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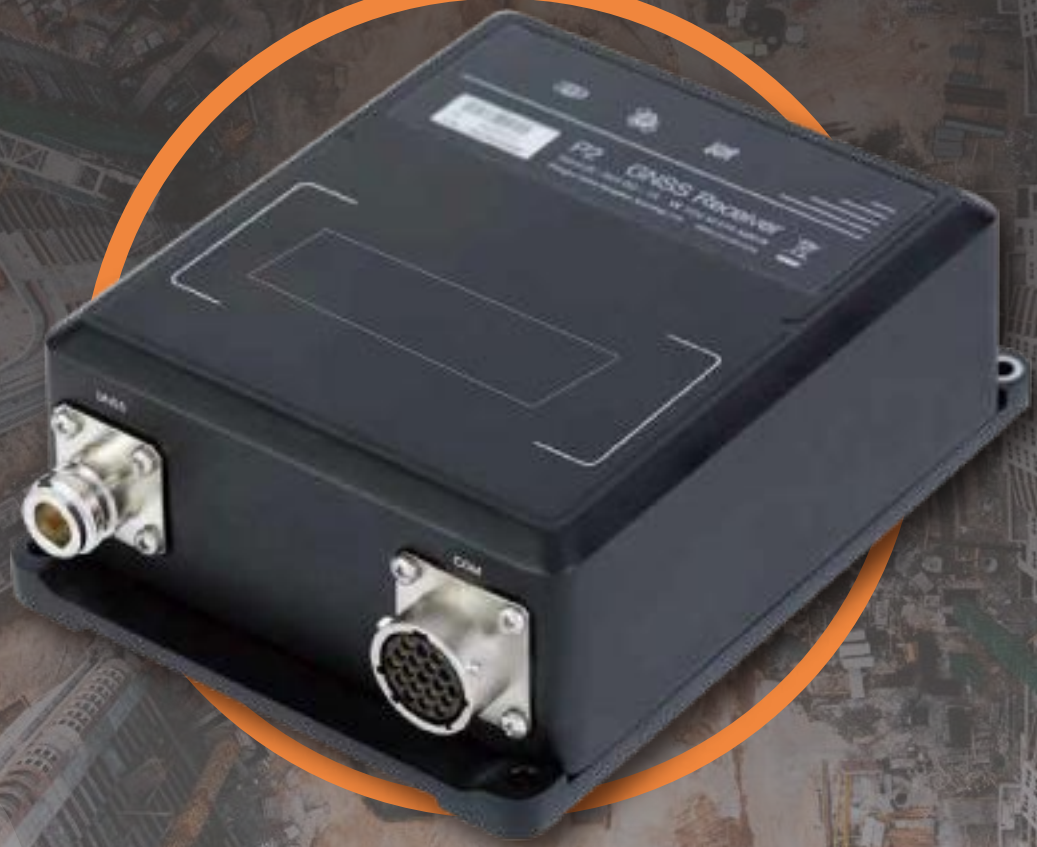
P2

GNSS POSITIONING



SURVEYING & ENGINEERING

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INDUSTRIAL DESIGN POSITIONING GNSS SENSOR

The P2 GNSS sensor is a multi-constellation high-precision receiver designed to provide robust centimeter level positioning to static or dynamic applications. Integrating the latest GNSS technology in an extremely rugged IP67 and lightweight enclosure, the P2 GNSS sensor is built to withstand harsh environment. Easy to install, its configuration web interface allows seamless integration process to system integrators.

The CHCNAV P2 GNSS sensor is the perfect choice for various range of precision applications such as GNSS reference station, marine, industrial automation, robotics…

MULTI-CONSTELLATION FOR EXTREME POSITIONING

Combine GPS, GLONASS, Galileo and BeiDou.
Powered by a 336-channel GNSS core engine, the P2 GNSS provides centimeter accuracy to any positioning applications.

HIGH-RELIABILITY INDUSTRIAL DESIGN

Secure your investment in any marine or construction machine application.
IP67 dust and water resistance certification and integrated industrial-grade power management circuit provide reliable and constant performances in most difficult environment.

EASY INTEGRATION AND CONFIGURATION

Virtually no learning curve for faster integration process.
The P2 GNSS sensor is easy to install and set up. Just connect to the P2 GNSS ethernet port and get immediate access to advanced control to its configuration.

EXTENDED AND RUGGED CONNECTIVITY

Rich hardware interfaces make the integration seamless in all applications .
The P2 GNSS sensor supports serial ports, RJ45 ethernet connectivity and low latency PPS output.

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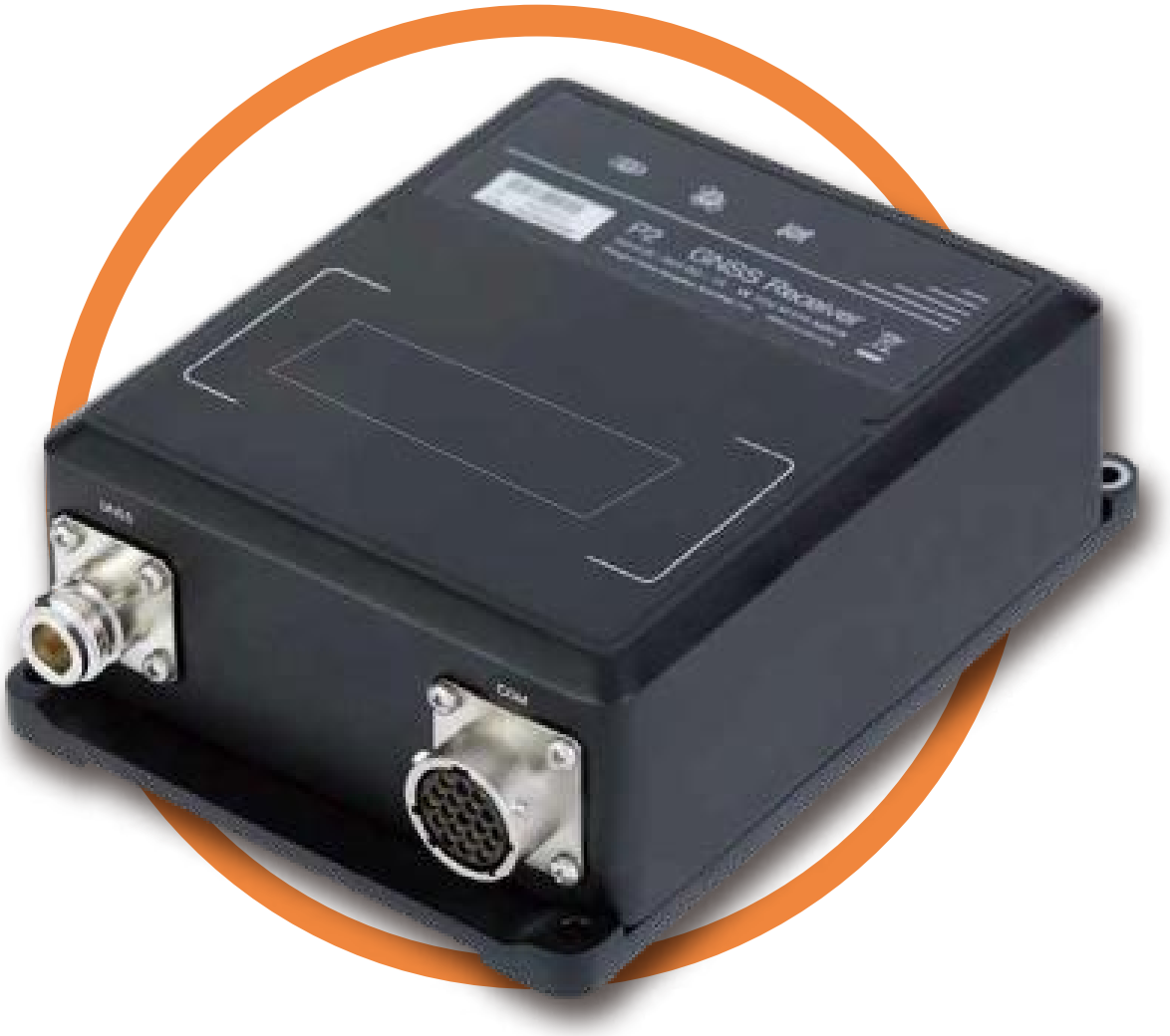
HIGH PERFORMANCE
GNSS SENSOR



RUGGED GNSS POSITIONING

SPECIFICATIONS

GNSS Characteristics [1]	
Channels	336
GPS	L1 C/A, L2E, L2C, L5
GLONASS	L1 C/A, L2 C/A, L3 CDMA
Galileo	E1, E5A, E5B, E5AltBOC, E6
BeiDou	B1I, B1C, B2I, B2C, B3I
SBAS	L1 C/A, L5
QZSS	L1 C/A, L1 SAIF, L2C, L5, LEX
IRNSS	L5
MSS L-Band	OmniSTAR®, Trimble RTX™
GNSS Accuracies [2]	
Real time kinematic (RTK)	Horizontal: 8 mm + 1 ppm RMS Vertical: 15 mm + 1 ppm RMS Initialisation time: typically < 8 s Initialisation reliability: > 99.9%
Autonomous	Horizontal: 1.0 m RMS Vertical: 1.5 m RMS
SBAS	Horizontal: 0.50 m RMS Vertical: 0.85 m RMS
Code differential	Horizontal: 0.25 m + 1 ppm RMS Vertical: 0.50 m + 1 ppm RMSs
Time to first fix [3]	Cold start: < 45 s Warm start: < 30 s Signal re-acquisition: < 2 s
Hardware	
Size (L x W x H)	162 mm x 120 mm x 53 mm (6.4 in x 4.7 in x 2.1 in)
Weight	≤ 1.0 kg (35.3 oz)
Environment	Operating: -40 °C to +75 °C (-40 °F to +167 °F)
Humidity	100%
Ingress protection	IP67 waterproof and dustproof
Shock	Survive a 1.2m drop in hard ground
Certifications	
CE; FCC Part 15 (class B Device), MIL-STD-810G, Method 514.7	

Communications	
1 x Ethernet port	Network protocols supported > HTTP/HTTPs (WebUI) > NTP Server > NMEA, GSOF, CMR etc over TCP/IP or UDP > NTripCaster, NTripServer, NTripClient
2 x RS232 ports	Up to 460,800 bps
1 x 1PPS	3.3V TTL level positive slope pulse 8ms pulse wide and 20ns latency
Control software	HTML web browser, Internet Explorer, Firefox, Safari, Opera, Google Chrome
Web user interface	Allows remote configuration, data retrieval and firmware updates, setup of multiple streaming/monitoring ports
Data Formats	
Reference outputs/inputs	CMR, CMR+, sCMRx, RTCM 2.x, RTCM 3.x
Navigation outputs	ASCII: NMEA-0183 Binary: Trimble GSOF
Observation output	RT17, RT27
Maximum position update rate	50 Hz output standard
Electrical	
Power consumption	2.7 W (depending on user settings)
External power input	9 V DC to 36 V DC

*All specifications are subject to change without notice.
(1) Subject to availability of BDS ICD and Galileo commercial service definition. B1C will be supported by V5.37 or higher firmware and B2A is optional. GLONASS L3 and Galileo E6 will be provided through future firmware upgrade.
(2) Accuracy and reliability are determined under open sky, free of multipaths, optimal GNSS geometry and atmospheric condition. Performances assume minimum of 5 satellites, follow up of recommended general GPS practices. (3) Typical observed values.