



**Bluetooth® Enabled  
Smart™ Sensors**

**NEW!**

# DST820 Smart® Multisensor

## Next-Generation Performance. Smarter. Faster. More Secure.

The new DST820 Smart Multisensor is the next evolution of Airmar's industry-leading technology, replacing the DST810 and introducing PSTI compliance for enhanced onboard network security.

With its secure QR-code setup, connecting your DST820 has never been easier—or safer. Simply scan the QR code and enter a one-time security password on your mobile device to protect your sensor on the network.

Featuring Airmar's high-performance Gen2 paddlewheel, the DST820 delivers unmatched speed-through-water accuracy—providing precise start-up data below 0.3 knots, linear accuracy from 0.6 knots, and stable, reliable readings all the way up to 45 knots.

Whether you're a day sailor, weekend cruiser, or tactical racer, accurate speed-through-water (STW) data helps you fine-tune sail trim and rig balance for maximum performance. For racers, precise STW readings enable accurate velocity made good (VMG) and target speed calculations on racing instruments, ensuring every tactical decision is data driven.

Together, the DST820 and Airmar's CAST™ app make speed calibration simpler than ever. The free CAST app provides powerful calibration tools—once only available through costly PC-based software—now instantly accessible from your smartphone or tablet. Choose from basic or advanced calibration options to suit your needs.

Beyond speed, the DST820 measures depth and water temperature, and provides a 5.7 Hz (5x per second) speed output with improved resolution. Its integrated attitude sensor delivers heel and trim data, enabling heel-compensated speed calibration across multiple heel angles and speed ranges—fast, intuitive, and completely independent of onboard instruments.

**AIRMAR®...IT'S WHAT'S UNDER YOUR BOAT.**



With depth tracking from 0.5 m (1.6 ft) to 100 m (328 ft), the DST820 also provides reliable depth data to help ensure you never run aground.

The result: industry-leading speed accuracy, wireless calibration convenience, and next-generation security—all in one powerful, compact sensor.

### Features:

- **NEW!** The DST820 is fully compliant with UK PSTI security standards, ensuring that the connection between DST820 and a mobile device is secure.
- **The industry's best speed paddlewheel** – DST820 features the Gen2 paddlewheel for industry-leading speed performance from 0.3 knots to 45 knots.
- **Smoother Speed** – 5.7 Hz speed output (5X per second) for visibly smoother speed-through-water reporting and faster data for better decision making when every second counts.
- **Integrated Attitude Sensor** – For heel and trim and used in advanced speed calibration.
- DST820 secure Bluetooth® connectivity to Airmar's CAST app provides the ability to:
  - Calibrate the DST820 in a simple, intuitive way from your mobile device.
  - Conduct basic and advanced heel-compensated speed calibrations for improved speed-through-water outputs across the speed range.
  - Advanced speed calibration allows for manual speed entries for multiple heel angles and up to 10 speeds, formerly only possible through expensive PC software.



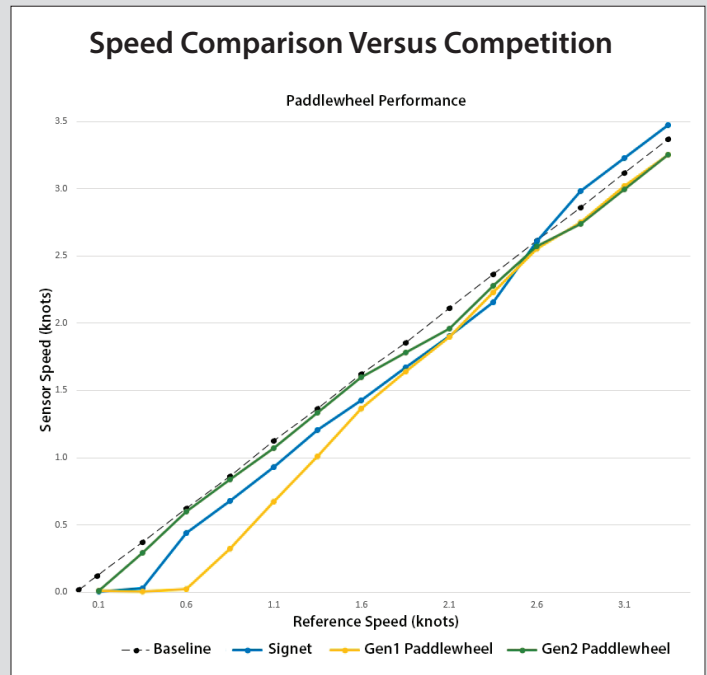
# Introducing the Paddlewheel That Sets the Standard for Performance

Airmar's new, next-generation paddlewheel design delivers industry-leading performance for start-up responsiveness and linearity throughout the speed range. Gen2 paddlewheel maintains the top speed performance Airmar is known for and adds start-up speed performance that beats all other available paddlewheels. The Gen2 paddlewheel is the most sensitive and accurate paddlewheel available for sailing and power boats.



## Key benefits of the new Gen2 paddlewheel include:

- Ultra-responsive speed begins as low as 0.3 knots and becomes linear at 0.6 knots.
- Speed-through-water readings stay accurate and smooth through 45 knots.



## SPECIFICATIONS

### Weight:

- 0.9 kg (2.0 lb)—Plastic
- 1.6 kg (3.5 lb)—Bronze
- 1.9 kg (4.2 lb)—Stainless Steel

**Acoustic Window:** Urethane

**Hull Deadrise:** Up to 22°

**Data Update Rate:** Depth: 1X/second  
Speed: 5X/second  
Heel/Trim: 10X/second

**Attitude Accuracy:** ±1° nominal after sensor calibration

**Depth Frequency:** 235 kHz

**Minimum Depth Range:** 0.5 m (1.6')

**Maximum Depth Range:** Up to 100 m (330')—NMEA 2000®

**Speed Range:** 0.3 knots to 45 knots

**Pressure Rating:** 3 m (10')

**Supply Voltage:** 9 VDC to 16 VDC— per NMEA 2000®

**Supply Current:** <200 mA— per NMEA 2000®

**Wireless Protocol:** Bluetooth Low Energy (BLE)

**Wireless Range:** Up to 30 feet depending on mount location

**Standard Cable Length:** 6 m (20') DeviceNet—NMEA 2000®

**Temperature Sensor Accuracy:** ±0.5°C (±1.8°F)

**Temperature Sensor Range:** -10°C to 40°C (14°F to 104°F)

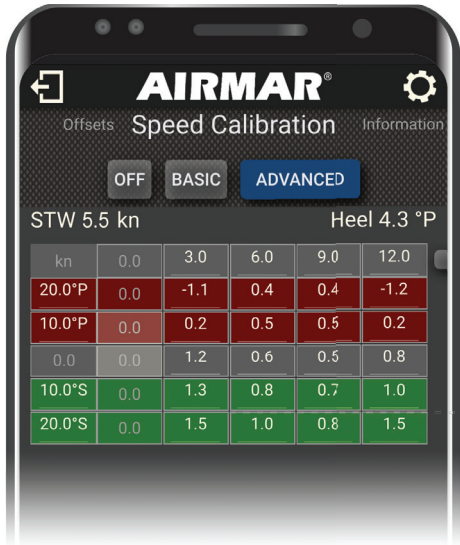
**NMEA 2000® Load Equivalency Number (LEN):** 2

**CE Regulation:** Complies to IEC 60945

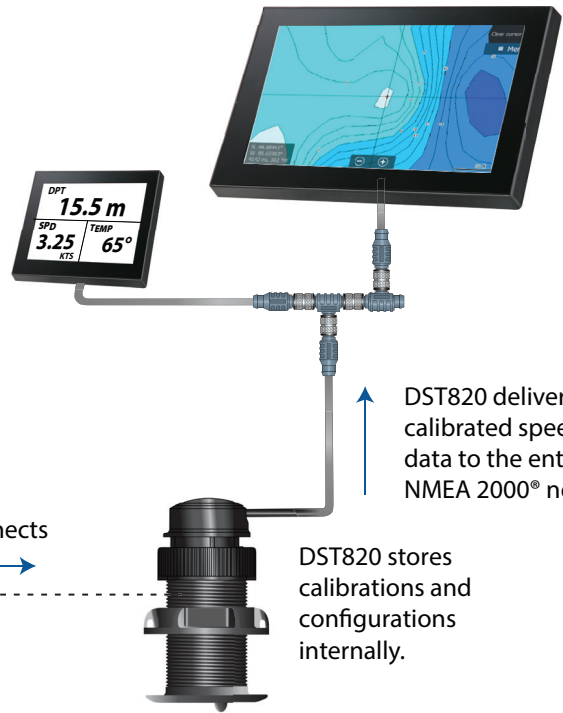
## CAST App With DST820



Use the Airmar CAST™ app to calibrate speed at multiple heel angles and numerous speeds for optimal performance.



Wirelessly connects



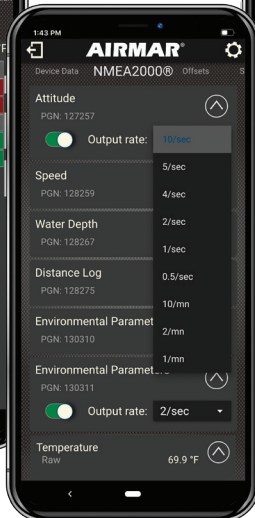
DST820 delivers calibrated speed data to the entire NMEA 2000® network.

DST820 stores calibrations and configurations internally.

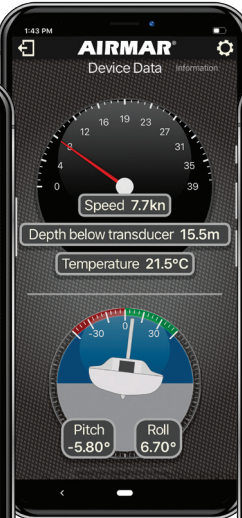
Calibrate speed at 5 heel angles and up to 10 speeds



Configure outputs



Display data / gauges



Calibrate basic or heel compensated speeds with DST820 connectivity



Configure offsets and calibrate attitude



CAST connects to TriSonic, DST820, 300WX, DX900+, and SmartBoat Modules



## DATA OUTPUT PROTOCOL

### NMEA 2000® Supported PGNs

#### Transmitted PGNs:

59392 ISO Acknowledgment  
60928 ISO Address Claim  
65285 Proprietary: Boot State Acknowledgment  
65287 Proprietary: Access Level  
65408 Proprietary: Depth Quality Factor  
65409 Proprietary: Speed Pulse Count  
65410 Proprietary: Internal Device Temp and Supply Voltage  
126208 Acknowledge Group Function  
126464 PGN List - Transmit and Received PGNs Group Function  
126720 Proprietary  
126720-40 Calibrate Depth  
126720-41 Calibrate Speed  
126720-42 Calibrate Temperature  
126720-43 Speed Filter  
126720-44 Temperature Filter  
126720-62 Depth Filter  
126996 Product Information  
126998 Configuration Information  
127257 Attitude  
128259 Speed (water referenced)  
128267 Water Depth  
128275 Distance Log  
130310 Environmental Parameters (water temp)  
130311 Environmental Parameters (water temp)  
130312 Temperature (water temp)  
130316 Temperature, Extended Range (water temp)  
130944 Proprietary: POST

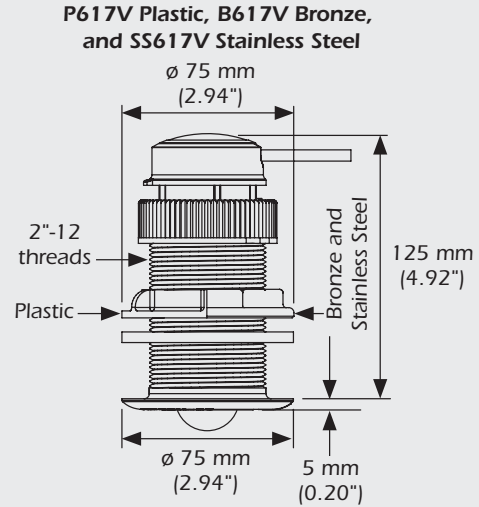
#### Received PGNs:

59904 ISO Request  
60928 ISO Address Claim  
65286 Proprietary: Boot State Request  
126208 Request Group Function  
126208 Command Group Function  
126720 Proprietary:  
126720-1 Master Reset  
126720-130 Restore EEPROM

#### Proprietary PGNs

126720-33 Attitude Offsets  
126720-67 Attitude Filter  
126720-68 Basic speed heel correction  
126720-69 Advanced speed heel correction  
126720-71 Disable speed heel correction  
060160 ISO Data Transport  
060416 ISO Connection Management  
126720-45 Read priorities and intervals  
126720-51 Bluetooth disable  
126720-100 Sensor List  
130945 Log

## DIMENSIONS



Airmar's innovative housing design incorporates a self-closing valve to minimize water flow into boat when the insert is removed.

