

Features

- Two Ethernet ports. Six USB ports; six optional serial ports
- 16GB flash drive, with an optional disk bay
- Dual hot-swap power supplies
- Meets or exceeds IEC 61850 and IEEE 1613 specifications for electric power substations
- Low power consumption 1.6 GHz Intel® Atom™ processor, 512KB L2 cache, 533Mhz FSB



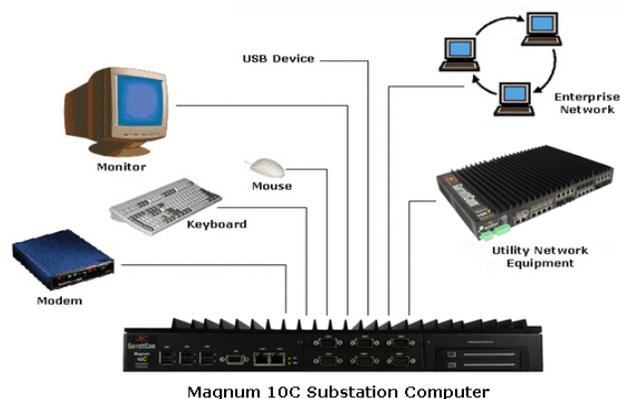
Mission critical applications such as substations, water treatment plants, transportation and public-safety as well as many others require constant monitoring, security, management and data collection to ensure that all is well. A substation-hardened computer allows the monitoring, surveillance and other critical logic to be embedded into rich applications running on Linux or Windows™ environments. The Magnum 10C allows the deployment of such applications without the worry or concern that environmental extremities will cause reliability issues. The Magnum 10C offers a maintenance free, low-power, high-reliability, fan-free, silent computing platform to support these applications. By integrating power surge and other resiliency protections in hardware, the Magnum 10C provides hardened and isolated standard interfaces such as USB 2.0 as well as Serial IO ports. By resisting dust, dirt, power-surge and temperature uncontrolled environments, the Magnum 10C allows quick integration of industry standard sensors or other custom interfaces to complete the solution.

As power utilities embrace Smart Grid standards, loss of data or control is unacceptable. Smart Grid capabilities depend on the resilient infrastructures. Not only must the electricity continue to flow, but also data and control commands must also flow to manage, monitor and control the load and distribution on the grid. The 10C can provide essential distributed command and control structure by distributing the critical applications within critical points of the Smart Grid.



GarrettCom®

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Magnum 10C Substation Computer

CPU: on board Intel® Atom™ N270 1.6GHz /512KB L2 Cache with 533MHz FSB

SYSTEM CHIPSET: Intel 945GSE + ICH7SM

BIOS: AMI BIOS , SPI 8Mbit Flash ROM

SYSTEM MEMORY: 2 GB 200 pin 533/400 MHz DDR2 SDRAM SODIMM – 2GB maximum memory

ETHERNET: Two 10/100/1000 RJ45 ports

EXTERNAL I/O: Six USB 2.0, VGA port for external monitor, optional six DB9 male serial (COM) ports, optional SATA 1.5Gbps disk drive bay for up to two disks

LED INDICATORS: Green (power indicator)

OPERATING SYSTEM – none - user-installed;
Tested with Windows 7, Windows XP/XPE; Linux--OpenSUSE, Ubuntu, Debian

HOT SWAPPABLE POWER SUPPLY OPTIONS

Magnum 10C may be ordered with hot swappable power supplies.

Up to two of the following supplies may be chosen:

HIGH VOLTAGE (H): 90-250V AC or DC, 50-60Hz, 1A, 85W

LOW VOLTAGE (L): 22-60V DC, 4.5A, 81 W

POWER CONSUMPTION: less than 20 Watts

COOLING METHOD: Convection Cooled, optional fan

OPERATING TEMPERATURE: From -40°F to 185°F (-40°C to 85°C) with compact flash memory card - temperature rating will lower with customer-installed disk bay. The temperature rating of the installed disk will determine the temperature rating of the Magnum 10C.

AMBIENT RELATIVE HUMIDITY: 5% to 95% (non-condensing)

WEIGHT: 5 Kg (11 lb)

Ordering Information

10C-HSPHH-FTF

Magnum 10C Substation Computer with 16GB CF drive. Includes two Ethernet 10/100/1000 ports, six USB ports, one VGA port for external monitor. Two GB memory. Two H PS slots for hot-swap power supplies (order power supplies separately). Alarm contacts for temperature. Heavy-duty case with thermal fins for maximum convection cooling efficiency in a rack-mount setting. Includes built-in cooling fan. Recommend to add with disk bays and disk drives.

10C-HSPHH-TF

As above but without fans - convection cooled

10C-HSPHH-F

As above but with fans and no thermal fins; Recommend to add with disk bays and disk drives

10C-HSPHH

As above, but with neither thermal fins nor fans

10C-HSPHL-FTF

As 10C-HSPHH-FTF but with one "H" and one "L" power supply slot

10C-HSPHL-TF

As above but without fans - convection cooled

10C-HSPHL-F

As above but with fans and no thermal fins; Recommend to add with disk bays and disk drives

10C-HSPHL

As above but with neither thermal fins nor fans

10C-HSPLL-FTF

As 10C-HSPHH-FTF but with two "L" power supply slots

10C-HSPLL-TF

As above but without fans - convection cooled

10C-HSPLL-F

As above but with fans and no thermal fins; Recommend to add with disk bays and disk drives

10C-HSPLL

As above but with neither thermal fins nor fans

TNC-HSPM-H

AC/DC removable power supply module, high voltage (90-250VAC/DC) - for Magnum 10C

TNC-HSPM-L

DC Removable power supply module, low voltage (18-60VDC) for Magnum 10C

10C-HH

As above but with two fixed internal AC / DC power supply modules, high voltage (90-250VAC/DC)

10C-HHF

As above but with two fixed internal AC / DC power supply modules, high voltage (90-250VAC/DC); Includes built-in cooling fan

10C-HHFTF

As above but with two fixed internal AC / DC power supply modules, high voltage (90-250VAC/DC); Includes built-in cooling fan; thermal fins for maximum heat dissipation.

TNC-PSBLNK

Blank cover for one hot-swap power supply slot.

10C-S6-DB9

Optional six serial port module with male DB-9 connectors for Magnum 10C

10C-DM

Optional disk mount bay option - to insert customer-supplied 2.5" laptop SATA-2 drive
Adding a disk bay reduces the overall operating temperature rating.
This will depend on the type of hard disk drives installed in the drive bays.

DIMENSION: 17.5" W x 11" D x 2.6" H

MOUNTING: Front-position rack mount brackets included - 1.5 RU

RELAY CONTACTS FOR ALARMS

HW alarms are normally open until the unit is powered and software is started. Under normal operation they are closed.

Form C HW alarm1 will be opened with any power supplies loss.

Form C HW alarm2 will be opened with temperature failure (at TEMP>95°C WITH 10C HYSTERESIS)

AGENCY APPROVALS AND STANDARDS COMPLIANCE:

SAFETY: Compliant with UL 60950, CSA, cUL, CE, EN60950

EMISSIONS: EN55022-2006, CISPR 22:2005, Emission meets FCC Part 15 Subpart B, ICES 003, Class A

INDUSTRIAL: IEEE 1613 Class 2 Environmental Standard for Electric Power Substations

IMMUNITY: IEC 61850-3 EMC & Operating Conditions Class C for Power Substations; EN55024, EN61000-6-2, EN61000-4-2 (ESD), EN61000-4-3 (RF), EN61000-4-4 (EFT), EN61000-4-5 (SURGE), EN61000-4-6 (CRF), EN61000-4-11 (VDI)

COMPLIANCE: RoHS Compliant

WARRANTY: One Year

Made in USA

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