.5 GHz	2.4-2.5 GHz 4.9-5.9 GHz	2.4-2.5 GHz 4.9-5.9 GHz	2.4-2.5 GHz 4.9-5.9 GHz 5.925-7.125 GHz	2.4-2.5 GHz
VSWR	2:1	1.5:1 / 1.8:1	1.7:1 / 1.7:1	1.3:1 / 1.6:1 / 1.5:1	1.4:1
Efficiency (%)	60	60/60	67/70	70/65/70	70
Dimensions L×W×H (mm)	23.0 x 16.0 x 1.6	30.0 x 6.0 x 0.15	27.0 x 14.0 x 0.15	30.0 x 8.9 x 0.15	30.0 x 6.0 x 0.15

ISM Antennas

Covering ISM bands 433/868/915 MHz. Consumer electronics-wearables & handheld devices.
SMD and Flexible PCB antennas with cable and connector. Nearby objects do not detune ceramic antennas.



Product Name	Gatun	Grandis	Velox	Silvai
Part Number	**SR42I110**	**SR42I010-L / SR42I010-R**	**SR4I052**	**SRCI024**
Mounting Type	SMD Antenna	SMD Antenna	SMD Antenna	SMD Antenna
Standard	868 / 915 MHz ISM	868 / 915 MHz ISM	868 / 915 MHz ISM	868 / 915 MHz ISM
Frequency	863-870 MHz 902-928 MHz	863-870 MHz 902-928 MHz	863-928 MHz	863-870 MHz 902-928 MHz
Efficiency (%)	72/79	60/65	70	55/70
Dimensions L×W×H (mm)	26.0 x 7.6 x 3.1	12.0 x 11.0 x 1.6	35.0 x 8.0 x 0.9	1.0 x 0.5 x 0.5
Ground Plane	110.4 x 40.4 mm	115 mm	100 mm	-
Clearance	26 x 15 mm	12 x 11 mm	35 x 9 mm	30 x 11.5 mm

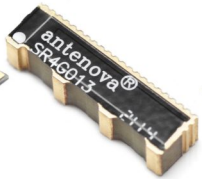
ISM Antennas

Covering ISM bands 433/868/915 MHz. Consumer electronics-wearables & handheld devices.
SMD and Flexible PCB antennas with cable and connector. Nearby objects do not detune ceramic antennas.

Product Name	Lama	Fera	Inca
Part Number	**SRFI065**	**SRFI068H / SRFI068V**	**SRFI028**
Mounting Type	Flexi PCB Adhesive Antenna	Flexi PCB Adhesive Antenna	Flexi PCB Adhesive Antenna
Standard	868 / 915 MHz ISM	915 MHz ISM	433 MHz ISM
Frequency	863-870 MHz 902-928 MHz	902-928 MHz	432-434 MHz
Efficiency (%)	52/52	36	45
Dimensions L×W×H (mm)	35.0 x 10.0 x 0.15	35.0 x 13.0 x 0.15	101.0 x 20.0 x 0.15
Ground Plane	NA	NA	NA
Clearance	NA	NA	NA

GNSS Antennas & GNSS Reflector Antenna

GNSS L1, L2 & L5 bands, GPS, GLONASS, Galileo, Beidou. Offered in various sizes and configurations.
Award-winning REFLECTOR antenna that operates on metal surfaces without de-tuning. REFLECTOR antennas are formed of two layers, which provides RF shielding to the second layer. Matching not required, simply fix them in place.



Product Name	Admotus	Agosti	Sinica	Beltii	Raptor	Robusta
Part Number	**SRCW091**	**SR4G080**	**SR4G008**	**SR4G013**	**SR4G053**	**SR4G031**
Mounting Type	SMD Antenna	SMD Antenna	SMD Antenna	SMD Antenna	SMD Antenna	**REFLECTOR** PCB Adhesive Antenna
Standard	GPS / GLONASS / BeiDou / Galileo	GPS / GLONASS / BeiDou / Galileo	GPS / GLONASS / BeiDou / Galileo	GPS / GLONASS / BeiDou / Galileo	GPS / GLONASS / BeiDou / Galileo	GPS / GLONASS / BeiDou / Galileo
Frequency	1559-1609 MHz L1	1559-1609 MHz L1	1559-1609 MHz L1	1559-1609 MHz L1	1164-1249 MHz / 1559-1609 MHz L1/L2/L5	1559-1609 MHz L1
Efficiency (%)	53	50	75	60	75/65	50
Dimensions L×W×H (mm)	1.0 x 0.5 x 0.5	9.0 x 5.8 x 1.7	7.0 x 5.8 x 0.4	15.6 x 3.3 x 4.4	16.0 x 8.0 x 1.6	23.0 x 16.0 x 1.6
Ground Plane	-	70 mm (L)	60 mm (W)	71 mm (W)	85 mm (L)	NA
Clearance	15 x 7 mm	9.9 x 6.2 mm	7.0 x 5.8 mm	On Ground	17 x 9.5 mm	NA

GNSS Antennas

SMD Active GNSS antennas & FPC Passive GNSS antennas - GPS, GLONASS, Galileo, Beidou. Offered in various sizes and configurations.

Product Name	Bentoni	Asper		
Part Number	**SRFG017**	**SRFWG018**	**M20047-1**	**M20057-1**
Mounting Type	Flexi PCB Adhesive Antenna	Flexi PCB Adhesive Antenna	SMD Active GNSS antenna	SMD Active GNSS antenna
Standard	GPS / GLONASS / BeiDou / Galileo	GPS / GLONASS / BeiDou / Galileo / Wi-Fi / Bluetooth / Zigbee	GPS / GLONASS / BeiDou / Galileo	GPS / GLONASS / BeiDou / Galileo
Frequency	1559-1609 MHz L1	1559-1609 MHz / 2.4-2.5 GHz L1	1559-1609 MHz L1	1559-1609 MHz L1
Efficiency (%)	75	75/85	65	65
Dimensions L×W×H (mm)	40.0 x 14.0 x 0.15	81.0 x 14.0 x 0.15	7.0 x 7.0 x 0.9	7.0 x 7.0 x 0.9
Ground Plane	NA	NA	-	-
Clearance	NA	NA	7 x 5 mm	7 x 5 mm

GNSS Receivers

High performance GNSS antenna modules. Drop-in antenna solutions. Simple to integrate. Small PCB footprint.
Modules are supplied fully optimized. Faster time to market for new products. Perfect for OEMs and systems integrators.

Part Number	**M10578-A2**	**M20048-1**	**M10578-A3**	**M20050-1**	**M20071**	**M20072**
Mounting Type	SMD Receiver Module	SMD Receiver Module	SMD Receiver Module	SMD Receiver Module	SMD Receiver Module	SMD Receiver Module
GPS Chipset	Mediatek MT3337-E	Mediatek MT3337-E	Mediatek MT3333	Mediatek MT3333	Mediatek AG3335MN	Mediatek AG3335MN
Frequency	1575 MHz	1575 MHz	1559-1609 MHz	1559-1609 MHz	1559-1609 MHz	1559-1609 MHz
Dimensions L×W×H (mm)	9.0 x 9.0 x 1.8	13.8 x 9.5 x 1.8	9.0 x 9.0 x 1.8	13.8 x 9.5 x 1.8	9.0 x 9.0 x 1.8	13.8 x 9.5 x 1.8
Current Draw: acquisition, tracking, sleep mode	24 mA, 21 mA, <500 uA	24 mA, 21 mA, <500 uA	30 mA, 25 mA, <500 uA	30 mA, 25 mA, <500 uA	18 mA, 12 mA, <100 uA	18 mA, 12 mA, <100 uA
Baud Rate (bps)	4800 / 9600 / 38400 / 115200	4800 / 9600 / 38400 / 115200	9600	9600	115200	115200
Sensitivity: acquisition/ tracking	-148 dBm/ -165 dBm	-148 dBm/ -165 dBm	-148 dBm/ -165 dBm	-148 dBm/ -165 dBm	-148 dBm/ -165 dBm	-148 dBm/ -165 dBm

Comprehensive range
of high-quality internal antennas

Expert antenna integration support
and consulting

Testing services:
4 labs worldwide for pre-certification testing

ABOUT ANTENOVA

Antenova is a leading provider of high-performance antennas since 2001. We have supplied the world with easy-to-integrate antennas for all kinds of wireless applications, from vehicle telematics, smart cities, connected healthcare, smart-homes, industry and wearables. Antenova develops custom engineered antennas for high volume applications such as smart meters and telematics.

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