



GPS-AIDED INERTIAL NAVIGATION SYSTEMS



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CHEETAH NAV

MEMS or FOG, Tactical Navigation



Type of IMU	MEMS or FOG, Tactical Navigation
GNSS receiver	Novatel/Septentrio/Ublox
Heading static.....	0.08°
Heading dynamic	0.08°
Pitch & Roll static.....	0.06°
Pitch & Roll dynamic	0.03°
Position (with GNSS)	1.8 m (SP)
Position (GNSS-denied, land navigation).....	0.2% DT
Jamming and spoofing mitigation	Yes
Moving Maps.....	Yes
Battle Management System (BMS)	Yes
Blue Force Tracking (BFS)	Yes
External Air Data Computer (ADC).....	No

GPS-Aided Inertial Navigation Systems



MADE IN
USA



INS-U

GPS-Aided Inertial Navigation System



Type of IMU	MEMS, Industrial
GNSS receiver	Ublox
Heading static.....	0.6°
Heading dynamic	0.3°
Pitch & Roll dynamic	0.05°
Pitch & Roll static.....	0.08°
Position (with GNSS)	1 cm (RTK)
Jamming and spoofing mitigation	Yes
Embedded Air Data Computer (ADC).....	Yes
External Air Data Computer (ADC).....	No
Size	82.0 x 40 x 26 mm
Weight	<200 g



GPS-Aided Inertial Navigation Systems

INS-D

GPS-Aided Inertial Navigation System



Type of IMU .....	.MEMS, Tactical
GNSS receiver .....	.Novatel / Septentrio / Ublox
Heading static .....	.0.08°
Heading dynamic .....	.008°
Pitch & Roll dynamic .....	.0.03°
Pitch & Roll static .....	.0.05°
Position (with GNSS) .....	.1 cm (RTK)
Position (GNSS-denied, land navigation) .....	.0.2% DT
Jamming and spoofing mitigation .....	.Yes
External Air Data Computer (ADC) .....	.Yes
Size .....	.120.5 x 53.2 x 49.3 mm
Weight .....	.320 g

GPS-Aided Inertial Navigation Systems





INS-DU, DL

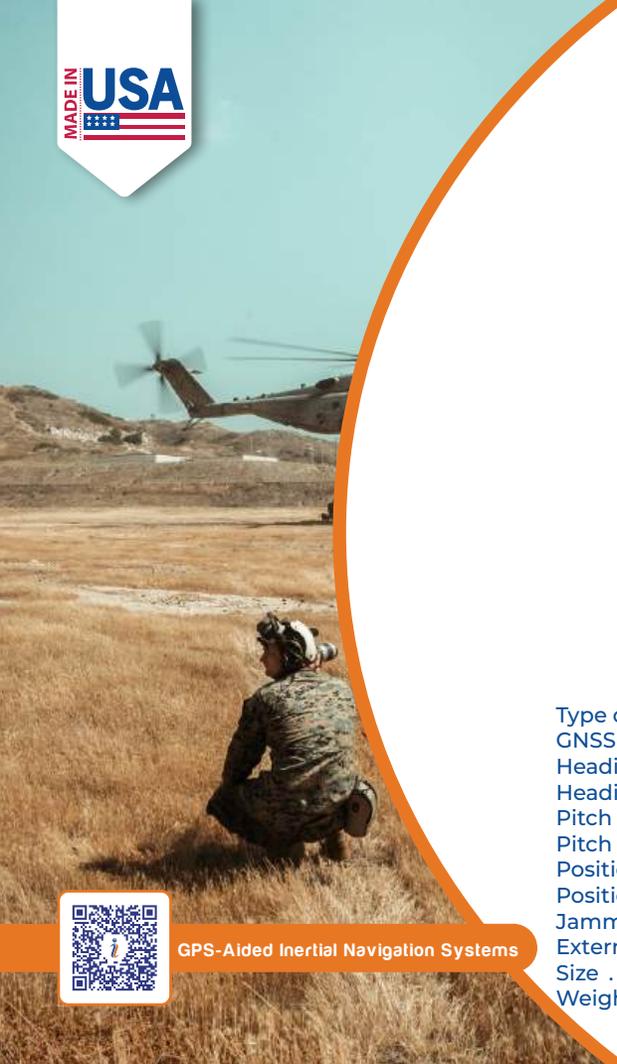
GPS-Aided Inertial Navigation System



	INS-DU	INS-DL
Type of IMU	MEMS, Industrial	MEMS, Industrial
GNSS receiver	Novatel / Septentrio / Ublox	Novatel / Septentrio / Ublox
Heading static	0.08°	0.2°
Heading dynamic	0.08°	0.2°
Pitch & Roll dynamic	0.05°	0.04°
Pitch & Roll static	0.08°	0.08°
Position (with GNSS)	1 cm (RTK)	1 cm (RTK)
Position (GNSS-denied, land navigation)	1% DT	0.5% DT
Jamming and spoofing mitigation	Yes	Yes
External Air Data Computer (ADC)	Yes	Yes
Size	120.5 x 53.2 x 49.3 mm	120.5 x 53.2 x 49.3 mm
Weight	220 g	320 g



GPS-Aided Inertial Navigation Systems



INS-P, B

GPS-Aided Inertial Navigation System



	INS-P	INS-B
Type of IMU	MEMS, Tactical	MEMS, Tactical
GNSS receiver	Novatel / Septentrio / Ublox	Novatel / Septentrio / Ublox
Heading static	0.3°	.1°
Heading dynamic	0.1°	0.1°
Pitch & Roll dynamic	0.03°	0.03°
Pitch & Roll static	0.05°	0.05°
Position (with GNSS)	.1 cm (RTK)	.1 cm (RTK)
Position (GNSS-denied, land navigation)	0.2% DT	0.2% DT
Jamming and spoofing mitigation	Yes	Yes
Embedded Air Data Computer (ADC)	No	No
External Air Data Computer (ADC)	Yes	Yes
Size	120.5 x 53.2 x 49.3 mm	120.5 x 53.2 x 49.3 mm
Weight	280 g	220 g

GPS-Aided Inertial Navigation Systems



MADE IN
USA



INS-DM-N11

Tactical MEMS IMU-based GPS-Aided Inertial Navigation System



Type of IMU	MEMS, Tactical Navigation
GNSS receiver	Novatel / Septentrio / Ublox
Heading static	0.08°
Heading dynamic	0.08°
Pitch & Roll dynamic	0.02°
Pitch & Roll static	0.03°
Position (with GNSS)	1 cm (RTK)
Position (GNSS-denied, land navigation).....	0.1% DT
Jamming and spoofing mitigation	Yes
Embedded Air Data Computer (ADC)	Yes
External Air Data Computer (ADC).....	No
Size	160.4 x 141.2 x 61.1 mm
Weight	1255 g



GPS-Aided Inertial Navigation Systems

INS-DM-B1

Tactical MEMS IMU-based GPS-Aided Inertial Navigation System



Type of IMU	Honeywell HG4930 MEMS IMU
GNSS receiver	Novatel / Septentrio / Ublox
Heading static.....	0.08°
Heading dynamic	0.08°
Pitch & Roll dynamic	0.01°
Pitch & Roll static.....	0.02°
Position (with GNSS)	1 cm (RTK)
Position (GNSS-denied, land navigation).....	0.1% DT
Jamming and spoofing mitigation	Yes
Embedded Air Data Computer (ADC).....	Yes
External Air Data Computer (ADC).....	Yes
Size	160.4 x 141.2 x 61.1 mm
Weight	1300 g



GPS-Aided Inertial Navigation Systems





INS-DM-FI

FOG IMU-based GPS-Aided Inertial Navigation System



Type of IMU	FOG, Tactical
GNSS receiver	Novatel / Septentrio / Ublox
Heading static.....	0.08°
Heading dynamic	0.08°
Pitch & Roll dynamic	0.01°
Pitch & Roll static.....	0.01°
Position (with GNSS)	1 cm (RTK)
Position (GNSS-denied, land navigation).....	0.1% DT
Jamming and spoofing mitigation	Yes
Embedded Air Data Computer (ADC).....	Yes
External Air Data Computer (ADC).....	No
Size	160 x 149 x 96 mm
Weight	1345 g



GPS-Aided Inertial Navigation Systems

INS-FI-200

FOG IMU-based GPS-Aided Inertial Navigation System



Type of IMU	FOG, Tactical
GNSS receiver	Novatel / Septentrio / Ublox
Heading static	0.08°
Heading dynamic	0.08°
Pitch & Roll dynamic	0.01°
Pitch & Roll static	0.01°
Position (with GNSS)	1 cm (RTK)
Position (GNSS-denied, land navigation)	0.1% DT
Jamming and spoofing mitigation	Yes
Embedded Air Data Computer (ADC)	No
External Air Data Computer (ADC)	Yes
Size	95 x 95 x 128 mm
Weight	990 g

GPS-Aided Inertial Navigation Systems





ADC

Air Data Computer



Pressure Sensor Measurement Range	±25 / ±600 / ±4000 mbar
Static Pressure Accuracy	±0.1% FSS
Dynamic Pressure Accuracy	±0.25% FSS
Max Calibrated and True Airspeed .....	.64 / 310 / 800 meters/sec
Calibrated and True Airspeed Accuracy	0.5 meters/sec
Size	73.5 x 55 x 29.5 mm
Weight .....	.130 g



GPS-Aided Inertial Navigation Systems

NOTES:



Inertial Labs

Attitude is Everything

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