


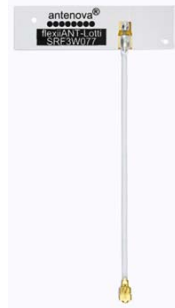


|   |      | WiFi®, Bluetooth® and ZigBee®   |   |  |   |   |  |   |
|---|------|---|---|--|---|---|--|---|
|  |      |                  |    |    |    |  |   |  |
| Product Name  |      | Trogon  | Mutica  | Mica   | Comata  | Rufa  | Serica   | Fusca   |
| Part No.  |      | SR42W009  | SR42W001  | A5645H   | A6111H  | A5839H<br>A5887H  | SR4W035  | A10192H   |
| Frequency   |      | 2.4Ghz / 5Ghz   |   |  | 2.4Ghz  |   |  |   |
| Dimensions (mm)   |      | 19.3 x 3.3 x 4.4  | 11.3 x 5 x 0.8  | 20.5 x 3.6 x 3.3   | 12.8 x 3.6 x 3.3  | 12.8 x 3.9 x 1.1  | 6 x 4 x 0.4  | 4 x 3 x 1.1   |
| Gain (dBi)  | Peak | 5.03 / 5.32   | 2.0 / 3.0   | 1.8  | 0.0   | 2.1   | 3.5  | 0.8   |
|   | Ave. | -0.6 / -2.2   | -0.5 / -2.5   | -1.9   | -3.5  | -1.2  | -1.5   | -1.9  |
| Ground plane  |      |                  |    |   |   |  |  |   |
|   |      | Reflector   |   |  |   |   | Ceramic  |   |
|   |      |                 |  |  |    |   |  |   |
| Product Name  |      | Zenon   | Dromus  | Amoris   | Weii / Sharpi   | Minuta  | Zoma   |   |
| Part No.  |      | SR4W030   | SRF2W012  | SRF2W021   | SRCW004 /<br>SRC5G027   | SRC2W006  | SR4T014  |   |
| Frequency   |      | 2.4Ghz  | 2.4 / 5Ghz  |  | 2.4G / 5Ghz   | 2.4G~5Ghz   | 4.48Ghz  |   |
| Dimensions (mm)   |      | 23 x 16 x 1.6   | 30 x 6 x 0.15   | 27 x 14 x 0.15   | 1.0 x 0.5 x 0.5   | 1.0 x 0.5 x 0.5   | 4 x 4 x 0.4  |   |
| Gain (dBi)  | Peak | 5.2~2.6   | 3.0 / 4.0   | 2.8 / 5.1  | 2.5 / 3.5   | 1.6 / 4 dBi   |  |   |
|   | Ave. | -2.5~-3.0   | -1.5 / -1.8   | 1.3 / -1.2   | -1.5 / -2.5   | -2.5 / -2.4 dBi   |  |   |
| Ground plane  |      | On the metal  |   |  |  |   | 대용량 data 전송  |   |



## WiFi® 6 / 6E / 7



WiFi 6E 2x MIMO



## ISM / LoRa, NB-IoT, SigFox, Wi-SUN

|                 |      |   |   |   |   |   |   |   |   |
|-----------------|------|---|---|---|---|---|---|---|---|
|                 |      |    |  |  |    |  |    |    |  |
| Product Name    |      | Velox   | Grandis   | Montana   | Lama<br>(New)   | Fera<br>(New)   | Latona  | Inca  | Pacifica  |
| Part No.        |      | SR4I052   | SR42I010<br>(L,R)   | SRF2I019  | SRFI065   | SRFI068<br>(H,V)  | SR4C033-L<br>SR4C033-R  | SRFI028   | SREI038-S9P   |
| Frequency       |      | 868Mhz , 916Mhz<br>(863~870, 902~928)   |   |   |   | 916Mhz<br>(902~928)   | 791~862M (B20)<br>824~960M  | 433Mhz  |   |
| Dimensions (mm) |      | 35 x 8 x 0.9  | 12 x 11 x 1.6   | 23 <sup>2</sup> x pi x 0.15   | 35 x 10 x 0.15  | 33 x 13 x 0.15  | 20 x 11 x 1.6   | 110 x 20 x 0.15   | 152.56 x 22.5<br>max.   |
| Gain (dBi)      | Peak | 1.6   | 0.2 / 0.4 / 0.2   | 1.9   | 0.82 / 1.33   | 0.7   | 0.5 / 0.8   | 2.8   | -1.1  |
|                 | Ave. | -1.6  | -2.5 / -2.2 /<br>-4.0   | -2.4  | -2.84 / -2.78   | -4.4  | -1.5  | -2.7  | -2.9  |
| Ground plane    |      |  |   |   |  |   |  |  | SMA plug, Cable<br>length 1.0/2.0m ,<br>25pcsx2ea/ box                              |



## 4G LTE / NB-IoT , Cat.M1 (B5,B3)

|                 |   |             |                       |   |                             |                            |   |                    |
|-----------------|---|-------------|-----------------------|---|-----------------------------|----------------------------|---|--------------------|
|                 |   |             |                       |   |                             |                            |   |                    |
| Product Name    | Calvus  | Armata      | Avia                  | Simils  | Zhengi                      | Latona                     | Integra   |                    |
| Part No.        | A10340H   | SRFC011     | SRFC025               | SR4C005   | SRFC015                     | SR4C033-L<br>SR4C033-R     | SR4L049-L<br>SR4L049-R  |                    |
| Frequency       | GSM824 ~960 (B5,B8) 1710~1990Mhz(B3) 2110~2170Mhz |             |                       | GSM824~960 1710~1990M 2110~2170M<br>LTE2.3~2.4G LTE2.5~2.69Ghz (B7) |                             | 791~862M (B20)<br>824~960M | 791~960Mhz<br>1710~2170Mhz<br>LTE2.3~2.4Ghz<br>LTE2.5~2.69Ghz |                    |
| Dimensions (mm) | 28 x 8 x 3.2                                      | 30 x 28.5   | 71 x 12.5 x 0.15      | 40 x 10 1.6   | 80 x 20 x 0.15              | 20 x 11 x 1.6              | 23 x 8 x 3.3  |                    |
| Gain (dBi)      | Peak  | 1.7 / 3     | 2.46 / 4.06 / 3.89    | 4.07 / 5.44 / 3.9   | 0.9 / 2.5 / 2.5 / 2.5 / 3.2 | 0.5 / 4 / 3.5 / 3.8 / 5    | 0.5 / 0.8   | -1.4 / 3.0 / 3.0   |
|                 | Ave.  | -1.8 / -1.6 | -3.79 / -2.59 / -2.21 | -3.31 / -1.1 / -1.74  | -1.5/-1.5/-1.5/ -1.7/-1.7   | -2.5/-1.5/-2.5 / -2.5/-1.5 | -1.5  | -1.7 / -2.0 / -2.0 |

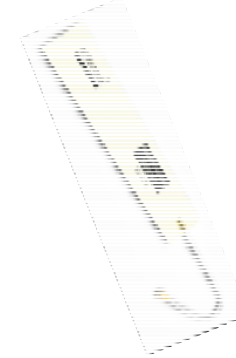
|                 |  |                               |                                  |                                   |                                  |                                  |                                  |
|-----------------|--|-------------------------------|----------------------------------|-----------------------------------|----------------------------------|----------------------------------|----------------------------------|
|                 |  |                               |                                  |                                   |                                  |                                  |                                  |
| Product Name    | Pharaoh  | Lucida                        | Inversa                          | Mitis                             | Moseni B7                        | Draco                            |                                  |
| Part No.        | SR4L073  | SR4L002                       | SR4L034-L<br>SR4L034-R           | SRFL026                           | SRFL029                          | SREL036-S9P                      |                                  |
| Frequency       | LTE 698~798Mhz GSM824~960 1710~2170Mhz<br>LTE2.3~2.4Ghz LTE2.5~2.69Ghz |                               |                                  |                                   |                                  |                                  |                                  |
| Dimensions (mm) | 37 x 13 x 3.3  | 35 x 8.5 x 3.2                | 28 x 8 x3.3                      | 110 x 20 x 0.15                   |                                  | 152.56 x 22.5 max                |                                  |
| Gain (dBi)      | Peak   | -1.4 / -0.1 / 2.9 / 2.6 / 2.9 | 0.5 / 1.0 / 2.5 / 1.6 / 2.5      | 0.4 / 1.6 / 3.5 / 3.6 / 2.1       | 2.5 / 2.3 / 3.5 / 4 / 4.5        | 3.5 / 3.5 / 3.8 / 4.5 / 4.6      | 2.18 / 1.92 / 3.29 / 3.23 / 4.08 |
|                 | Ave.   | -6 / -4.5 / -1 / -1.7 / -2.1  | -1.5 / -1.5 / -1.5 / -1.2 / -2.0 | -2 / -1.1 / -2 / -2 / -1.6 / -2.3 | -1.5 / -1.6 / -1.7 / -1.7 / -1.4 | -1.6 / -1.7 / -1.4 / -0.7 / -0.5 | SMA<br>25pcsx2ea/ box            |



**5G (3.5Ghz) + 4G LTE**



(New)



Product Name

Minima

Allani

Lepida

Lutosa

Rabo

Part No.

SR4L075

SR4L069

SR4L054

SRFL061

SREL062-

Frequency

LTE (617~698Mhz, 698~824Mhz), 824~960Mhz, , 1710~2170Mhz,  
LTE 2.3~2.4Ghz, 2.5~2.69Ghz , **5G 3.2~3.8Ghz**

Dimensions (mm)

40 x 10 x 3.3

54.5 x 10 x 3.3

50.6 x 10.6 x 3.3

95 x 15 x 0.15

152.56 x 22.5 max.

Gain (dBi)

Peak

-1.4 /  
-0.3 / **2.0** / 3.3 /  
3.3 / 4.3 / 3.9

-0.1 / 0.9 / 3.4 /  
3.3 / 5.5 / **4.3**

0.5 / 1.0 / 2.5 /  
1.6 / 0.5 / 1.0

-1.7 / 1.7 / 2.7 /  
3.6 / 3.7 / 3.6

0.41 / 2.42 / 2.51 /  
3.87 / 5 / **3.89**

Ave.

-4.5 /  
-3.4 / -2.0 / -2.5  
-2.5 / -2.1 / -3.0

-3.4 / -2.6 / -1.7 /  
-1.5 / -2.9 / -2.1

-1.5 / -1.5 / -1.5 /  
-2.0 / -1.5 / -1.5

-4.2 / -3.2 / -2.3 /  
-2.1 / -1.8 / -1.9 / -2.2

SMA  
25pcsx2ea/ box



## GPS antenna

### SMD





### FPC + IPEX (UFL) connector



**In Stocks**







**Precision L2**

**Reflector**

|                        |   |   |                  |                |   |   |   |                               |                            |
|------------------------|---|---|------------------|----------------|---|---|---|-------------------------------|----------------------------|
| <b>Part Name</b>       | Acuta   | Raptor  | Sinica           | Agosti         | Beltii  | Robusta   | Bentoni                                     | Asper                         |                            |
| <b>Part No.</b>        | <b>A10415</b>   | <b>SR4G053</b>  | <b>SR4G008</b>   | <b>SR4G080</b> | <b>SR4G013</b>  | <b>SR4G031</b>  | <b>SRFG017</b>                              | <b>SRFGW018</b>               |                            |
| <b>Architecture</b>    | GPS   | GPS / GLONASS   |                  |                |   |   | GLONASS / <b>WiFi</b>                       |                               |                            |
| <b>Frequency</b>       | 1575Mhz   | 1164~1249Mhz / 1559~1609Mhz   | 1559~1609Mhz     |                |   |   |   | 1559~1609 Mhz / <b>2.4Ghz</b> |                            |
| <b>Gain</b>            | <b>Peak</b>   | 0.4 dBi   | 2.3dBi / 2.2dBi  | <b>3 dBi</b>   | <b>0.7 dBi</b>  | 2.3 dBi   | 5.2 / 2.6 / 3.3 dBi                         | 4dBi                          | 4.25 dBi / 5.6 dBi         |
|                        | <b>Average</b>  | -2.2dBi   | -0.9 / -1.5 dBi  | 0 dBi          | -2.97dBi  | -2.3 dBi  | -3 / -2.5 / -3 dBi                          | -1.2dBi                       | -1.1 dBi / -0.6 dBi        |
| <b>Efficiency</b>      | <b>Linear</b>   | 60%   | >75% / >65%      | <b>&gt;75%</b> | >50%  | > 60%   | > 50%, >60%, >50%                           | >75%                          | >75%, >85%                 |
|                        | <b>RHCP</b>   | 40%   | >38% / >33%      | >38%           |   |   | <b>RF GND / Free space / Metal floating</b> |                               | 1559~1609 Mhz / 2.4~2.5Ghz |
| <b>Dimensions (mm)</b> | 29.6 x 5 x 6.8  | 16 x 8 x 1.6  | 7 x 5.8 x 0.4    | 9 x 5.8 x 1.7  | 15.6 x 3.3 x 4.4  | 23 x 16 x 1.7   | 40 x 14 x 0.15                              | 81 x 14 x 0.15                |                            |
| <b>Cable Length</b>    | 1000 pcs / Box  | <b>Precision L2 band</b>  |                  | Long GND       | Pin1 - GND  | <b>On the metal</b>   | Cable 50, 100, 150mm                        | Cable 100, 150, 200mm         |                            |
| <b>Packaging</b>       | 100 pcs / Tray  | 1,000 pcs/Reel  | 1,000 pcs / Reel |                | 1,000 pcs / Reel  | 1ea/Bag, 100/Bag  | 10 pcs / Bag , 20 bag / Box, 200pcs / Box   |                               |                            |
| <b>Ground plane</b>    |  |  |                  |                |  |  |   |                               |                            |



## GPS antenna module

|                                 | Antenna + RF + BB (No LNA)  |   | GPS Module (RF+LNA + BB)  |   |   | Antenna +RF+LNA   |                   |
|---------------------------------|---|---|---|---|---|---|-------------------|
|                                 |  |  |  |  |  |  |                   |
| <b>Part No.</b>                 | <b>M20048-1</b>   | <b>M20050-1</b>   | <b>M20071<br/>(New)</b>   | <b>M10578-A2</b>  | <b>M10578-A3</b>  | <b>M20047-1 (LNA-SAW)<br/>M20057-1 (SAW-LNA)</b>                                    |                   |
| <b>GPS Chipset</b>              | Mediatek MT3337E ROM  | Mediatek MT3333 Flash   | MediaTek AG3335MN flash   | MT3337E ROM   | MT3333 flash  | <b>Active GNSS antenna</b>  |                   |
| <b>Frequency</b>                | 1575.8Mhz   | 1559~ <b>1609 MHz</b>   | 1559~ <b>1609 MHz</b>   | 1575.8Mhz   | 1559~ <b>1609 MHz</b>   | 1559~ <b>1609 MHz</b>   |                   |
| <b>External Antenna Support</b> | Yes   | Yes   | Yes   | Yes   | Yes   |   |                   |
| <b>Power Consumption</b>        | <b>Acquisition</b>  | 31mA  | 38mA  | 18mA  | 31mA  | 38mA  |                   |
|                                 | <b>Tracking</b>   | 24mA  | 28mA  | 12mA  | 24mA  | 28mA  |                   |
|                                 | <b>Sleep mode</b>   | <200uA  | <350uA  | <100uA  | < 200uA   | < 350uA   | (LNA) 2.6mA       |
| <b>Bandwidth</b>                | 30Mhz   | 50Mhz   | <2.5m CEP   | 30Mhz   | 50Mhz   | 62Mhz   |                   |
| <b>Position Accuracy</b>        |   |   |   |   |   |   |                   |
| <b>Host Interface</b>           | UART<br>CMOS 3.3v   | UART<br>CMOS 3.3v   | UART<br><b>1.8v TYP</b>   | UART<br>COMS 3.3v   | UART<br>CMOS 3.3v   | 1.5~3.3V  |                   |
| <b>Baud Rate (bps)</b>          | 4800/9600/ 38400/115200   | 9600  | 115200 default  | 4800/9600/ 38400/115200   | 9600  |   |                   |
| <b>Data Output</b>              | NMEA 0183   | NMEA 0183   | NMEA 0183   | NMEA 0183   | NMEA 0183   |   |                   |
| <b>Sensitivity</b>              | <b>Acquisition</b>  | -148dBm   | -148dBm   | -148dBm   | -148dBm   | -148dBm   | LNA Gain 18.5 dBm |
|                                 | <b>Tracking</b>   | -165dBm   | -165dBm   | -165dBm   | -165dBm   | -165dBm   |                   |
| <b>Dimensions (mm)</b>          | 13.8 x 9.5 x 1.8  |   | 9 x 9 x 1.8   |   |   | 7 x 7 x 0.9   |                   |
| <b>Packaging</b>                | 1,000 pcs / Reel  |   |   |   |   |   |                   |
| <b>Typical application</b>      | Tracking Devices, PND, OBD2, mHealth  |   |   |   |   | Tracking devices,<br>Sports wearable, Telemetric                                    |                   |

|                                | Internal GPS module   |   |  |   | External GPS module   |   |   |   |
|--------------------------------|---|---|--|---|---|---|---|---|
|                                | Active (Ant + RF+LNA)   |   | Active (Ant + RF+LNA)  | Passive   | G-Mouse (BB+Ant+RF+LNA)   | GPS Active Ant. (Ant + RF+LNA)  | GPS Passive Ant.  |   |
|                                |  |  |  |  |  |  |  |  |
| <b>Part No.</b>                | <b>AP.10F</b>   | <b>AP.12F</b>   | <b>IGPSB</b>   | <b>IGPSB-1</b>  | <b>GT-902P(M)GG</b>   | <b>ATGG4336(M)</b>  |   | <b>TS.07 / GT.80 (LTE+GNSS)</b>   |
| <b>GPS Chipset / Ant. size</b> | MHF RF0.81 39mm   | MHF RF1.13 45mm   | MHF RF1.13 100mm   | MHF RF1.13 100mm  | U-Blox UBX-M8030-KT   | 25 x 25 x 4mm Antenna   |   | 72 +/- 1.5mm  |
| <b>Frequency (MHz)</b>         | 1575.4Mhz   | 1575.4Mhz   | 1575.4Mhz  |   | 1575.42 / <b>1609.3</b>   | 1575.42 / <b>1609.3</b>   |   | 1575.42 / <b>1609.3 /LTE+GNSS</b>   |
| <b>A-GPS</b>                   |   |   |  |   | Assist Now on-line and off-line   | Polarization : RHCP   |   |   |
| <b>Power Consumption</b>       | <b>Acquisition</b>  | LNA Gain 25 dBi   | LNA 28 dBi   | LNA 28 dBi  | 50mA  |   |   |   |
|                                | <b>Tracking</b>   | RHCP polarization   |  |   | 45mA  | LNA   |   |   |
|                                | <b>Standby</b>  |   |  |   | 650uA   | 3.3 +/- 0.3V  |   |   |
| <b>Input Voltage</b>           | 1.8V/3V/5.5V  |   |  |   | 2.8~5.5V / 3.3V typ.  | 12 +/- 2mA at 3.0V  |   |   |
| <b>Input Backup Battery</b>    |   |   |  |   | 2.8~3.6V  |   |   |   |
| <b>Baud Rate (bps)</b>         |   |   |  |   | 9600  | Material  |   |   |
| <b>Data Output</b>             |   |   |  |   | NMEA 0183   | RG174 cable   |   |   |
| <b>Sensitivity</b>             | <b>Cold Start</b>   |   |  |   | -147dBm   | 3M / 5M   |   |   |
|                                | <b>Tracking</b>   |   |  |   | -161dBm   | Adhesive: 3M  |   |   |
| <b>Dimensions (mm)</b>         | 10 x 10 x 6mm   | 13.4 x 13.4 x 6mm   | 25 x 25 x 9mm  |   | 45 x 38 x 14.3  | 43 x 36 x 13.5  |   |   |
| <b>IO Interface</b>            |   |   |  |   | 4 pin 2.5/3.5mm Ear-Jack  |   |   |   |
| <b>Voltage Level</b>           |   |   |  |   | UART (TTL level)  | Waterproof: IP67  |   |   |
| <b>Operating Temperature</b>   | -40 ~ +85 °C  | -40 ~ +85 °C  |  |   | -40 ~ +85 °C  | -40 ~ +85 °C  |   | -40 ~ +85 °C  |




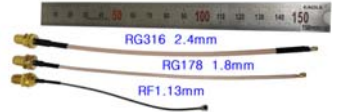





Standard External Antenna®

|                 |   |   |   |   |   |   |
|-----------------|---|---|---|---|---|---|
|                 |  |  |  |  |  |  |
| Product Name    | TFD   | TFF   | TEC / TEH   | TEB / TED   | MSA   | TEA / TEA1  |
| Part No.        | SYHA-xxxTFD   | SYHA-xxxTFF   | SYHA-xxxTEC/TEH   | SYHA-xxxTEB/TED   | SYHA-xxxMSA   | SYHA-xxxTEA/TEA1  |
| Frequency       | 2.4Ghz / 5Ghz, 868Mhz/ 915Mhz, 850Mhz, 900Mhz, 1800Mhz, 1900Mhz, 2100Mhz, 433Mhz  |   |   |   |   |   |
| Dimensions (mm) | ~160mm / ~260mm   | ~100~120mm  | ~80mm   | ~50mm   | ~190mm  | ~30mm   |
| Gain (dBi) Peak | 5dBi / 7dBi   | 2~3dBi  | 2~3dBi  | 2~3dBi  | 5dBi  | 2dBi  |
| Description     |   |   |   |   | Magnetic  |   |

Standard Accessory®

|                 |  |   |  |  |  |
|-----------------|--|---|--|--|--|
|                 |  |  |  |  |  |
| Product Name    | SMA PCB Mount (Straight)   | SMA PCB Mount (Right Angle)   | PCB Edge Launch  | SMA to U.FL  | MHF1 / U.FL Receptacle   |
| Part No.        |  | HSC-A300  | SMA-PCB-xxT  | RF1.13 / RG178 (1.8T) / RG316 (2.4T)   | U.FL-R-SMT-1   |
| Option          |  |   | 0.8T, 1.0T, 1.2T, 1.6T   |  |  |
| Dimensions (mm) |  |   |  | 50, 100, 150mm   |  |
| Description     | SMA Female   | SMA Female  | SMA Female   | SMA Female   |  |