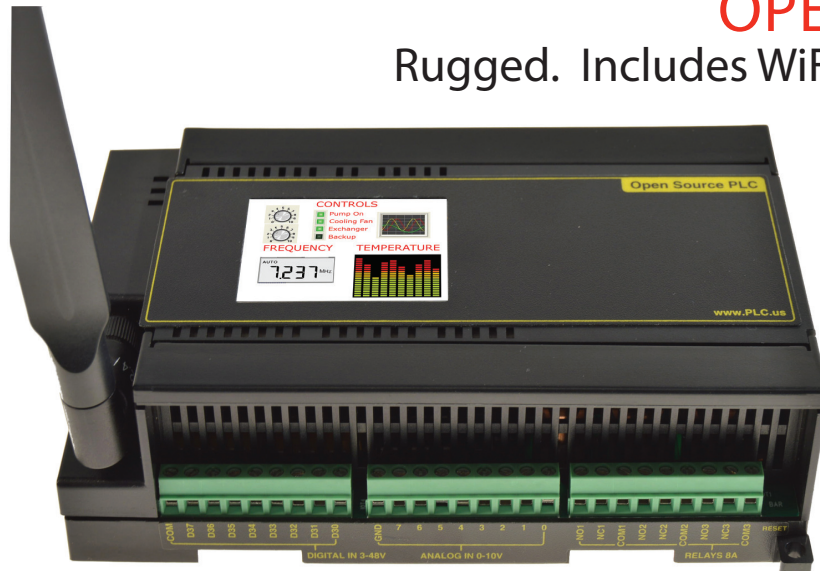# OPEN SOURCE PLC
Rugged. Includes WiFi. Perfect for the IoT.

Need an easy-to-use control solution?
Get the controller that does exactly what *you* want.

Combine Arduino simplicity with US reliabilty. This open source PLC goves you both. All inputs and outputs are protected. Why use stacks of boards, wires and compnents? Get more functionality from a complete heavy duty PLC. Eliminate complexity. Get the job done right.

A simple USB cable connects to Arduino. Load your first program in minutes. Do you prefer Lua, GNU, or AVR Studio? They're all supported. Demonstration code and libraries are free to download.   Most customers find all the functions they need on github.

The color LCD touchscreen and speaker add an useful human interface. A separate WiFi chip takes the workload off the main AtMega processor The I/O is robust and well protected. Rest assured the board is easy to service and modify.

Most PLC users never pop the cover, but if you'd like to explore inside, go ahead. Customize it. We'll support you with full schematics and component specs.

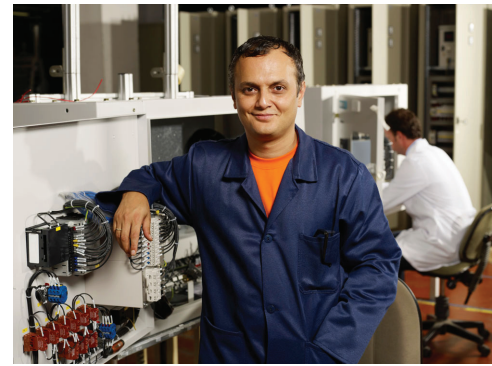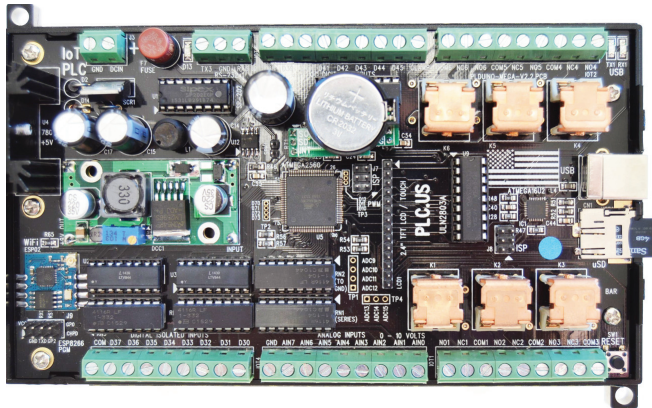Applications include industrial control, home automation, Robotics and SCADA. What will you build?

Call now for a risk-free trial. Quantity discounts are available.

DIGITAL LOGGERS, INC.

2695 Walsh, Santa Clara, CA 95051
(408) 330-5599   www.PLC.US

- 8x digital inputs with opto-isolation and hardware debounce connect easily to AC or DC..

- 8x analog inputs with a low-noise regulator give you 10-bit performance. Plug-in scaling resistors adjust the input voltage range. Sensors are easy to connect.

- 8x digital outputs are driven by open-collector 500mA drivers. 4x outputs have PWM.

- 2.4" LCD and touchscreen are easy to use with existing graphic libraries. An audio amp and speaker are included.

- Clock / calendar with battery backup is ideal for scheduling and can be locked to NTP.

- Forget memory constraints. WiFi operation *and* web services are off-loaded to a separate co-processor with 128Mb FLASH. You can run NodeMCU, Arduino, BASIC, or Lua on the WiFi chip. The PLC ships with demo code installed.

- An SD slot is included. A separate, socketed EEPROM with high-write endurance is a great place to store rapidly changing data. It can be replaced with FRAM or other I2C components.

- 6 DPST ruggedized relays have double-wiping 20A contacts brought out through 10A fuses. Screw terminals are UL rated at 6-10A. C,NO, and NC contacts are brought out.

- RS-232 is handy for long distance wired communication, controlling external devices, or linking multiple PLCs.

- Switching power supply operates efficiently from any 12-24VDC input. Separate low-noise regulators operate under software control to improve reliability, reduce power consumption and ensure reliable startup and restart.

- Snap directly to DIN rail or bolt securely via mounting ears.

- Superior US design and qaulity that imports can't match. Thousands have been built. The design is field-proven.

"Replaced several old PLCs and expansion-units with just one box. Runs great!"

Arav Amrit , AG Precision

"Came to life right out of the box!

..Doesn't get easier than that."

Bill Surrey
Advance Datacenters

SPECIFICATIONS

Analog Inputs	8 ea. 10-bit, 0-10V default scale
Case Contact Rating	300V, 6A continuous, 10A peak
Clock Calendar	9s / week typical accuracy 10 year lithium battery backup WiFi supports NTP time sync
"De-bricking"	AVR ISP headers on 16U2 and ATmega 2560, 3.3V TTL header on ESP8266
Dimensions	4.0 x 5.0 x 1.3" DIN compliant
Digital Inputs	8ea/ Opto-Isolated to 2500V Set to 3-24VAC/DC by default Can be used to monitor high AC voltages by adding an external series capacitor.
EEPROM	32K I2C, 1 million cycle, 200 year
Enclosure Material	Injection molded high-temp thermoplastic, vented 3 sides
Input Voltage DC	11-24VDC. Voltages over 32VDC will activate OVP circuit to open 1A fast blo safety fuse.
LCD Display	2.4" TFT LCD backlit with PWM power save, driven via SPI

Operating Temperature	-40º to 185ºF, -40º to 85ºC designed for dry environments
Power Dissipation	2.4W Max (relays on) <1W idle
Power Fail Hold-Over	50ms at 24VDC in, all relays on
Relay Contact Rating	20Ax2 SPDT, 1/4 HP, 120VAC/D self-wiping, dual contact, unsealed 10A fuse, note terminal ratings
RS-232	150-240k baud
Supported Languages (ESP 8266 WiFi Controller)	NodeMCU, BASIC, Arduino, Lua
Supported Languages (Atemga 2560 Controller)	Arduino, AVR Studio, GNU C/C++
Switches & Controls	Touchscreen, reset button
USB Interface	AtMega 16U2 processor
Weight	Bare unit 2.7 lbs, Ship wt. 3.6 lbs
WiFi	2.4Gb,g,n 19.5dBm out in 802.11B Dipole antenna, RP-SMA