

## HCU1500 and HCU400

### Modular Controllers for PathTrak™ System



The HCU Modular Controller provides the communications gateway to and from the Master System Controller (Server PC) and data monitoring equipment. In addition, the HCU provides the housing for PathTrak monitoring modules, memory for data storage, and an on-board processor for intelligent analysis and control of monitored data.

The HCU communicates to the Master System Controller to notify users of system alarms and status. Users can also initiate contact to the HCU through the Master System Controller to interactively control and view monitoring system data. Largely due to the design of the HCU, the PathTrak Performance Monitoring System is an extremely scalable system, maintaining high performance in large deployments.

#### **Modular Platform Provides Scalable Housing**

The HCU housing is an industry standard VME chassis. Each HCU has a specific number of slots available for PathTrak monitoring system modules and cards (i.e., the RPM1000 spectrum analyzer cards). Users are able to construct a system that contains the number and kind of modules to meet their specific needs today, which reduces initial investment costs. Then, as user network architectures grow and needs change, new modules and capability can easily be added.

#### **Intelligence and Data Storage in HCU Improves System Performance**

Each HCU contains a multi-gigabyte hard drive module for storage of monitored performance data and a powerful single board computer module for intelligent analysis. Once the user establishes and downloads monitoring plans to the HCU, the HCU becomes a completely self-managed unit. With so much on-board processing power so close to the monitoring modules, data storage and analysis is much faster, and more extensive intelligence and higher overall system performance is possible.

#### **Local HCU Processing Improves Scalability and Reduces LAN Impact**

Since all data storage and analysis is performed in the HCU, communication to the Master System Controller (Server PC) is only required to communicate system status and alarms. Thus, multiple HCUs deployed in multiple remote sites can all perform at equally high speed and will not be restricted by communication links to a central PC controller. This also minimizes network traffic over a user's LAN or data communications networks. PathTrak does not require a dedicated high bandwidth LAN to monitor peak performance.

#### **Excellent Reliability**

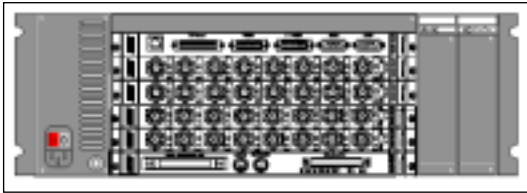
After proper setup, the HCU is a completely self managed stand-alone unit. This means it works independent from the LAN. If the LAN has a temporarily outage, the monitoring process still continues. All local processing power is supported by the on-board computer. Because the computer is a VME-industry type version, the Mean Time Between Failures (MTBF) is much greater than what's expected from standard PC's.

- *Modular design*
- *Scalable and flexible architecture for large and small hub sites*
- *Self-contained data analysis, measurements and storage*
- *Easy to integrate into existing LAN*
- *Very low data bandwidth required*
- *Only one IP address necessary (independent of RPM cards)*
- *One year of data storage; no database management required*
- *Reliable operation*

# Specifications

## HCU400

Width . . . . . 19" rack mountable  
 Height . . . . . 4 rack units (6.968 in, 176.9mm)  
 Weight . . . . . 25 lbs. maximum / 11.5kg  
 Module Capacity . . . . . 4 available slots for module cards  
 Data Storage Capacity . . . . . 2 GB  
 Processor . . . . . Motorola Power PC single board  
 computer CE marked  
 Communication Ports . . . . . Four serial RS232, one 10/100 baseT  
 Ethernet, one parallel port  
 Power Supply . . . . . AC auto-ranging 90-132 VAC  
 180-246VAC at 47-63Hz  
 Max. Operating Temp . . . . . 0-50oC



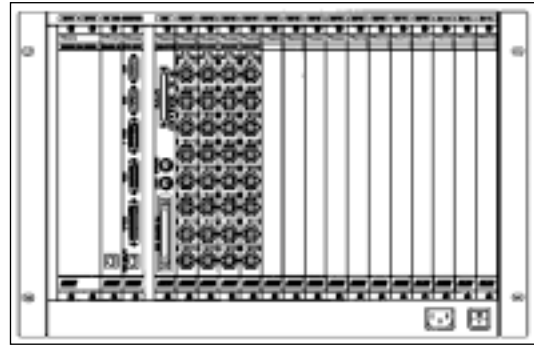
▲ Back view schematic of HCU400 with four RPM1000 modules.



◀ Close up view of the rear of HCU1500 showing 3 RPM1000 modules installed.

## HCU1500

Width . . . . . 19" rack mountable  
 Height . . . . . 7 rack units (12.219 in, 310.4mm)  
 Weight . . . . . 35 lbs. maximum / 16kg  
 Module Capacity . . . . . 15 available slots for module cards  
 Data Storage Capacity . . . . . 4 GB  
 Processor . . . . . Motorola Power PC single board  
 computer CE marked  
 Communication Ports . . . . . Four serial RS232, one 10/100 baseT  
 Ethernet, one parallel port  
 Power Supply . . . . . AC auto-ranging 90-132 VAC  
 180-246VAC at 47-63Hz  
 Max. Operating Temp . . . . . 0-50oC



▲ Back view schematic of HCU1500 with four RPM1000 modules.

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