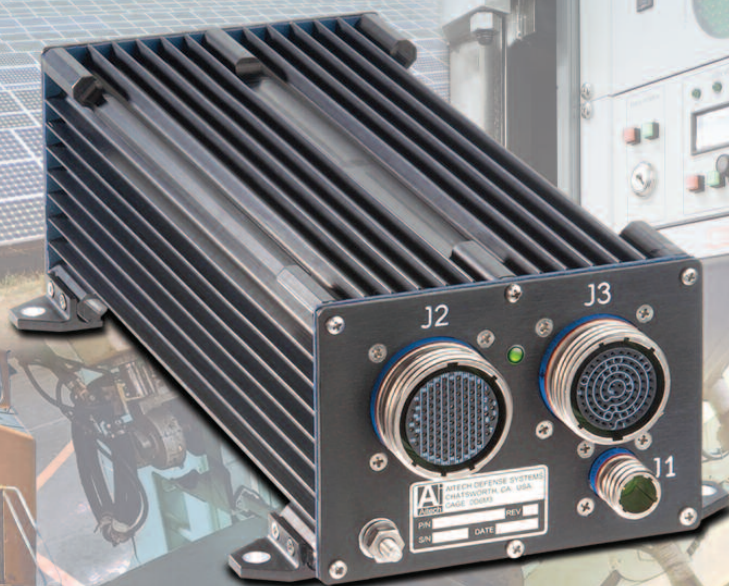




NightHawk ICU™

Industrial Control Unit for
Severe Environment, High Reliability
Industrial Applications



Leveraging a Unique Capability.

Aitech has been designing and building computer boards and sub-systems for the world's toughest applications since 1983. The company is renowned in the military/aerospace markets for the exceptionally high performance and high reliability of its products and support services.

The Aitech NightHawk Fanless ICU Industrial Control Unit retains the unrivaled reliability of Aitech's military/aerospace products with the flexibility and cost-effectiveness required by today's severe environment industrial applications. The NightHawk offers a truly unique combination of product quality, reliability, performance, versatility and efficiency. In every respect, it's the ultimate rugged PC in a box. Now you can leverage true mil/aero levels of performance and reliability for industrial applications and budgets. And it's backed by Aitech's COTS Lifecycle+™ program to ensure our customers are provided long-term protection from component obsolescence that's plaguing the military and industrial markets.

For the Toughest Applications.

The performance characteristics and exceptional configuration flexibility of the NightHawk ICU make it ideal for a vast range of industrial applications requiring high reliability. Applications for the NightHawk ICU are as limitless as our customers' imagination and include but are not limited to:

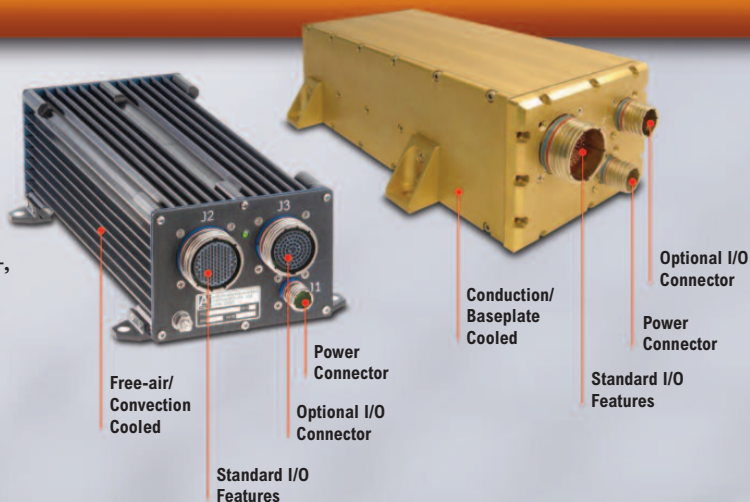
- Factory automation and robotic controls
- Open- and closed-loop process and machine control
- Industrial process visualization and task displays
- Remote and intelligent traffic and transportation control and monitoring
- Locomotive and fully-automated MPV controls
- Remote railway freight and automated warehouse RFID monitoring
- Commercial and heavy equipment GPS-based asset tracking and monitoring
- Data communications gateways and/or data protocol conversion
- Heavy equipment and condition-based maintenance vehicle diagnostics
- Chemical engineering and process control
- Power/heat generation and waste management
- Remote power grid and/or control station monitoring
- Remote digital public information signage
- Mining and well-head pressure monitoring
- Solar energy generation and control
- And more...



Modular with Exceptional Flexibility.

The Nighthawk can be quickly and effectively tailored and customized to the specific needs of your industrial application. Configuration choices include:

- Modular and expandable with a wide range of I/O (see below) with built-in internal resources added via industry standard bus interfaces, including: PMC/XMC, MiniPCI, SATA, MiniPCIe, PC104+, CompactPCI and Compact Flash
- Conduction or free-air convection cooling
- Single or multi-core Intel processor architectures
- Windows (XP Pro), Linux (Red Hat or Fedora Linux with R/T Extensions)
- Windows Embedded, WindRiver VxWorks and GreenHills INTEGRITY
- Ideal for real-time embedded or graphical user interface-based applications
- Consult Aitech for additional configuration options



NightHawk ICU Standard Features

- ✓ 1.6 GHz Intel Atom
- ✓ 2 GB DDR2 Memory
- ✓ 4 to 64 GB Flash SSD
- ✓ Removable CF Drive
- ✓ 2 RS232/422/485 Ports
- ✓ 2 RS232 Ports
- ✓ 6 USB Ports
- ✓ 2 GigE Ports
- ✓ 1 Parallel/LPT Port
- ✓ 1 PS2 Mouse Port
- ✓ 1 PS2 Kbd Port
- ✓ 1 SATA Port
- ✓ 1 XGA Video Port
- ✓ 1 TV-SD Port
- ✓ 1 Stereo Audio Out
- ✓ 1 Stereo Audio Input
- ✓ 1 Stereo MIC Input

Optional Functionality*

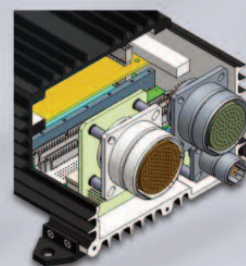
Wireless WAN/WiFi
Bluetooth
Fiberoptic LAN
Digital I/O
Analog I/O
ARINC 429/708A
Industrial 1553
Video Encoder
Servo Motor Controller
Large Capacity SSD
RS232/422/485 Serial
DVI-D Output
Hi Def Audio
CAN Interface
GPS Receiver
3G Wireless

WAN/WiFi Antenna



Front Panel Interfaces.

All standard feature I/O is brought out and made available on the J2 (left) circular connector. Optional I/O is made available via wiring harness (or Flexcable) on the J3 (right) connector.



Front Panel Power/BIT LED.

An environmentally sealed, multi-color LED provides the convenience of a combined power-up POST/Built-In Test (BIT) data read-out and power monitor.



* Consult Aitech for additional functionality options, the quantity of I/O and connector location/availability.

I/O Options.

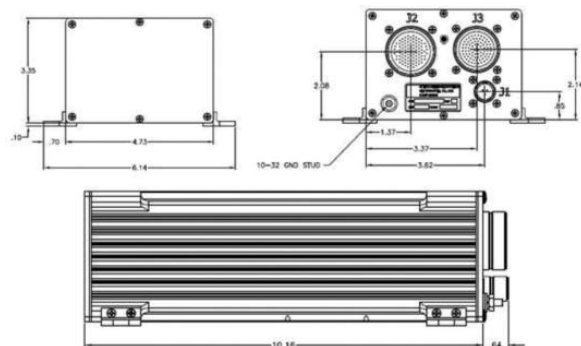
Optional powered I/O harness and break-out cable set.

- Universal power supply included
 - Single phase, 90-264 VAC, 50-60 Hz
 - 24 VDC, 24 W output
- Industrial circular connectors to standard, commercial PC-based I/O connectors

This harness and cable set saves countless hours of internal engineering and technician time required for the design, procurement and assembling of I/O harnessing as well as weeks of connector/harnessing order lead-times.



Mechanical Specifications.



Technical Specifications.

The NightHawk ICU provides *all* these features as standard right out of the box in addition to a bootable O/S recovery disk/USB Flash drive.

- Processor: Intel N270 architecture at 1.6 GHz (lower speeds supported)
- Memory: Up to 2 GB DDR2 Memory
- Mass memory (internal): 4 to 64 GB Flash SSD (up to 250 GB optional)
- Operational temperature: -40°C (cold start) to +71°C
- Power input: 18-36 VDC input*, 20 W (typ) with reverse polarity protection
- ICU SoftStart™: Controlled power start ups reduce supply rail spikes
- Front panel tri-color power/BIT LED
- External finish: T6061-T6 aluminum alloy with hard black anodized finish

* Other, lower voltage inputs are optional, consult Aitech on availability.