



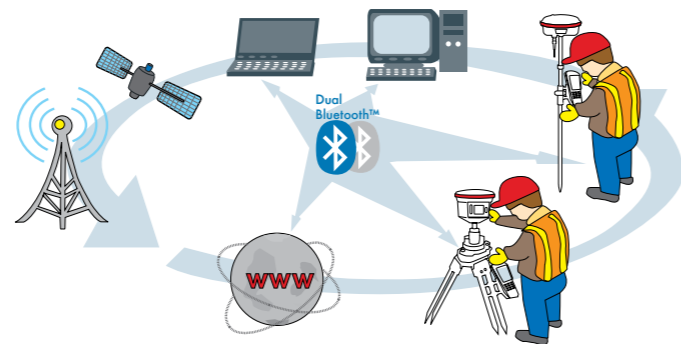
KRONOS 200 M

INTRODUCING THE **NEWLY** UPGRADED HORIZON KRONOS 200 M

With the core board based on proven technology, the KRONOS 200 is able to excel in terms of accuracy, precision, and consistency during operation. Its channel capacity caters for multi-constellational GNSS integration, with alignments to the GPS, GLONASS, GALILEO and COMPASS networks, and reserve channels for other future satellite networks.

The KRONOS 200 product features:

1. Built using Trimble Maxwell 6 technology
2. Dual Bluetooth™ technology
3. RTK capability
4. High speed and stable GPRS connection to CORS network
5. Communication and integration now possible via GSM mobile networks. UHF data link technology
7. Low-elevation tracking technology
8. On-board multipath mitigation
9. K-Link and Post processing software included. Optional software integration with Carlson SurvCE and SurvGNSS



KRONOS 200 M TECHNICAL SPECIFICATIONS GNSS MODULE SPECIFICATIONS:

| | | |
|---|--|--|
| Internal Memory | 4G (15 static days with frequency of 1 Hz) | |
| Number of Channels | 220 | |
| Satellite signals tracked | GPS: | Simultaneous L1 C/A, L2E, L2C, L5 |
| | GLONASS: | Simultaneous L1 C/A, L1 P, L2 C/A (GLONASS M Only), L2 P |
| | COMPASS | Simultaneous B1, B2 |
| | GALILEO | Simultaneous L1 BOC, E5A, E5B, E5AltBOC |
| | QZSS: | L1 C/A, L1 SAI1E, L2C, L5 |
| | SBAS: | Simultaneous L1 C/A, L5 |
| | GIOVE-A: | Simultaneous L1 BOC, E5A, E5B, E5AltBOC1 |
| GIOVE-B: | Simultaneous L1 CBOC, E5A, E5B, E5AltBOC1 | |
| Initialization time: | <10 sec | |
| Signal recapture: | 1 sec | |
| RTK signal initialization | 20 sec | |
| Up to 50 Hz raw measurement & position outputs. | | |
| Very low noise GNSS carrier phase measurements with <1 mm precision in a 1 Hz bandwidth | | |
| Proven low elevation tracking technology. | | |
| Mother board | | |
| GSM module The GSM board mount a SIMENS MC75i unit for GSM/GPRS communication. | | |
| This module supports | Single band operation at 800 MHz, Dual band operation at 900 MHz and 1800 MHz, Tri-band operation at 800 MHz, 900 MHz, 1800 MHz. | |
| Packet data service of GPRS | CLASS 10 | |
| Maximum rate of transmission 85.6 kbit/s. | | |
| Embedded TCP/IP protocol suite that supports multiple links and provides ACK answer and large-capacity cache. | | |
| Connection devices | | |
| Connectors I/O: 9-pins serial port (baud rate up to 115.200kbps) and 5-pins LEMO interfaces. | | |
| Multicable with USB interface for connecting with PC. | | |
| 2.4GHz Bluetooth device class II | Maximum range is 50m. | |
| Internal Radio: | | |
| 3 frequency range option (Emit or Receive) | 410-430MHZ, 430-450MHZ. 450-470MHZ | |
| GSM/GPRS Modem | | |
| GSM/GPRS data modem maximum range | 70km. | |
| External radio: | | |
| PDL radio, emitting power and maximum range depending on model | Maximum range 22km. | |
| Serial protocols | | |
| Reference outputs | CMR+, CMRx, RTCM 2.1, RTCM 2.3, RTCM 3.0, RTCM 3.1. | |
| Navigation outputs: | ASCII (NMEA-0183 GSV), AVR, RMC, HDT, VGK, VHD, ROT, GKG, GSA, ZDA, VTG, GST, PJT, PJK, BPQ, GLL, GRS, GBS, GSOE. | |
| External cell phone support | RTK and VRS operation (optional). | |
| Receiver accuracy | | |
| Static horizontal accuracy | 3mm ± 1ppm (RMS). | |
| Static vertical accuracy | 5mm ± 1ppm (RMS). | |
| Fixed RTK horizontal accuracy | 8mm ± 1ppm (RMS). | |
| Fixed RTK vertical accuracy | 15mm ± 1ppm (RMS). | |
| DGPS accuracy | 0.25m + 1ppm Horizontal | |
| Stand Alone RTK positioning accuracy | 1.5m (CEP). | |
| SBAS accuracy | 0.5m Horizontal, 0.85m Vertical | |
| Power Supply (9 to a 15V DC external power input with over-voltage) | | |
| Voltage: | 7.2 V. | |
| Working time in static mode: | Typically 6 hours. | |
| Working time in RTK rover mode: | Typically 4 hours. | |
| Charge Time | Typically 7 hours. | |
| Power consumption | < 3.8 W. | |
| Remaining time with battery light blinking: | 1 hour. | |
| Physical specification: | | |
| Size | Height 96mm x Diameter 186mm. 59mm from the center of the rubber loop to the bottom. | |
| Weight | 1.2 Kg with internal battery, radio standard UHF antenna. | |
| Operational temperature | - 25°C to 60°C (-13°F to 140°F) | |
| Storage temperature | - 55°C to 85°C (-67°F to 185°F) | |
| Waterproofing | Protected from temporary immersion to depth of 1 meter and from 100% humidity and dustproof. | |
| Shock resistance | Designed to survive a 2m pole drop on the concrete and has vibration resistance. | |