



PROCESS CONTROL
REMOTE MONITORING
HVAC CONTROL
WATER & WASTEWATER
OIL & GAS

A unique “open architecture” controller that combines IEC 61131-3 programmable control, sensor conditioning, process monitoring and data logging, built-in Ethernet, Internet and high-speed serial and wireless communications, and voice, pager and e-mail alarm annunciation.



EtherLogic Ultima

- **High-speed Ethernet**
- **4 Serial Ports + Modem/Radio**
- **Programmable Logic**
- **32-bit Math and PID Control**
- **Built-in HMI/MMI**
- **Data Logging**
- **Alarm Logging and Paging**
- **Remote Program Updates**
- **E-mail w/file attachments**
- **Ethernet & Web Server**
- **Internal Battery Charger/UPS**
- **Integral sensor conditioning**
- **Built-in Analog/Discrete I/O**
 - 8 16-bit Analog Inputs
 - 4 12-bit Analog Outputs
 - 20 Discrete + 2 Mag Pickup Ins
 - 12 Relay Outputs
- **I/O Expansion to 8000 points**
- **3 Year Factory Warranty**

EtherLogic Ultima™ is an “open architecture” programmable controller with built-in Ethernet networking, wireless, hardwired and modem communications, and a large standard memory capacity for data logging and “over-the-link” program updates.

With 32-bit processing power and high level software tools that minimize programming time, EtherLogic Ultima™ bridges the gap between traditional PLCs, RTUs and the new generation of Ethernet and Web connected instruments.

Open Software

As an open architecture controller, EtherLogic Ultima™ includes an **IEC 61131-3** software kernel supporting six industrial control languages. EtherLogic Ultima™ also supports traditional text programming languages like **C/C++**. With EtherLogic Ultima™, you can mix and match any of these tools to get the job done quickly and reliably.

In addition to powerful programming tools, EtherLogic Ultima™ is supported by **ScadaBuilder**, software that eliminates hours of programming time with point-and-click configuration of serial and network communications, data and alarm logging, alarm annunciation (including pager and e-mail support), and a simple but powerful MMI interface over hardwired, radio and Ethernet connections.

Open Communications

The open architecture design of EtherLogic Ultima™ extends to its communications capabilities. By supporting industry standard protocols like **Modbus** and **Modbus TCP/IP** as well as the standard suite of Ethernet and Internet protocols. EtherLogic Ultima™ is easily integrated into existing factory Local Area Networks and SCADA systems, including all of the top HMI software packages, without special drivers. Need radio or dial-up access/dial-out alarming including voice? Built-in wide temperature range radios, telephone modems, cellular modems are available options.



Industrial Control Links
(800) 888-1893 www.iclinks.com

EtherLogic Ultima

ANALOG INPUTS

Quantity of Universal Inputs	8
Analog Input Signals	
Voltage	5Vdc, +/-300mV
Current	20mA
Resistance	0 to 65K ohms
Temperature Sensors	J, K, T, E, R, S thermocouple, 10K thermistor (Type II & III) and 1000 ohm, type 385 RTD
Input Overload Clamping	Inputs limited to 50mA and 6Vdc
Overload / Transient Protection	Transorb/Self Resetting Polyfuse
Analog Resolution	16 bits (1 part in 65535)

ANALOG OUTPUTS

Quantity	4
Output Type	0 or 4 to 20mA
Resolution	12 bits (1 part in 4096)
Overload / Transient Protection	Transorb/Self Resetting Polyfuse

DISCRETE INPUTS

Quantity	20
Input type	Optically isolated with 2/18 split shared isolated commons, AC/DC
Input levels	9 to 50 Vac/Vdc (56-00xx) 80 to 150Vac/Vdc (56-01xx)
Max. DI Pulse Counting Rate	DI9 & 10: 5KHz, all others: 40Hz

MAGNETIC PICKUP INPUTS

Quantity	2
Input type	AC sine wave/pulse, 8KHz max.
Input levels	0.15Vpp min., 100Vpp max.

DISCRETE OUTPUTS

Quantity	12
Output Type	Relays, 10 x Form A, 2 x Form C
Output Rating	
AC	250 Vac; 10A load @125 Vac
DC	30 Vdc; 5A load @ 30 Vdc

COMMUNICATIONS

Serial Port Interfaces	4 + 1 Internal Modem/Radio
COM #1, #3 & #4	RS-232, 9 pin D Male
COM #5 only	RS-485, 2-pin Terminal Block
Ethernet Port	10Base-T (10 Mb/sec), RJ-45

COMMUNICATIONS OPTIONS (one only per controller)

Internal Spread Spectrum Radios	900MHz, 1W, up to 115Kbaud 2.4GHz, 0.5W, up to 115Kbaud
Internal Cellular Radios	GSM or CDMA, 14.4Kbaud
Telephone modem w/voice	56K Baud, PC compatible

CONTROL & COMMUNICATIONS PROCESSOR

CPU	32-bit Intel 386EX, 25MHz
Memory	8MB Flash, 1MB RAM
Real Time Clock	Dallas DS1689S (IBM/PC comp.)

INPUT / OUTPUT (I/O) RISC PROCESSOR

CPU	Atmel ATMEGA64
Memory	64KB Flash, 4KB RAM

GENERAL SPECIFICATIONS

Field I/O Wiring Terminations	Removable Terminal Blocks
Wire Size	#14 to #26 stranded, #12 solid
Dimensions	7.0" W x 9.75" L x 2.5" D (178mm x 248mm x 64mm)
Power	8 to 26Vac, 10 to 36Vdc, (12Vac, 14Vdc min for UPS battery charging), 2W typical (6W max. w/int. modem/radio)
Temperature	-40°C to 75°C (-40°F to 167°F)
Humidity	5 to 85% RH (non-condensing)

SOFTWARE

IEC 61131-3 (ISaGRAF)	Ladder Diagram (LD) Structured Text (ST) Sequential Function Chart (SFC) Function Block Diagram (FBD) Instruction List (IL) Flow Chart
C/C++	Supports Borland v3.1 through 5.0 with control & communication
SCADABUILDER	Point-and-Click configuration of: Modbus RTU, DF1 (Allen Bradley), Bricknet (Peer-to-peer SCADA)
Serial Communications	Modbus TCP/IP, HTTP, FTP, TELNET
Ethernet Communications	ANSI/VT100 - serial data links, Telnet over Ethernet
Simple MMI	up to flash memory capacity
Data and Alarm Logging	

ORDER PART NUMBERS:

HARDWARE (hardware includes ISaGRAF, ScadaBuilder, operating system and TCP/IP software licenses)

56-0002	12/24V DIs, Standard (no internal radio/modem)	56-0102	120V DIs, Standard (no internal radio/modem)
56-0012	12/24V DIs, Internal 900MHz Spread Spectrum Data Radio	56-0112	120V DIs, Internal 900MHz Spread Spectrum Data Radio
56-0022	12/24V DIs, Internal 2.4GHz Spread Spectrum Data Radio	56-0122	120V DIs, Internal 2.4GHz Spread Spectrum Data Radio
56-0052	12/24V DIs, Internal 56K baud Telephone Modem with Voice	56-0152	120V DIs, Internal 56K baud Telephone Modem with Voice
56-0062	12/24V DIs, Internal GSM Cellular Telephone Data Modem	56-0162	120V DIs, Internal GSM Cellular Telephone Data Modem

SOFTWARE (Starter kits include software and documentation on CDROM and PC-to-Controller data cable)

91-3001	ScadaWorks Starter Kit	SCADA System Development Software with ISaGRAF and ScadaBuilder
91-3002	C Starter Kit	Borland C/C++ Compiler Version 5.0, Multitasking Kernel and API Library

Industrial Control Links www.iclinks.com (800) 888-1893 (530) 888-1800 fax (530) 888-7017