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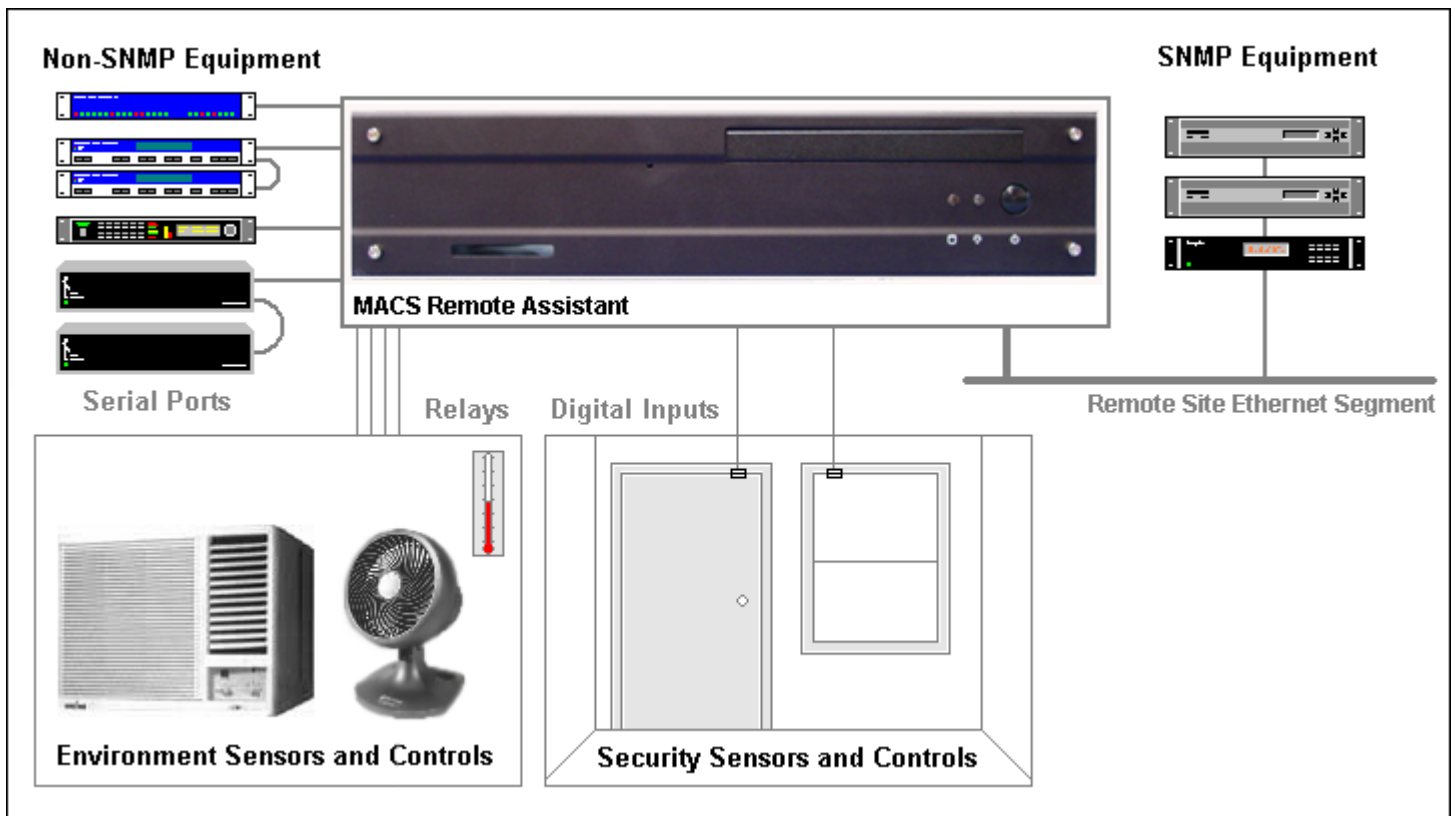
Do you need ...

to monitor geographically distant sites?
to monitor contact closures and operate relays?
to operate other equipment over telephone lines?
remote access to your sites?

Use mini-MACS Remote Assistant
the reliable and cost effective solution to your needs



- Monitors digital inputs from your equipment and environment sensors
- Operates output relays that control your equipment and environment
- Integrates digital inputs and relays into your SNMP management system
- Acts as a router to other equipment in your remote site
- Provides remote access to the equipment connected over serial lines
- Integrates non-SNMP equipment into your SNMP management system
- Allows all on-site equipment to share a single telephone line
- Supports network and dial up remote access



The Problem

As a service provider, you probably have a number of unmanned remote sites, such as satellite downlinks and cable head ends. In these sites, you may have a variety of equipment from different vendors. You may also have a number of sensors to monitor site security and environment.

To provide reliable service to your customers, you need to know the exact operational status of all of your equipment at all times. You also need to monitor the environment and the security of your sites.

In case of equipment failure, power outage, or intrusion into your site, you need reliable and immediate notification.

The Solution

MACS Remote Assistant offers a fully integrated and reliable, yet cost-effective solution to your alarm monitoring and equipment control needs. It monitors digital inputs, controls output relays, and allows you to install optional software components to monitor and control other equipment over serial lines and network connections.

Using optional internal components and external inverters and shaft position encoders, you can even operate heavy industrial machinery and electrical motors, or remotely adjust the position of your remote site antennas.

You can communicate with MACS Remote Assistant using a variety of methods, from telephone lines to Ethernet and wireless networks. The product also acts as a router, thus provid-

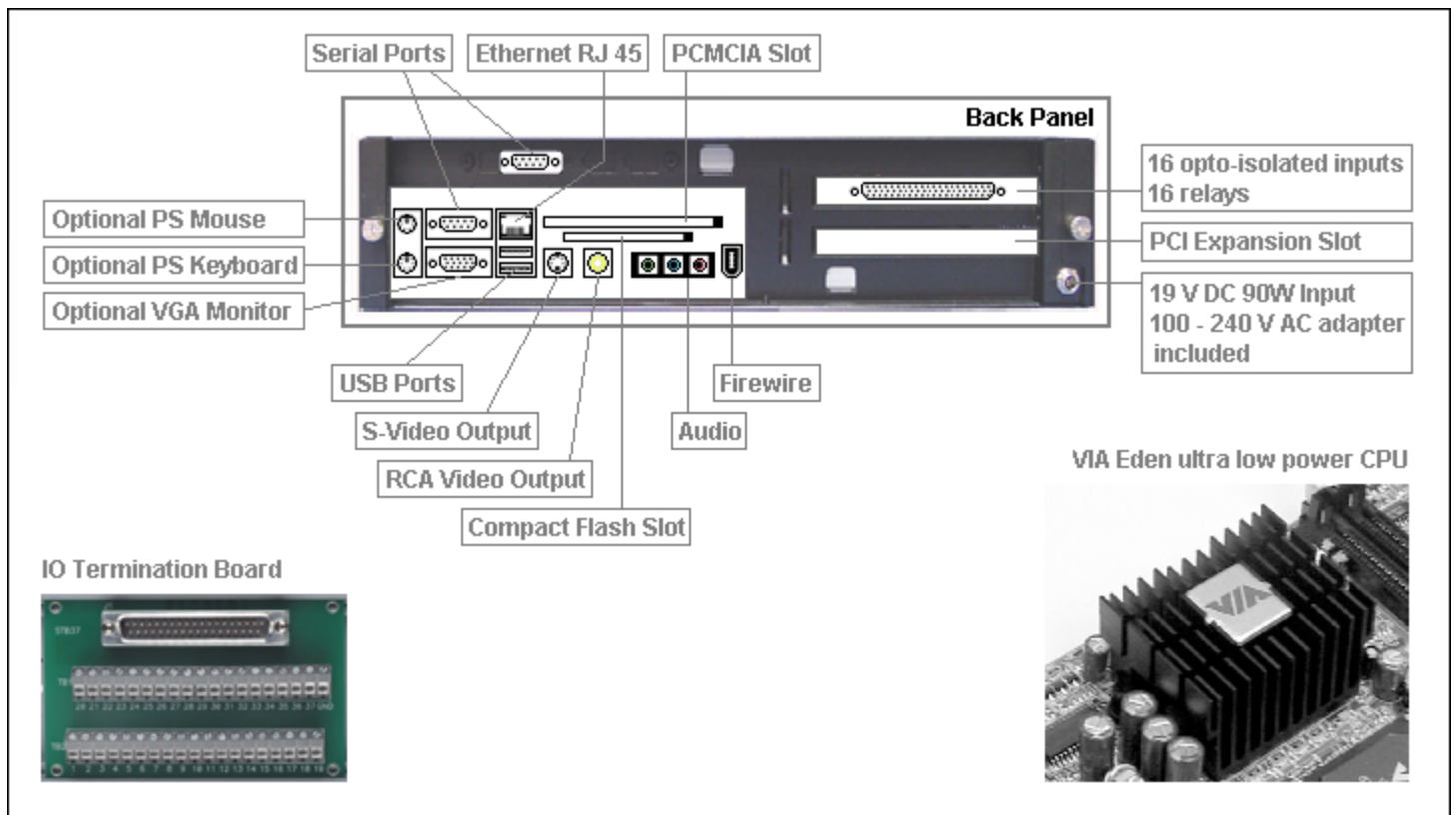
ing network access to the equipment connected to your remote site Ethernet segment. To protect your network the product uses a built-in firewall.

Although rich in features, MACS Remote Assistant is surprisingly small in size. It comes either in a sturdy 12.7" x 10" x 2.7" chassis, or as a 19" x 15" x 1.75" 1U rackmount unit. It operates on 19V DC or 100 - 240 V AC.

The product is fully compatible with our standard MACS software¹ and MACS Site Manager² product. In addition, a built-in SNMP agent allows you to interface MACS Remote Assistant with any SNMP manager of your choice.

¹) **Micus Alarm And Control System (MACS)** is a software package used to configure, control and monitor various pieces of equipment, and to collect and process alarms generated by the equipment. For more information on MACS software, please refer to the related marketing material.

²) **MACS Site Manager** is a computer based system which runs MACS software on a robust rack mounted computer platform, under the industry standard Windows XP operating system. For more information on MACS Site Manager please refer to the related marketing material.



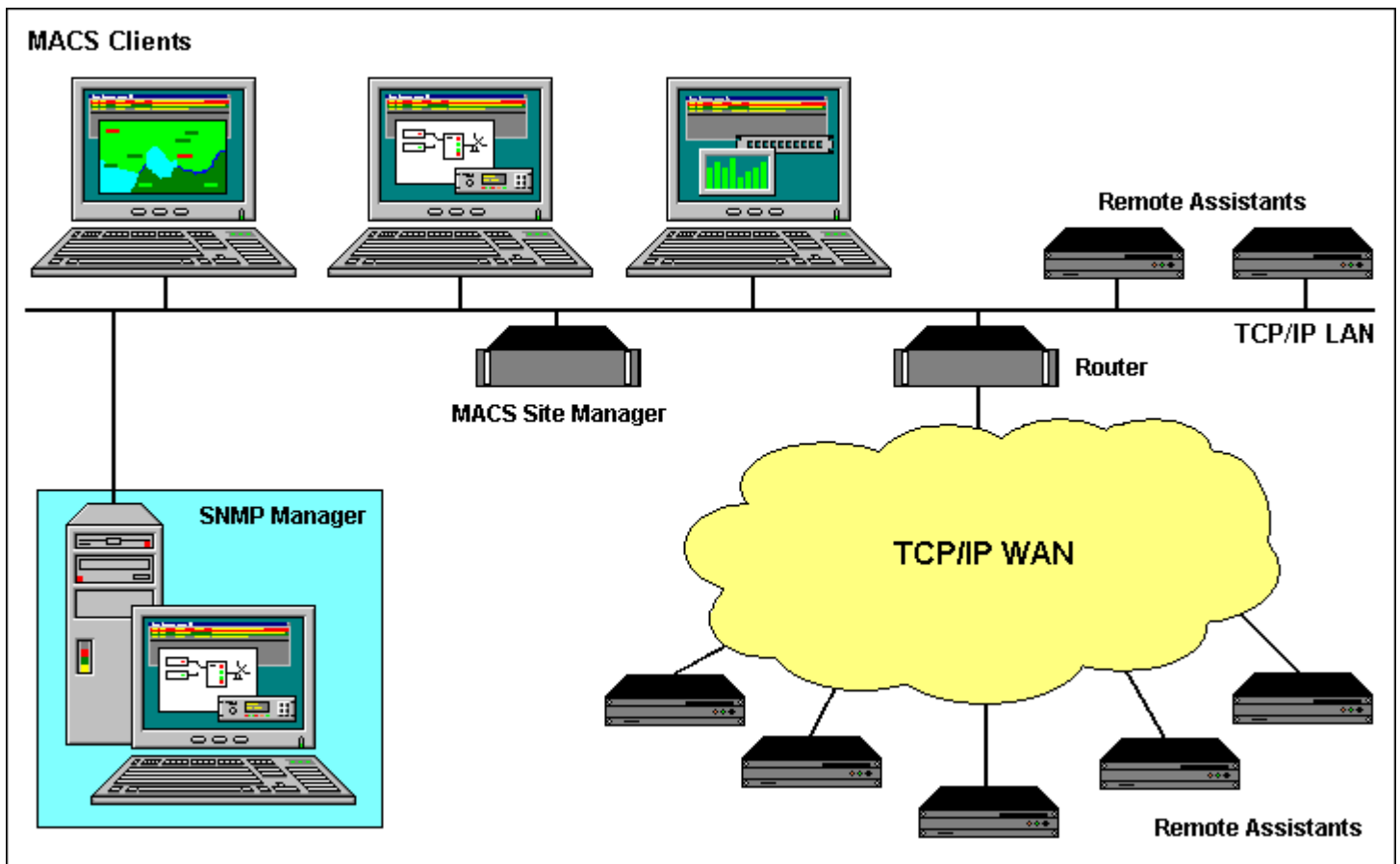
MACS Remote Assistant Standard Features

- Available as standalone or 1U rack mounted unit.
- Operates on 19 V DC or 100 - 240 V AC.
- 16 opto-isolated inputs monitor external dry contacts and environment sensors.
- 16 output relays control external switches.
- Two serial ports can be used to monitor equipment attached via serial lines.
- Four USB ports are available for connecting external peripherals and other USB based devices.
- Fast Ethernet 10/100 NIC port connects to the remote site Ethernet segment.
- Built-in SNMP agent sends SNMP traps and allows other SNMP managers to query the status and operate relays.
- Simple, friendly and intuitive built-in *Graphical User Interface (GUI)* can be used from optional monitor, keyboard and mouse, or via the remote desktop connection.
- Fully compatible with Micus Alarm and Control System (MACS) software and with MACS Site Manager.
- Any standard or custom built MACS software components can be installed or added at later date.
- The software is embedded on a 2 GB compact flash disk.
- One PCI slot, and one PCMCIA card slot are available for installing optional hardware components, such as a modem or additional IO card.

- One compact flash slot, one CD drive bay and one hard disk bay are available for installing optional storage devices.
- S-Video and RCA TV outputs can be used to display custom screens on the large TV monitors.

Optional Components

- Inputs and relays cable.
- Inputs and relays termination board.
- PCI internal modem.
- PCMCIA modem.
- 8 opto-isolated inputs and 8 relays card.
- 16 opto-isolated inputs and 16 relays card.
- 16 relays card.
- Multi-channel analog IO card.
- Incremental position encoder card.
- Up to 1 GB DDR SDRAM memory.
- Internal hard drive.
- CD or DVD drive.
- Floppy drive.
- Faster CPU with fan.
- Monitor, keyboard and mouse.



Connectivity

MACS remote assistants are capable of sending their event reports and SNMP traps to any number of remote locations, via a TCP/IP network. At the same time, MACS remote assistants listen to the service requests that may come from any workstation on the TCP/IP network. Thus, they can be easily used to monitor a single remote site, as integrated into large networks, with many remote sites.

The user interface clients for the MACS remote assistants are computer programs that can run on the remote assistant itself, or on any Windows workstation on the TCP/IP LAN or WAN network. Clients can use a variety of possible connections to communicate with their remote assistants: LAN connections, RAS connections via modems or ISDN, and WAN connections.

Custom Applications

MACS Remote Assistant highly modular hardware and software comprise an ideal platform for the compact, powerful and reliable custom-built solutions. If you need a networking or computing device that will precisely meet your requirements, please contact us via our web site at www.micus.ca.

Specifications

- Non-polarized optically isolated inputs, 5 - 24V AC/DC, optical isolators rated at 500V
- Electromechanical relays 1A@24V DC, 60 V DC max, 0.5A@125V AC carry current, 10 million operations minimum
- VIA Eden low power processor
- 256 DDR RAM expandable to 1 GB
- Built-in compact flash disk 2 GB
- Front panel: power switch, power and activity LEDs, optional CD/DVD drive, optional front panel Compact Flash slot
- Back panel: 1 CardBus type 1 and type 2 slot, 1 Compact Flash slot, 1 RJ-45 LAN, PS2 mouse, PS2 keyboard, 2 serial ports, 2 USB ports, VGA monitor, RCA TV signal output, S-Video output, 1394 firewire port, line-in, line-out and microphone
- One PCI expansion slot
- Internal power supply 19V@4.7A DC, external adapter 100 - 240V AC
- 12.7" x 10" x 2.7" standalone chassis, or 19" x 15" x 1.75" 1U rackmount unit