ELECTRONIC VISIONS, INC.

Model EVI-8800MX

EVI-8800MX

The Electronic Visions, Inc. Model 8800MX is a high performance Modacs interface to open systems via TCP/IP or UDP. The 8800MX will convert your MODACS data acquisition front end system into a distributed process monitoring system. The 8800MX data acquisition system consists of a Modacs PIO Bus interface, processor card, network interface card, video card and data acquisition software.

The processor card configuration is a 486DX2-66 MHz or Pentium-100Mhz based single board PC for a 16 bit ISA slot. The card is configured with 4 Mb dynamic RAM and 512Kb EPROM or Flash RAM. The network interface card is a 10/100 Base-T 16 bit ethernet controller which plugs into a 8800MX ISA slot.

Process I/O hardware is dependent on the configuration of the Modac system. The 8800MX data acquisition software supports analog and digital (including sequence of event points) as well as analog and digital outputs. A total of 2048 digital or 512 analog points per system can be supported. Point types may be mixed, that is inputs and outputs may be in the same chassis and analog and digital signals may be present.

Engineering Unit Conversions, a wide range of conversions are available for the analog input signals. Current conversion types include:

> Linear.

> Ratio of Polynomials.

> Resistive Temperature Devices (RTD).

> Square Root and Exponitial.

> Thermocouple (Types: B, E, J, K, N, R, S, T).

Alarm Processing

Alarm Processing provides a flexible alarming mechanism. Key features of alarm processing include:

> Eight sets of alarm limits. The alarm limit set in use is set by a system plant mode point. The eight sets may be used to tailor the alarm limits to particular plant operating modes such as startup, shutdown, or normal operations.

> Six standard analog alarm levels - High Critical, High Alert, High Warning, Low Warning, Low Alert, Low Critical.

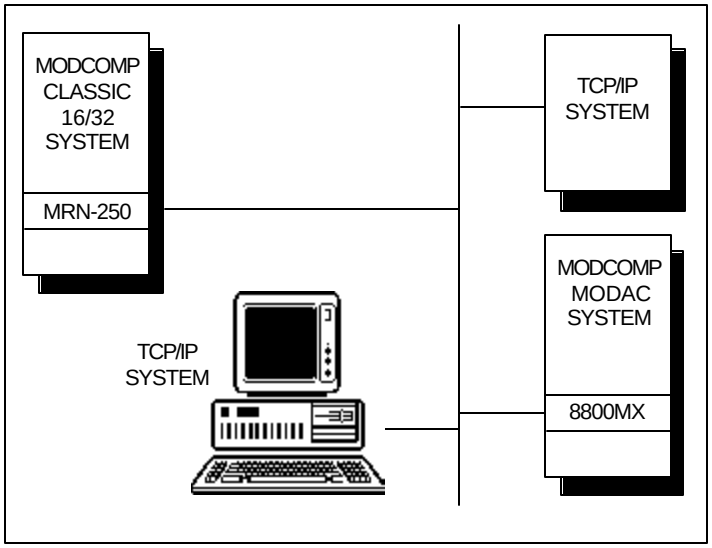

Figure 1, Typical 8800MX Configuration

> High and low deadband limits.

> Alarm and normal states for digital points.

> Rate of Ascent and Rate of Descent alarms for analog input points.

> High and Low Validity Limits for analog points. These limits determine what the acceptable input levels for a given analog point are. Points with input signals outside of the validity limits are marked as Invalid.

> Scan and mathematical exception reporting. A scan exception occurs when the conversion cannot be completed due to a hardware failure. A mathematical exception occurs when the conversion can not be completed.

Data acquired and processed by the 8800MX is transmitted to other systems based on significant changes. A significant change occurs when:

> The value of the point changes by an amount greater than a defined threshold.

> The value changes by an amount that causes the point to make an alarm transition, either into or out of alarm.

> A change in quality of the point occurs. This can

be due to the point being or having been taken off-line, manually entered by an operator, validity limit violation, scan exception or mathematical exception.

Data is also updated at periodic intervals, defined on a point by point basis. The periodic refresh ensures that systems that have just come on-line will receive point information in a predetermined period of time.

Two types of significant change checking are performed on analog input points. A Raw Value significant change test is made as well as an Engineering Units significant change test. Certain types of points, notably the radiation monitors at nuclear power plants, have a logarithmic scale. An engineering units significant change appropriate at one portion of the instruments span may not allow changes at a lower portion of the scan to be transmitted. The Raw Value significant change allows the significant change to be expressed in input signal levels as well.

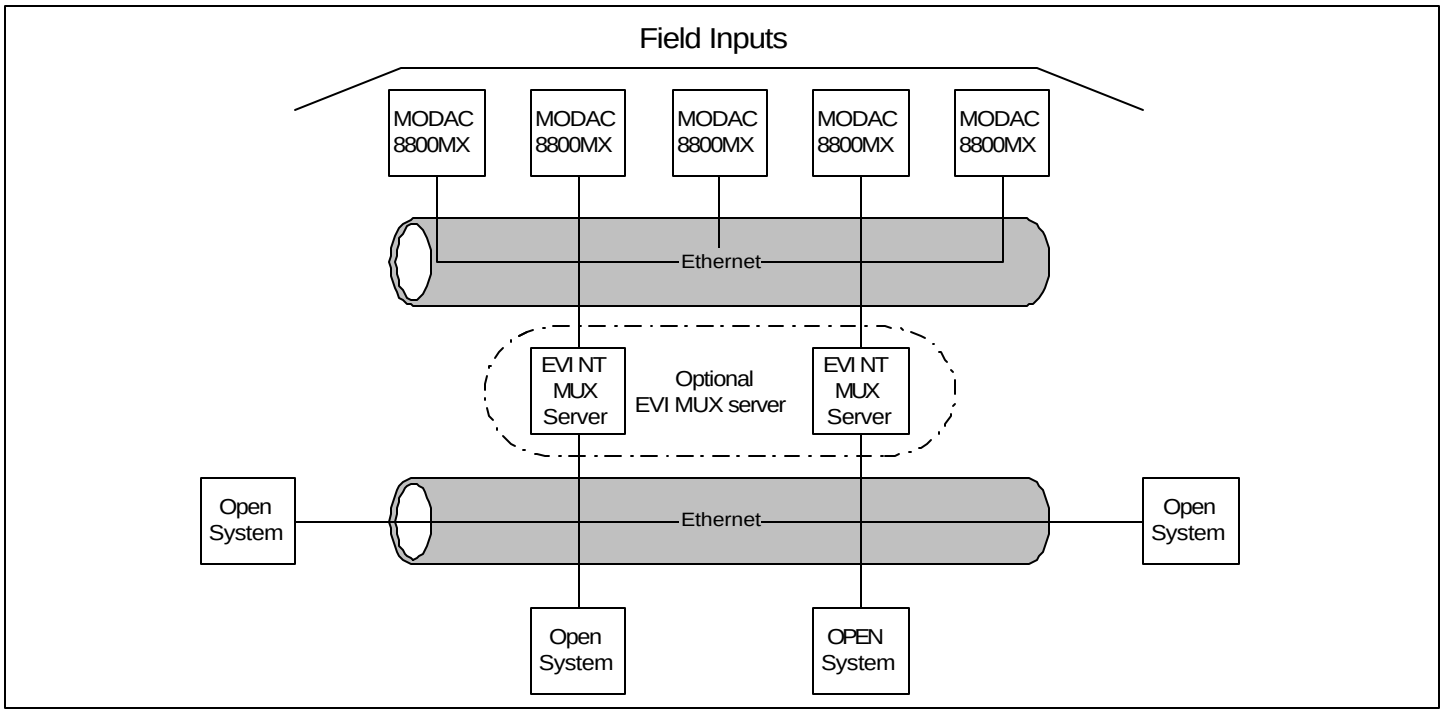

Figure 2, Typical Netwok Configuration

HARDWARE (SUPPLIED)

8800MX interface board

HARDWARE (PREREQUISITES)

Modcomp Modac's sytem

TCP/IP network

Electronic Visions, Inc's products are of the highest quality and designed with the customers needs in mind. All products are delivered with a one year, return to factory warranty.

If you would like more information on this or any of the other products offered by Electronic Visions, Inc. please contact us at any of our offices listed.

World Headquarters
Electronic Visions, Inc.
1555 Magnolia St NE
Palm Bay, FL 32905
Voice: (321) 632-7530
http://www.e-visions.com