# **SPAN Inertial Measurement Units (IMUs)**

### **Mid Performance IMUs**

## NavtechGPS)

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#### HG1900

The IMU-HG1900 incorporates an HG1900, which is a MEMS gyro based IMU manufactured by Honeywell. Economical, robust and small in size, the low power HG1900 provides high end tactical grade performance for commercial and military guidance and navigation applications. The HG1900 is a commercial product that can be licensed under the U.S. Department of Commerce for customers outside the United States.

Dimensions: 130 x 130 x 125 mm

Weight: 2.5 kg



#### **OEM-HG1900**

The HG1900 is a MEMS gyro based IMU manufactured by Honeywell. Economical, robust and small in size, the low power HG1900 provides high end tactical grade performance for commercial and military guidance and navigation applications.

The OEM-HG1900 is a commercial product that can be licensed under the U.S. Department of Commerce for customers outside the United States.

A NovAtel Universal IMU Controller (UIC) is required to integrate an OEM-HG1900 with NovAtel receivers.

Dimensions: 92.7mm dia max x 79.1 mm h

Weight: <460 g



#### KVH-1750

The IMU-KVH1750 offers tactical grade performance in a compact and rugged package with minimal power consumption. It contains Fiber Optic gyros (FOG) and MEMS accelerometers.

Dimensions: 88.9 mm dia max x 73.7 mm h

Weight: <700 g



#### µIMU-IC

The µIMU-IC features Northrop Grumman Litef GMBH's proven inertial measurement technology offering exceptional performance when paired with a NovAtel SPAN receiver.

Dimensions: 130 x 130 x 115

Weight: 2.6 kg



#### HG1700 AG62

The HG1700 AG62 is a tactical grade IMU from Honeywell containing servo accelerometers and ring-laser gyros. With a Gyro Bias of 5 degrees per hour, the economical HG1700 AG62 offers good performance. The HG1700 AG62 is available in the Universal IMU Enclosure (shown) or the SPAN HG Enclosure.

The HG1700 AG2 is a commercial product that can be licensed under the U.S. Department of Commerce for customers outside the United States.

Universal IMU Enclosure

**Dimensions:** 168 x 195 x 146 mm **Weight:** 4.5 kg

#### SPAN IMU Enclosure

**Dimensions:** 167 x 193 x 100 mm **Weight:** 3.4 kg

### **SPAN SYSTEM ATTITUDE** ACCURACY (DEGREES)<sup>1</sup> RMS

**IMU SPECS** RTK<sup>2</sup> Post Processed<sup>3</sup> Available as OEM **Gyro Technology Export Control** Power Consumption Data Rate Heading Heading Pitch Pitch Roll Roll 8 W (typical) Commercial 100 Hz MEMS 0:030 0.005 0.005 0.010 0.010 0.011 + Commercial 100 Hz MEMS 0.005 0.005 <3 W 0.010 0.010 0.030 0.011 Commercial 8 W (max) 200 Hz 0.035 0.005 0.005 0.015 0.015 0.017 FOG 13 W (typical) Commercial 200 Hz MEMS 0.030 0.005 0.005 0.009 0.010 0.010 + Commercial 100 Hz 0.035 0.004 0.009 0.012 0.012 0.004 RLG 8 W +



**SPAN PERFORMANCE** 

Heading Error (degrees) 0.040 0.030 0.020 0.010 0.000 0 10 20 30 40 50 60 Duration of Outage (s)

1. 2. 3.

When SPAN is in RTK mode. 0 seconds outage on land vehicle application. RMS, incremental error growth from steady state accuracy. Computed with GPS, RTK trajectory using Waypoint Inertial Explorer.