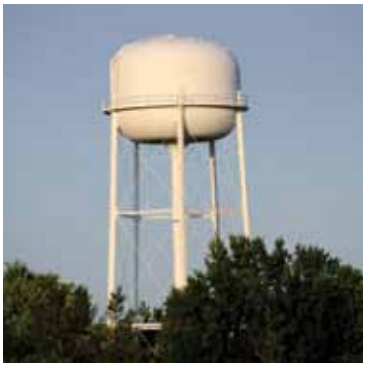
ICL Industrial Control Links, Inc.

Pinnacle Series Programmable SCADA Controllers



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Pinnacle Series Features & Benefits

More Power, Less Programming Saves $$$

Connectivity

Easily connect to nearly any SCADA device, PLC or Process Control Instrument. Built-in Ethernet provides a high-speed means of configuration and back-up, ability to transfer information and files, lively animated HMI displays, and a way to send out alarms.

Ethernet Networking

- MODBUS TCPIP/UDP
- DNP3
- ETHERNET IP
- SDX
- HTTP
- FTP
- TELNET
- E-MAIL

Serial Communications

- MODBUS RTU
- MODBUS ASCII
- DF1
- DNP3
- DFA OPENLINK
- NMEA 12
- HART
- SMS

…as well as standard Internet protocols running over a serial PPP link: FTP, E-mail, and Virtual Serial Port bridging.

Data Storage

Replace expensive PC software or make sure that critical data is never lost when a communications link is down.

Data Logging

- CSV
- XML
- FREEFORM (USER DEFINED)
- ALARMS
- UP TO 100 SAMPLES/SECOND

Historical Trending

- YEARS OF HISTORICAL STORAGE
- TRACES: 64 PER CHART, UNLIMITED CHARTS
- AUTO GENERATED WEB TREND DISPLAY
- RESOLUTION DOWN TO 1 SECOND

Gas Flow Calculation

Built-in flow computers allow for 20+ simultaneous runs.

- AGA-3
- AGA-7
- AGA-8
- MEETS API 21-1 AND ERCB DIRECTIVE 17 REQUIREMENTS

Easy-to-Use Web Pages for:

- Configuration
- Calibration
- Reports
- Orifice Changes
- Gas Component Entry

No Special Software Required

Alarm Notification

Versatile, 3-state alarm management included—replace alarm dialers & expensive PC software.

- SYNTHESIZED VOICE DIAL OUT
- TEXT MESSAGE
- E-MAIL

- Unlimited Alarm Points
- Unlimited Alarm Destinations
- Web Log Page

HMIs

Replace or supplement expensive PC HMI software. HMIs are built in and easier to use, with no recurring license fees, user limits, tag limits or maintenance fees.

- GRAPHICAL WEB PAGES
- TEXT USER INTERFACE (LOW BANDWIDTH)
- VOICE
- TEXT MESSAGE
- BUILT-IN AND PANEL LCD

Programmable Logic

Powerful programming tools for custom control strategies including editors, debuggers and simulators.

IEC-61131 languages Included

- Ladder Logic
- Function Block Diagram
- Structured Text
- Sequential Function Chart
- Flow Chart
- Instruction List

C/C++

Security

Latest security technologies to protect your systems and data exchanges.

- SECURE EMBEDDED OS
- SERIAL # LINKING
- COMMUNICATIONS ENCRYPTION
- SECURE USER ACCESS MANAGER

Pinnacle Product Selection Guide

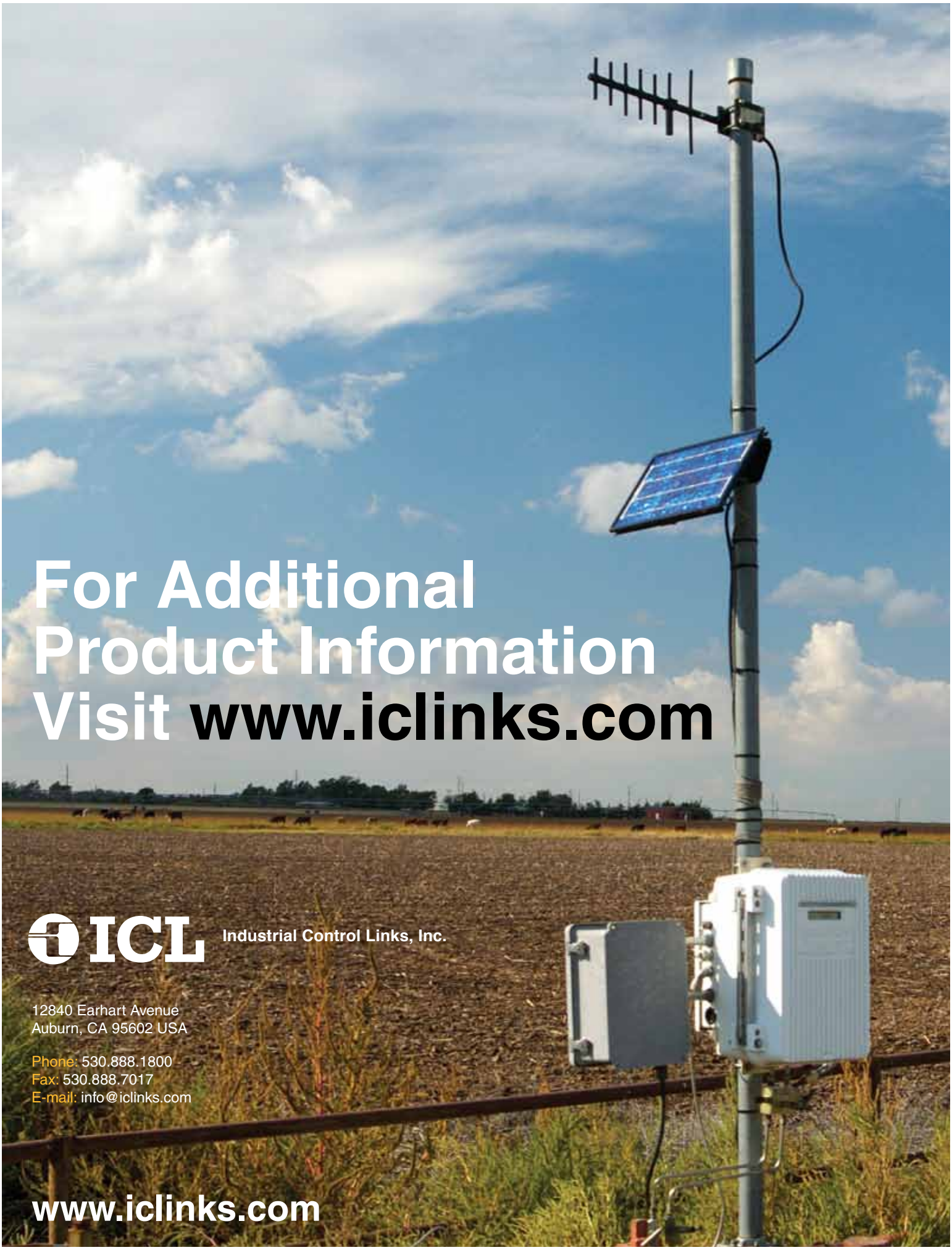
		Communications			I/O							Internal Options					External Options				
		Ethernet	USB (HOST)	Serial	Universal Inputs	Analog Inputs	Anaog Outputs	Digital Inputs	Digital I/O	Mag. Pickup Inputs	Digital Outputs	MDS Radio	Freewave Radio	DiGI/Maxstream Radio	Telephone Modem	UPS	Cell Modem	Lease Line Modem	VHF/UHF Radio	Telephone Modem	HART Modem
Lassen		1	2	3	2	1	2	6*	6	1		•	•	•	•		•	•	•	•	•
Rubicon		1	2	3	4		2	20		1	10						•	•	•	•	•
Shasta		1	2	3	8	1	2	16	2	1	6				•	•	•	•	•	•	•
Shasta Expansion Boards ADD UP TO 2 EXPANSION BOARDS IN TALL CHASIS	**Combo**				+8	+4	+4	+14	+4		+10										
	DIO							+32	+16												
Everest		1	4	5	8	1	4	20	4	2	12	•	•	•	•	•	•	•	•	•	•
Everest Expansion Boards ADD UP TO 2 EXPANSION BOARDS IN TALL CHASIS	**Input**				+32	+12		+16													
	Combo				+24		+4	+22			+14										
	DIO							+44	+32												

* LOW VOLTAGE CONTACT CLOSURE

Terminal Diagrams

Dimensions

Pinnacle SCADA Controllers—Common Features	
CPU	High-performance 300MHz 32-Bit Processor
Memory & Storage	128MB Program RAM, 512MB Internal Flash Disk, Upgradable to 2GB
Universal Inputs	16-bit Analog Inputs with Sensor Conditoning and Configurable Filtering, Up to 4000 Sample/Second (15 in Lassen) 20mA, 0 to 2 Volts, +/-250 mV, Ohms, Thermocouple (Type J, K, T, E, R, S, B, N) Thermistor (10K, II & III), RTD 2 and 3-wire (10,100, 1K ohm) note: 3-wire RTDs Require 2 Inputs Each
Analog Inputs	20mA or 32V Depending on Model
Analog Outputs	16-Bit, 0/4 to 20mA
Digital Inputs	12/24V or 120/240V Optically Isolated (Except Lassen—Low Voltage Contact Closure), Configurable Filtering
Digital I/O	Contact Closure, or 0 to 30Vdc In, 0 to 30Vdc 1A Protected FET Out, Configurable Filtering, Counting to 10kHz
Magnetic Pickup Input	High-speed Variable Voltage, Variable Frequency Adaptive Thresholding, 20mV to 50Vac/Vdc, 10 KHz Maximum
Digital Outputs	Relay Contacts Up to 240V, 3A
HMI	Built-in LCD HMI—4 line x 20 Characters, 122x32 Graphics
Warranty	3 Years, Factory Parts and Labor
Operating Range	-40˚F (-40˚C) to 158˚F (70˚C), 5%RH to 95%RH, Non-Condensing
Safety	Certified for Use in Hazardous Locations—Class 1, Div 2, Groups A, B, C, D (UL/CSA)
Power	10 to 28Vdc Power Draw Depends on I/O & Option Configuration—Contact Factory
Mounting	Panel or 35mm DIN Rail
Modem Options	
Telehone/Voice	56K Baud, Hayes AT Compatible w/Voice Extensions FCC68, CS-03 & CTR21 Certified V.44, V.42bis & MNP5 Data Compression, V.42LAPM & MNP 2-4 Error Correction
Leased Line	Input: -40dB to +6d8, Automatic Gain Adjust Output: 600 ohms, -40dB to +6dB, User Settable
HART Modem	USB Plug-in Interface—Transformer Isolated, Add to Any AO, Powered from USB
UPS Option	(Shasta & Everest only) Up to 3A Battery Backed Power to External Equipment in Addition to Controller Requires External 12V Lead-acid Gel-Cel Battery, 3 to 18 AH, 0.7A Charge Current Max.
Wireless Options	(Lassen & Everest only) 902MHz to 928MHz Spread Spectrum, Frequency Hopping, 1Watt, 115K Baud
Freewave	Sensitivity: -108dBm (BER 10-6), 32-bit CRC, Point to Multipoint, Network Diagnostics, FGR-115 Compatible
MDS	Sensitivity: -108dBm (BER 10-6), 16-bit CRC, Point to Multipoint, Network Diagnostics, Transnet Compatible
Digi/Maxstream	Sensitivity: -110dBm @9600 Baud, -100dBm @115K Baud, Point to Multipoint & Peer to Peer, DigiMesh
Cellular	GSM/GPRS/HSPA (AT&T, T-Mobile, Rogers, Telus), Quad Band 850/900/1800/1900 MHz CDMA/EV-DO (Verizon, Sprint), Dual Band 800/190 MHz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