

1.166 GHz to 1.218 GHz/1.559 GHz to 1.606 GHz,  
 43 dBi LNA, GPS/GLNSS Timing Antenna

**KP-GPSL1L5-40-NF**



**Features**

- Dual Band L1/L5
- Multiple GNSS Systems Supported
- High 40 dB Gain
- Low 2 dB Noise Figure
- 1 dB Axial Ratio
- IP67 Rated
- External Grounding Lug

**Applications**

- Global: GPS (L1 / L5), Galileo (E1 / E5), GLONASS (G1 /G3)
- Local: BeiDou (B1 /B2), IRNSS (L5)
- Timing and Positioning Phase Synchronization
- 1166 - 1218 MHz / 1559 - 1606 MHz
- High Accuracy Mission Critical Global Positioning
- Military and Security

**Description**

The KP Performance KP-GPSL1L5-40-NF GPS timing antenna is a Dual Band (L1 / L5) active antenna that filters and amplifies global positioning system signals received from GNSS (L1 / L5), Galileo (E1 / E5), GLONASS (G1 /G3), BeiDou (B1 /B2), QZSS (L1/L5), and IRNSS (L5) satellite constellations. The KP-GPSL1L5-40-NF recovers timing and positioning data for timing reference and phase synchronization.

The KP-GPSL1L5-40-NF antenna from KP Performance is designed with an integrated 40 dB LNA and operates within 1166 MHz to 1218 MHz and 1559 MHz to 1606 MHz with high out-of-band rejection. Increased position accuracy in densely populated urban areas is possible with 1 dB axial ratio. High 43 dBic gain and low 2 dB noise figure allows for longer commercial grade cable, making installation versatile and economical.

This KP Performance Type N Female KP-GPSL1L5-40-NF GPS antenna is compatible with several existing mounting brackets. The dual band (L1 / L5) active antenna is a fully ruggedized unit and IP67 Rated. The antenna is DC fed through the RF cable and is externally grounded.

**Configuration**

|                   |                                     |
|-------------------|-------------------------------------|
| Design            | GPS/GLNSS                           |
| Application Band  | L1/L5                               |
| Band Type         | Multi                               |
| Radiation Pattern | Omni Directional                    |
| Polarization      | RHCP                                |
| DC Injection      | Coaxial feed cable center conductor |
| Connector Type    | N Female                            |

**Electrical Specifications**

| Description     | Minimum | Typical | Maximum | Units |
|-----------------|---------|---------|---------|-------|
| Frequency Range | 1,166   |         | 1,606   | MHz   |
| Input VSWR      |         | 1.8:1   |         |       |
| Impedance       |         | 50      |         | Ohms  |
| Gain            |         |         | 43      | dBi   |
| Gain Variation  |         | ±3      |         | dBi   |
| Noise Figure    |         | 2       |         | dB    |

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications:  
[1.166 GHz to 1.218 GHz/1.559 GHz to 1.606 GHz, 43 dBi LNA, GPS/GLNSS Timing Antenna KP-GPSL1L5-40-NF](#)

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|                       |     |    |    |       |
|-----------------------|-----|----|----|-------|
| Out Of Band Rejection | 40  | 60 |    | dB    |
| Operating DC Voltage  | 3.5 |    | 12 | Volts |
| Current               |     | 30 |    | mA    |
| Axial Ratio           |     | 1  |    | dB    |

**Mechanical Specifications**

|                       |                    |
|-----------------------|--------------------|
| Housing Plating/Color | White              |
| <b>Size</b>           |                    |
| Length                | 3.937 in [100 mm]  |
| Height                | 3.03 in [76.96 mm] |
| Weight                | 0.9 lbs [408.23 g] |

**Environmental Specifications**

|          |     |
|----------|-----|
| Humidity | 95% |
|----------|-----|

**Plotted and Other Data**

Notes:

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## Appendix

**Electrical Downtilt:** Angle in the antenna's elevation pattern in which the maximum gain occurs.

**Gain:** Antenna's average gain.

**Front to Back Ratio @ 180°±30°:** Average difference between the antenna's maximum gain and the maximum gain in the antenna's back lobe over ±30° angles.

**Cross-polarization Ratio (dB):** Typical difference between the co-polarization and cross-polarization gain across the sector's 3 dB Beam Width.

Dedicated to serving the needs of the Wireless Internet Service Provider (WISP) market, KP Performance Antennas offers purpose built products that reliably perform in the field. KP Performance Antennas product line consists of Yagi, Grid, Omni, Dish and other style antennas that operate in the 900 MHz, 2.4 GHz, 3 GHz, and 5 GHz frequencies.

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URL: <https://www.kpperformance.com/1.166-1.218ghz-1.559-1.606ghz-43dbi-gps-glss-timing-antenna-kp-gpsl1l5-40-nf-p.aspx>

The information contained within this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part in order to implement improvements. KP Performance reserves the right to make such changes as required. Unless otherwise stated, all specifications are nominal. KP Performance does not make any representation or warranty regarding the suitability of the part described herein for any particular purpose, and KP Performance does not assume liability arising out of the use of any part or document.

KP-GPSL1L5-40-NF CAD Drawing

