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# Vehicular 4-Port MIMO Antenna

## VLQ69273x21G

### 698-960 / 1710-2700 / 2300-2700 / 4900-5900 MHz + GPS MIMO ANTENNA

The Laird vehicular 4-port MIMO antenna covers the 698-960 / 1710-2700 MHz, 2300-2700 / 4900-5900 MHz as well as GPS (1575.42 MHz) frequency ranges. Configured with 3-port, dual-band elements in addition to 1-port with integrated GPS.

Connector options include SMA male connectors for 3G/4G LTE and GPS ports with an RSMA male connector for the WiFi port. The housing incorporates a low-profile, rugged design that meets IP67 standards. The antenna also features high impact, UV-resistant polycarbonate plastic available in black or white.



### SPECIFICATIONS

| PARAMETER                        | PERFORMANCE                                     |               |                           |               |
|----------------------------------|-------------------------------------------------|---------------|---------------------------|---------------|
| Model Number                     | VLQ69273B21G-518A (Black)                       |               | VLQ69273W21G-518A (White) |               |
| No. of Ports                     | 4 (2-ports 3G/4G LTE, 1-port WiFi, 1-port GPS)  |               |                           |               |
|                                  | 3G/4G Port                                      |               | WiFi Port                 |               |
| Frequency Bands (MHz)            | 698-960 MHz                                     | 1710-2700 MHz | 2300-2700 MHz             | 4900-5900 MHz |
| Peak Gain * dBi                  | 3.3                                             | 4.6           | 5.5                       | 5.3           |
| Max Gain +/- 30 above horizon    | N/A                                             | N/A           | N/A                       | 4.1           |
| VSWR* Typical                    | < 1.8:1                                         | < 1.8:1       | < 1.6:1                   | < 1.7:1       |
| VSWR * Max                       | < 2.0:1                                         |               |                           |               |
| Typical Port-to-Port Isolation * |                                                 |               |                           |               |
| LTE1-to-LTE2                     |                                                 |               | > 15 dB                   |               |
| LTE1-to-WiFi                     |                                                 |               | > 18 dB                   |               |
| LTE2-to-WiFi                     |                                                 |               | > 20 dB                   |               |
| Nominal Impedance                | 50 Ohm                                          |               |                           |               |
| Polarization                     | Vertical Linear                                 |               |                           |               |
| Azimuth Beam Width               | Omnidirectional                                 |               |                           |               |
| Input Power, Max                 | 50 Watt (ambient temp. of 25°C / 77°F           |               |                           |               |
| Operating Temperature            | -30° C to +70° C (-22°F to +158°F)              |               |                           |               |
| Dimensions (dia. x hgt)          | 132 mm x 75 mm (5.2" x 2.9")                    |               |                           |               |
| Weight                           | 0.95 kg (2.09 lb)                               |               |                           |               |
| RF Connector                     | SMA-Male (3G/4G port)                           |               | RSMA-Male (WiFi port)     |               |
| Cable (exposed length)           | LMR195M- 518.2 cm (17 ft)                       |               |                           |               |
| Radome / Baseplate Material      | PC, UL94 - V0 Rating, UV Stable (Black & White) |               |                           |               |
| Material Compliance              | ROHS compliant                                  |               |                           |               |
| IP Dust & Water Ingress Rating   | IP67                                            |               |                           |               |

\*Measured on 1 ft. (30.48 cm) diameter ground plane

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### GPS ANTENNA SPECIFICATIONS

| PARAMETER                                             |                 | PERFORMANCE                                        |                   |     |
|-------------------------------------------------------|-----------------|----------------------------------------------------|-------------------|-----|
| Frequency Band                                        |                 | 1575.42 MHz (GPS L1)                               |                   |     |
| Band Width                                            |                 | 6 MHz (Typical)                                    |                   |     |
| Amplifier Gain                                        |                 | 27 dB ± 3 dBc                                      |                   |     |
| Nominal Impedance                                     |                 | 50 Ohm                                             |                   |     |
| Output VSWR                                           |                 | < 1.5:1                                            |                   |     |
| DC Voltage                                            |                 | 2.7 - 12 Vdc                                       |                   |     |
| DC Current                                            |                 | 20 mA (Nominal); 30 mA (-40°C - +85°C)             |                   |     |
| Out-of-Band Signal Rejection                          |                 | > 40 dB rejection @ ± 50 MHz from center frequency |                   |     |
| Intermodulation@ CW Mode (-40°C - +85°C)              |                 |                                                    |                   |     |
|                                                       |                 | Int1                                               | Int2              | IM3 |
| Power, dBm                                            | -10(1842.8 MHz) | -10(2110 MHz)                                      | -100(1575.6 MHz)  |     |
| Power, dBm                                            | -10(829.58 MHz) | -10(2405 MHz)                                      | -100(1575.42 MHz) |     |
| Power, dBm                                            | -10(755.42 MHz) | -10(820 MHz)                                       | -100(1575.42 MHz) |     |
| Input 1 dB Compression @ 750 MHz, 2000 MHz & 3500 MHz |                 |                                                    |                   |     |
|                                                       |                 | > 10 dBm (-40°C - +85°C)                           |                   |     |
| RF Connector                                          |                 | SMA-Male                                           |                   |     |
| Cable (exposed length)                                |                 | RG174-518.2 cm (17ft)                              |                   |     |

### PART NUMBERS

| PART NUMBER                                                                          |
|--------------------------------------------------------------------------------------|
| VLQ69273B21G-518A 2-Ports 4G/LTE, 1-Port GPS: SMA Male; 1 Port WiFi:RSMA Male(Black) |
| VLQ69273W21G-518A 2-Ports 4G/LTE, 1-Port GPS: SMA Male; 1 Port WiFi:RSMA Male(White) |

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