Sensors teaming up
An unmatched integration of the latest within multi GNSS and KONGSBERG’s unique motion gyro compass (MGC™) facilitate the possibility to operate with no additional augmentation services without compromising on DP performance. The DPS i-series is still fully prepared to utilize differential corrections and SBAS services when required. DPS i4 utilizes data from all available GNSS constellations including GPS, GLONASS, Galileo and Beidou.

Designed for robust performance
The integration ensures a continuous position solution by bridging gaps in the GNSS reception and increasing position stability in periods with limited GNSS availability due to masking, scintillation and interference. GNSS and INS are perfectly matched as they overcome each others limitations. Using both systems is superior to using either system alone. RAIM (Receiver Autonomous Integrity Monitoring) extended by data from the INS provides ultimate reliability of the position and velocity data under difficult GNSS conditions.

Multi-use of sensor
By using the MGC as the inertial sensor, a high-quality WheelMark gyro compass becomes a part of the solution. In addition, MGC can serve other on-board systems such as navigation equipment and other systems that require attitude data.

Increased operational efficiency
Inertial technology combined with the latest multi-constellation GNSS technology enables a cost efficient and reliable position reference solution. No regular maintenance, calibration or additional operational costs are required.

Scalable solution
The flexible design of the DPS i-series ensures a scalable and expandable reference solution that can adapt to the specific requirements of any vessel. For the more demanding applications, a combination of multiple DPS systems and MGC/MRU sensors will enable precise heading determination world wide and provide spoofing detection capabilities. The DPS i-series may utilize existing or dedicated MGC or MRU sensors for the integration.

Active decision support
The DPS i-series has an intuitive and easy-to-use graphical user interface developed in close co-operation with experienced DP operators. The HMI (Human-Machine Interface) enables the operators to assess the quality of their positioning quickly and effectively during operation.

Remote service
The DPS i-series is ready for K-IMS remote services for operational support and troubleshooting. Cases that previously required a visit from a service engineer, may now be resolved remotely.
### TECHNICAL SPECIFICATIONS

**DPS i4**

**PERFORMANCE**
- Non-differential position accuracy: 0.65 m, 95% CEP
- High precision accuracy: < 10 cm, 95% CEP
- SBAS position accuracy: < 1 m, 95% CEP
- Velocity accuracy: < 0.01 m/s, 95% CEP
- Roll, pitch accuracy: Please see separate datasheets for MGC/MRU products
- Update frequency rate: 1-20/200 Hz
- Latency: < 1 ms

All accuracy specifications are based on real-life tests conducted in the North Sea under various conditions. Operation in other locations under different conditions may produce different results.

**INTERFACES**
- Serial ports: 8 isolated ports, 6 configurable between RS-232 and RS-422
- IMU: RS-422
- Ethernet/LAN: 4
- USB: 3

**DATA OUTPUTS**
- Message formats: NMEA 0183 v. 3.0, Proprietary
- Message types: ABBDP, ARABB, DPGGA, DTM, GBS, GSA, GLL, GNS, GSA, GST, GSV, MMC, VTM, VER, VTN, ZDA

**DATA INPUTS**
- DGNSS corrections: RTCM-SC104 v.2.2, 2.3, 3.0 and 3.1, Seastar XP/XP2/02/02-/04/04/
- RTK corrections: RTCM-SC104 v.2, 2.3, 3.0 and 3.1 and CMR
- Gyro compass: NMEA 0183 DHT, HRC, THS and Robertson LR22 BCD format
- Display control: DDC
- INS Sensor: MGC R3, MGC R2, MRU 5+

**WEIGHTS AND DIMENSIONS**
- DPS 14 Processing Unit: 5.4 kg, 89 x 485 x 357 mm
- DPS i-series HMI Unit: 3.8 kg, 44 x 485 x 330 mm
- GNSS antenna: 0.5 kg, 89 mm x 185 mm

**POWER SPECIFICATIONS**
- DPS 14 Processing Unit: 100 - 240 V AC, 50/60 Hz, max 75 W
- DPS i-series HMI Unit: 100 - 240 V AC, 50/60 Hz, max 40 W
- GNSS antenna: 5 V DC from Processing Unit

**ENVIRONMENTAL SPECIFICATIONS**
- Operating temperature range:
  - DPS 14 Processing Unit: -15 to +55 °C (*), +5 to +40 °C recommendation
  - DPS i-series HMI Unit: -15 to +55 °C (*), +5 to +40 °C recommendation
- Humidity:
  - DPS 14 Processing Unit: Max 95 % non-condensing
  - DPS i-series HMI Unit: Max 95 % non-condensing
  - GNSS antenna: Hermetically sealed
- Mechanical Vibration: IEC 60945/EN 60945
- Electromagnetic compatibility:
  - Compliance to EMCD, IEC 60945/EN 60945
  - Immunity/emission: IEC 60945/EN 60945

**PRODUCT SAFETY**
- Compliance to LVD, standard used: IEC 60950-1/EN 60950-1
- Compliance to SIL, standard used: IEC 60950-1/EN 60950-1

**PRODUCT STANDARDS**
- GNSS systems: IEC 61108-1
- Maritime navigation and radio communication equipment and systems: IEC 61108-1
- IMO regulations: IEC 61108-1
- UKODA: IEC 61108-1

1. Dependent on subscription type
2. Integrated system

Specifications subject to change without any further notice.