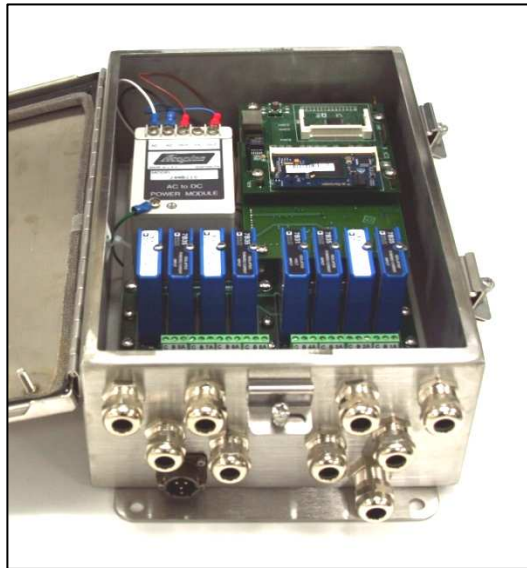


# ICHM® Intelligent Component Health Monitor

Experts in Component Health and Condition Base Monitoring

## Key Features

- **Diagnostics at the machine**
  - Data manipulation
  - Machine state analysis
  - Bandwidth mitigation
  - Relevant, Quality Data - Sensor to Enterprise
- **Web Based Server**
  - IP Addressable
  - Ethernet connectivity
  - Integration with local digital data and control
- **Sensor Types**
  - Dynamic (vibration)
  - Process/Static (temp, press, flow, etc)
  - (8) channels for onboard data acquisition



## Condition Based Monitoring

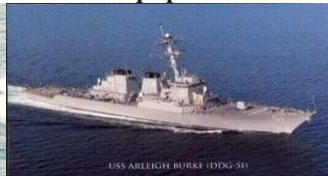
- Eliminate the need to collect data manually
- Increase asset reliability and availability
- Equipment Status/Alerts/Alarms
  - Maintainer - Machine Condition
  - Operator - Machine Performance
  - Management - Readiness Planning
- O & M optimized planning with knowledge of actual equipment conditions
- Analyze data to increase critical asset performance and production

## Military Applications

### Combatant Craft



### HM&E Equipment



### UxV



## Commercial/Industrial Applications:

**Aviation & Aerospace**

**Building Automation**

**Industrial Automation**

**Industrial Machinery**

**Manufacturing**

**Petro Chemical**

**Power Generation**

**Process Control**

**Transportation**

## Technical Specifications:

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- **Web Based Configuration and GUI**
  - ICHM web-based server to network
  - User configurable data acquisition and analysis with web based operator interface
- **Equipment Status and Abnormality Alerts**
  - Maintainer—Machine Condition
  - Operator—Machine Performance
  - Management—Readiness Planning
- **Wired Interface**
  - Utilizes wired Ethernet for communications and data transport.
- **ISO 13374 Data Processing and Information**
  - MIMOSA compliant and OSA-CBM
  - Data acquisition, data manipulation, state analysis
- **Communications Protocol**
  - Net TCP is the communications protocol used by the ICHM to seamlessly interface with decision support software (i.e. ICAS, MELS, EDS Center)
  - XML Web Service API
- **Processor Specifications**

<p>CPU:</p> <p>PXA270 (520MHz)</p>	<p>Memory:</p> <p>64MB SDRAM (32 Bit) 32MB FLASH (32 Bit)</p>
<p>Interfaces:</p> <p>32Bit External BUS CompactFlash/PCMCIA 100MBit Ethernet Boot serial port Telnet serial port I<sup>2</sup>C Reset</p>	<p>Software:</p> <p>Pre-installed Embedded Linux (Kernel 2.4)</p> <p>Size:</p> <p>67.6 x 36.7 x 5.2 mm</p> <p>Security:</p> <p>Web Server configuration protected with username and password. SSL used to secure traffic</p>

- **Power Supply Voltage and Power Consumption**
  - Requires 120VAC, 60 Hz, 0.5 Amps converted to 24 VDC
- **Signal Conditioning—7B Input Module Features**
  - Accepts a Wide Range of Process Control and Factory Data Collection Signals: mA, mV, RTDs and Thermocouples
  - Process Current Output Modules 4 - 20 mA & 0 - 20 mA
  - Powered mA Input Module Includes Isolated Power for a Remote Transmitter, Sufficient to Drive a 4 mA to 20 mA Current Loop
  - Bipolar Voltage Input Modules
  - "Hot Swappable" Mix and Match Ability Under Full Power Without Disrupting Field Wiring
  - Operates From a Single +24 V DC Power Supply
  - Provides +1 V to +5 V, 0 V to +10 V and ±10 V Output Options
  - Factory Calibrated to ±0.1% Maximum Accuracy
  - Isolates up to 1500 V rms continuous CMV and 120 V rms Continuous Field Wiring Protection
  - Fully Rated Over the -40°C to +85°C Industrial Temperature Range
  - Packaged in a Compact 2.1-inch x 1.7-inch x 0.6-inch Durable Plastic Package
- **Sampling Frequency**
  - Capable of sampling up to 48 kHz per channel resulting in an effective bandwidth of DC up to 20 kHz.

