Audemat’s IP2CHOICE is a modular system for the management and monitoring of remote equipment. It can be configured to connect with any equipment at a remote site through serial ports, status or metering inputs, commands (relays) or IP and provides support for up to 40 metering inputs, up to 128 status inputs and up to 64 command relays. All devices and sensors linked to the IP2CHOICE can then be monitored and controlled locally and remotely via a variety of communications modes (ADSL, LAN, 3G, GPRS, GSM, PSTN...).

**POWERFUL PERFORMANCE**

- Extensive Control & monitoring of equipment at a remote site
- Continuous monitoring and logging of status, values or levels
- Flexible configuration to handle complicated sites

**POWERFUL CONTROL**

- Triggering of automatic actions on out of tolerance conditions or on set schedules
- Alarm Notifications via Email, SNMP and optional Voice/DTMF Interface
- ScriptEasy software for automatic actions and remote control & MasterView software for end-user views of data and control (see page 17)
- Communicate and control external equipment using SNMP protocols
  - Easily manage and communicate with serial equipment using EasyLink (see page 18) or tunneling
  - Fully compatible with Audemat's Broadcast Manager (see page 23)

**POWERFUL SAVINGS**

- Minimize Downtime with automatic actions on failure
- Optimize maintenance with 24/7 monitoring and control
- Customize - buy only as many I/O as you need
Relio ‘Thinks’ Like an Engineer
Systems Integrator Finds Audemat Useful for Installations and Refits

**USER REPORT**

**BY JEFF ROSENBERG**
President and Chief Engineer
Modulation Magic

**SOUTHBOROUGH, MASS. —** Modulation Magic is a systems integrator based in Southborough, Mass. We install a large number of turnkey systems incorporating studios and transmitter sites for our broadcast clients. Increasingly in recent months, we have been installing Audemat’s Relio facility management system to enable full supervision and monitoring of the complete installation.

As well as installing Relio as part of new transmitter rollouts, we often are called in to replace existing remote control systems. We have evaluated a number of solutions from a range of established suppliers and find that the Audemat Relio is the best choice. It provides extensive monitoring capabilities; it is versatile and easy for broadcast engineers and operators of all abilities to use.

**KILLER APP**

Hardware for the IP-based Relio is a rackmount unit that offers a large number of inputs and outputs, making it suitable for all sizes of current installations and flexible should the need to add new equipment arise.

In addition to the 64 status inputs, 24 metering inputs and 64 command outputs, there are serial ports, USB ports and two 100 Mbps network ports. Thanks to the SCSI (48- and 64-pin) connectors, we can offer high-density pin-outs from the connection panels within only 1 RU of rack space.

The Killer application of Relio is the Scripteasy software suite, a powerful graphical application that has simplified the configuration and control of the most complex site we have installed. This puts the Relio head and shoulders above the competition.

There are two elements to Scripteasy software: the Designer module, which enables users to program conditions and outcomes using drag-and-drop functionality; and the customizable Masterview Module, a dashboard view of everything that is being monitored at the remote site.

With the Script Designer, we use common logic based around status, metering inputs and mathematical expressions to create detailed scripts that produce a desired output such as an alarm or command. In this way, we can deliver a comprehensive service to our customers by means of preconfigured scripts that help protect the site from issues that could cause an off-air situation.

We program the system to prevent outages in circumstances such as switching from primary to backup transmitters and prescribe the steps to be taken (such as switching STL and audio paths) if one of our established error conditions are met.

The Masterview application is customized and presented to our client as a tailored, at-a-glance view of their site where alarms and potential issues are identified and dealt with.

Alarms and status can be sent to the relevant engineer via e-mail, SMS, SNMP traps or even a voice message to ensure that immediate action can be taken if necessary.

We have found that the Relio system is easy and quick to install. Our customers are happy that little space is required for the system; the optional breakout boards can be mounted right in the transmitter if desired.

As Relio is IP-based, it can communicate with an extensive range of product types. For legacy equipment that relies on serial or other protocols, a prewritten API can be supplied (Scripteasy Easylink) to allow connection to the equipment and access to a huge number of parameters that cannot be accessed by traditional I/O connections.

Audemat products are regularly an integral part of our designs and Relio often is installed alongside the Goldeneagles range of signal monitoring units and, for larger installations, the Broadcast Manager, which aggregates the alarms and status of an extensive network into a centralized management system that can be monitored from a single seat.

We have many satisfied customers running the system. I believe this is largely due to its flexibility and to the power of the Scripteasy software. As a “smart” approach to facility management, the Relio with Scripteasy does not just process contact closures, it performs processes; and you can program it to think just like an engineer.

*For information, contact Tony Peterle at Audemat WorldCast Systems Inc in Florida at (305) 249-3110 or visit www.audemat.com*
The Audemat Mini Control Silver is a deceptively compact system for management & monitoring of remote equipment. It offers a wealth of features at a very affordable price.

The unit can be configured to connect with any equipment at a remote site through serial ports, status or metering inputs, commands (relays) or IP. Despite its compact size, the Mini Control Silver offers up to 8 analog inputs, 8 digital inputs and 8 command relay outputs.

**POWERFUL PERFORMANCE**
- Mini format: compact and light, the Mini Control Silver can fit anywhere (DIN rail mountable)
- Control and monitoring of any equipment at a remote site through GPIOs, ModBUS, SNMP, CAN / USB / Serial port, DTMF/Voice commands...
- Sends relevant automatic or preset notifications via Email, SNMP and optional Voice/DTMF Interface

**POWERFUL CONTROL**
- Access the site from anywhere via an embedded web server
- Comprehensive event and action management using Audemat’s ScriptEasy, the smartest facility management software suite on the market.
- Fully compatible with Audemat’s Broadcast Manager as well as any SNMP Manager with alarm centralization, statistics, filters, notification forwarding

**POWERFUL SAVINGS**
- Audio backup for transmitter sites prevents off-air disasters
- Prevents audio interruption in case of unexpected issues

**Comparative table**

<table>
<thead>
<tr>
<th>RELIO</th>
<th>IP2CHOICE</th>
<th>Mini Control Silver</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Large number of I/O</strong></td>
<td><strong>Modular and Powerful</strong></td>
<td><strong>Smart and Compact</strong></td>
</tr>
<tr>
<td>STATUS</td>
<td>64</td>
<td>up to 128</td>
</tr>
<tr>
<td>COMMAND</td>
<td>64 (TTL)</td>
<td>up to 64 (Relay)</td>
</tr>
<tr>
<td>METERING</td>
<td>24</td>
<td>up to 40</td>
</tr>
<tr>
<td>AUDIO IN</td>
<td>1 [stereo]</td>
<td>option: 2</td>
</tr>
<tr>
<td>AUDIO OUT</td>
<td>1 [stereo]</td>
<td>-</td>
</tr>
</tbody>
</table>

“It’s very powerful for its tiny size.”
“About the most bang for the buck in the whole area of remote facilities control” techINK’s 2010 Award judges

“It’s very powerful for its tiny size.”
“A very effective control system that’s easy to install and access.” NAB 2010 Pick Hit Award judges

“Super inexpensive but feature laden”