

PowerRTNU

Real Time Navigation Unit for Orca, Gator II, and Spectra Systems

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The PowerRTNU, used with ION Concept Systems Orca, Gator II & Spectra command and control systems, is navigation hardware that interfaces with onboard and in-water systems. VxWorks operating system runs on each of the proven off-the-shelf VME-based CPU boards which interface to vessel sensors and systems via ION Concept Systems designed and manufactured VME Transition Modules [VTMs]. Mission critical application and interface code is developed in-house to run on VxWorks. A more rugged lower capacity RTNU variant, the PowerRTN μ , is also available.



MAIN FEATURES OF PowerRTNU

- 7 Slot expandable VME64x chassis for 19" rack or desktop mounting
- 2 PowerPC VME Single Board Computers each running VxWorks RTOS on 1.5 GHz processors
- 10/100/1000BaseT auto-negotiate speed select external Ethernet network (connection to vessel navigation network) + secondary private Ethernet network (e.g. to Gun Controller)
- 10/100/1000BaseT internal, private Ethernet network
- Interfacing to ~ 250 external sensors and headers
- 15 RS232 Serial Ports - 7 ports also selectable for RS422/RS485/NMEA 0183
- 12 Output Triggers – selectable TTL Active HI/LO & Relay NO/NC
- 6 Input Triggers - selectable Active HI/LO
- 1PPS signal available as raw 10 uSec +ve going pulse or switchable on 3 Output Triggers as 100 mSec +ve going pulse
- GPS Clock delivering accurate timing and standalone GPS position to initiate navigation calculation
- GPS Clock 'holdover' mode keeps good time for approximately 24 hours during GPS signal outage
- All input and output connectors on Rear Panel
- Universal Input Power Supply
- DC Power LED indication, LAN activity & CPU activity/status visible through Front Panel
- VTMs contain serial, digital, GPS and other interface and signal conditioning circuitry
- Standard PowerRTNU can be upgraded to 23 serial ports by adding a VME & a VTM board
- PowerRTNU is also available with 7 serial ports, which can be upgraded to 15 and 23 serial ports
- RoHS Compliant



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Dimensions & Power

Dimensions	480mm x 500mm x 180mm (4U High)
Weight	14 Kg
Power Supply	Universal Input 90 - 255V @ 47-63 Hz
Power Dissipation	Maximum 400W (< 1.5A @ 220V AC, <3.0A@ 110V AC)

Environmental

Operating Temperature	0 °C to + 50 °C, Forced Air Cooling
Storage Temperature	-40 °C to +80 °C
Operating Humidity (NC)*	5% to 85%
Storage Humidity (NC)*	5% to 95%
*Non-condensing	

EMC Compliance and Electrical Safety

Electromagnetic Compatibility, Generic Emission Standard Part 6-4	EN 61000-6-4 : 2001
Electromagnetic Compatibility, Generic Immunity Standard Part 6-2	EN 61000-6-2 : 2001
Electrical Safety Assessment, Low Voltage directive Testing LVDT	EN 60950: 2000