

# Leica Geosystems GNSS Comparison Chart



|                                                                                                                        |    | Leica GS18 I                     | Leica GS18 T              | Leica GS18                | Leica GS16                 | Leica GS05                      | Leica GS07                         | Leica GS10       | Leica GS25       |
|------------------------------------------------------------------------------------------------------------------------|----|----------------------------------|---------------------------|---------------------------|----------------------------|---------------------------------|------------------------------------|------------------|------------------|
| Signal tracking                                                                                                        |    | Multi-frequency                  | Multi-frequency           | Multi-frequency           | Multi-frequency            | L1/E1, B1I, L2C, B2/E5b         | Multi-frequency                    | Multi-frequency  | Multi-frequency  |
| GPS / GLONASS / Galileo / BeiDou / QZSS / SBAS                                                                         |    | ✓/✓/✓/✓/✓                        | ✓/✓/✓/✓/✓                 | ✓/✓/✓/✓/✓                 | ✓/✓/✓/✓/✓                  | ✓/✓/✓/✓/✓ <sup>1</sup>          | ✓/✓/✓/✓/✓                          | ✓/✓/✓/✓/✓        | ✓/✓/✓/✓/✓        |
| HxGN SmartNet Pro <sup>2</sup> / HxGN SmartNet <sup>2</sup> / HxGN SmartNet PPP / HxGN SmartNet NRTK GS05 <sup>2</sup> |    | ✓/✓/✓/✓                          | ✓/✓/✓/✓                   | ✓/✓/✓/✓                   | ✓/✓/✓/✓                    | ✓/✓/✓/✓                         | ✓/✓/✓/✓                            | ✓/✓/✓/✓          | ✓/✓/✓/✓          |
| Imaging functionality                                                                                                  |    | ✓                                | ✗                         | ✗                         | ✗                          | ✗                               | ✗                                  | ✗                | ✗                |
| Tilt compensation                                                                                                      |    | ✓                                | ✓                         | By service upgrade        | ✗                          | ✓ (up to 30°)                   | ✗                                  | ✗                | ✗                |
| Single baseline RTK                                                                                                    | Hz | 8 mm + 1 ppm                     | 8 mm + 1 ppm              | 8 mm + 1 ppm              | 8 mm + 1 ppm               | 10 mm + 1 ppm                   | 10 mm + 1 ppm                      | 8 mm + 1 ppm     | 8 mm + 1 ppm     |
|                                                                                                                        | V  | 15 mm + 1 ppm                    | 15 mm + 1 ppm             | 15 mm + 1 ppm             | 15 mm + 1 ppm              | 20 mm + 1 ppm                   | 20 mm + 1 ppm                      | 15 mm + 1 ppm    | 15 mm + 1 ppm    |
| Network RTK                                                                                                            | Hz | 8 mm + 0.5 ppm                   | 8 mm + 0.5 ppm            | 8 mm + 0.5 ppm            | 8 mm + 0.5 ppm             | 10 mm + 0.5 ppm                 | 10 mm + 0.5 ppm                    | 8 mm + 0.5 ppm   | 8 mm + 0.5 ppm   |
|                                                                                                                        | V  | 15 mm + 0.5 ppm                  | 15 mm + 0.5 ppm           | 15 mm + 0.5 ppm           | 15 mm + 0.5 ppm            | 20 mm + 0.5 ppm                 | 20 mm + 0.5 ppm                    | 15 mm + 0.5 ppm  | 15 mm + 0.5 ppm  |
| HxGN SmartNet Global (RTK bridging & PPP)                                                                              | Hz | 2.5 cm                           | 2.5 cm                    | 2.5 cm                    | 2.5 cm                     | ✗                               | 2.5 cm                             | 2.5 cm           | 2.5 cm           |
|                                                                                                                        | V  | 5 cm                             | 5 cm                      | 5 cm                      | 5 cm                       | ✗                               | 5 cm                               | 5 cm             | 5 cm             |
| Static (phase) with long observations                                                                                  | Hz | 3 mm + 0.1 ppm                   | 3 mm + 0.1 ppm            | 3 mm + 0.1 ppm            | 3 mm + 0.1 ppm             | 3 mm + 0.5 ppm                  | 3 mm + 0.5 ppm                     | 3 mm + 0.1 ppm   | 3 mm + 0.1 ppm   |
|                                                                                                                        | V  | 3.5 mm + 0.4 ppm                 | 3.5 mm + 0.4 ppm          | 3.5 mm + 0.4 ppm          | 3.5 mm + 0.4 ppm           | 6 mm + 0.5 ppm                  | 6 mm + 0.5 ppm                     | 3.5 mm + 0.4 ppm | 3.5 mm + 0.4 ppm |
| Static and rapid static (phase)                                                                                        | Hz | 3 mm + 0.5 ppm                   | 3 mm + 0.5 ppm            | 3 mm + 0.5 ppm            | 3 mm + 0.5 ppm             | 5 mm + 0.5 ppm                  | 5 mm + 0.5 ppm                     | 3 mm + 0.5 ppm   | 3 mm + 0.5 ppm   |
|                                                                                                                        | V  | 5 mm + 0.5 ppm                   | 5 mm + 0.5 ppm            | 5 mm + 0.5 ppm            | 5 mm + 0.5 ppm             | 10 mm + 0.5 ppm                 | 10 mm + 0.5 ppm                    | 5 mm + 0.5 ppm   | 5 mm + 0.5 ppm   |
| Reliability                                                                                                            |    | 99.99%                           | 99.99%                    | 99.99%                    | 99.99%                     | 99.95%                          | 99.95%                             | 99.99%           | 99.99%           |
| Maximum positioning update rate                                                                                        |    | 20 Hz                            | 20 Hz                     | 20 Hz                     | 20 Hz                      | 10 Hz                           | 5 Hz                               | 20 Hz            | 20 Hz            |
| Raw data / RINEX data logging / NMEA out                                                                               |    | ✓/✓/✓                            | ✓/✓/✓                     | ✓/✓/✓                     | ✓/✓/✓                      | ✓/✓/✓                           | ✓/✓/✗                              | ✓/✓/✓            | ✓/✓/✓            |
| RTK reference station functionality                                                                                    |    | ✓                                | ✓                         | ✓                         | ✓                          | ✓                               | ✗                                  | ✓                | ✓                |
| Cellular / UHF radio (receive & transmit) modem                                                                        |    | 4G / ✓                           | 4G / ✓                    | 4G / ✓                    | Controller internal / ✓    | ✓/✓/✓ <sup>3</sup>              | Controller internal / Receive only | 4G / ✓           | 4G / ✓           |
| Storage                                                                                                                |    | Internal memory & SD card        | Internal memory & SD card | Internal memory & SD card | Micro SD card              | Internal memory                 | Controller internal                | SD card          | SD card          |
| User interface (buttons / LEDs / display)                                                                              |    | 2 / 8 / ✗                        | 2 / 8 / ✗                 | 2 / 8 / ✗                 | 2 / 7 / ✗                  | 1 / 3 / ✗                       | 1 / 3 / ✗                          | 2 / 10 / ✗       | 7 / 7 / ✓        |
| Power, Bluetooth®, WLAN, USB                                                                                           |    | ✓/✓/✓/✓                          | ✓/✓/✓/✓                   | ✓/✓/✓/✓                   | ✓/✓/✗/✓                    | ✓/✓/✓/✓                         | ✓/✓/✗/✓                            | ✓/✓/✗/✓          | ✓/✓/✗/✓          |
| Event and PPS                                                                                                          |    | ✗                                | ✗                         | ✗                         | ✗                          | ✗                               | ✗                                  | ✗                | ✓                |
| Operating temperature                                                                                                  |    | -30°C to +50°C (camera active)   | -40°C to +65°C            | -40°C to +65°C            | -40°C to +65°C             | -30°C to +55°C                  | -40°C to +65°C                     | -40°C to +65°C   | -40°C to +65°C   |
|                                                                                                                        |    | -40°C to +65°C (camera inactive) |                           |                           |                            | -40°C to +65°C <sup>4</sup>     |                                    |                  |                  |
| IP68 proof against water, sand and dust                                                                                |    | ✓                                | ✓                         | ✓                         | ✓                          | ✓                               | ✓                                  | ✓                | ✓                |
| Weight (without battery)                                                                                               |    | 1.25 kg                          | 1.23 kg                   | 1.20 kg                   | 0.93 kg                    | 0.75 kg (with internal battery) | 0.70 kg                            | 1.20 kg          | 1.84 kg          |
| Operating time with internal UHF radio (Rx / Tx)                                                                       |    | 7 h / 5 h                        | 7 h / 5 h                 | 7 h / 5 h                 | 7 h / 5 h                  | 10 h / 10 h                     | 7 h / NA (device in controller)    | 15 h / 13 h      | 14 h / 12 h      |
| Operating time with internal phone                                                                                     |    | 6 h                              | 6 h                       | 6 h                       | 7 h (device in controller) | 8 h                             | 7 h (device in controller)         | 14 h             | 13 h             |

1. Enabled through future firmware updates.

2. Available in selected countries only.

3. Available in separated variants.

4. With external power.

✓ = Available ✗ = Not available



Seattle 425-771-7776 | Tacoma 253-922-6087  
 Portland 503-641-3388 | Salt Lake City 801-878-9763  
 St. George 435-922-5262 | Las Vegas 702-586-1152  
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