

# LabJack T4

## Low Cost - Ethernet, USB Multifunction DAQ

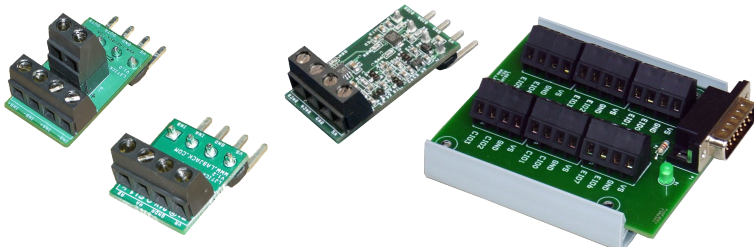
The T4 is our least expensive DAQ device with both USB and Ethernet connectivity, it incorporates a wide range of features at a highly competitive price point.

### I/O Features

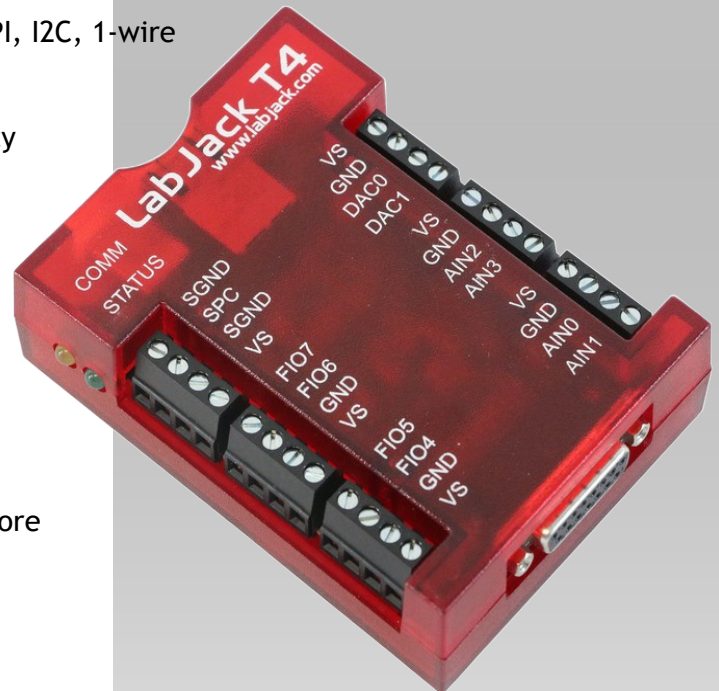
- 4 Dedicated high voltage ( $\pm 10V$ ) analog inputs, 12-bits of accuracy
- 8 Flexible I/O lines (digital input, digital output, analog input)
- 8 Dedicated 3.3V digital I/O great for UART, SPI, I2C, 1-wire
- 2 Analog outputs (10-bit, 0-5 volts)
- Flexible I/O with range 0-2.5V, 12-bits accuracy
- Timers provide PWM output, quadrature input pulse/period timing, and pulse counting.
- Watchdog system
- Supports LJTick accessories for additional analog outputs, analog buffers, and more.
- Industrial range (-40 to +85C)
- Serial protocols: SPI, I2C, and more
- Up to 8 PWM, Quadrature, Pulse Width, and more
- Same software API as the T7/T7-Pro

### Other Highlights

- Each purchase includes **lifetime support**
- Several **free applications** to configure & test, and log data to file
- Example code in: **C/C++**, **C#**, **VB**, **Matlab**, **LabVIEW**, **Python**, **Java**, **Delphi**, **.NET** and more...
- Modbus TCP - Use any platform that supports TCP/IP, no driver needed!
- Free **cross-platform** driver - Extends/wraps the Modbus protocol for convenience.
- Expansion boards - Add  $\pm 10V$  DACs, current shunts, terminal boards, relay boards and more...



[labjack.com/t4](http://labjack.com/t4)



“I don't know of many other companies that provide such excellent service. I wouldn't hesitate to recommend your product to anyone.”

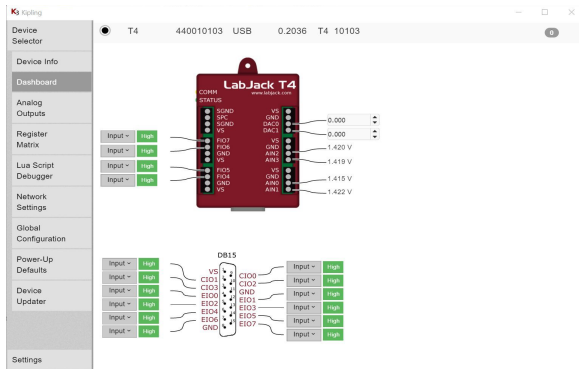
-Richard P.  
Milwaukee School of Engineering

# Software

All important values and data from the device can be read and/or written by using the associated Modbus register(s). Thus, the process for reading the serial number, an analog input, or PWM is all functionally the same, you simply provide a different address. The **LJM Library** provides names for each address, along with several other convenience functions.

- Log to file with **LJLogM** or **LJStreamM**
- Up to 1000Hz using LJLogM
- Up to 50kHz using LJStreamM

## Test & Configure with Kipling



### Python Example

```
from labjack import ljm
handle = ljm.openS("ANY", "ANY", "ANY")

name = "SERIAL_NUMBER"
result = ljm.eReadName(handle, name)
print(" %s = %f" % (name, result))

#Read the voltage on AINO
name = "AIN0"
result = ljm.eReadName(handle, name)
print(" %s = %f" % (name, result))

#Set DAC0 to 3.3V
name = "DAC0"
value = 3.3
result = ljm.eWriteName(handle, name, value)
```

## Why LabJack?

### Legendary Support

- Email responses that actually answer your question.
- Free lifetime support includes (some) engineering design help.
- The engineers who made the product also respond to your questions.
- Free RMA diagnostics and calibration.

### Flexibility

- Software integrates easily. We don't force you into a certain software or programming environment. Choose LabVIEW, C++, MATLAB, Python, Java, .NET, Delphi, Visual Basic, VB6, VBA, and more...
- Add new kinds of sensors on-the-fly. We provide inexpensive signal conditioning modules.
- Control valves, motors, lights, pumps, etc - using one of many digital I/O control options.
- Incorporate LabJack DAQ hardware using our OEM options.

### Quality Hardware

- Have confidence in your measurements. Each device is individually tested and calibrated.
- New features or fixes are readily available through field-programmable firmware.
- Each device has multiple protection mechanisms on every I/O to help prevent electrical damage.

“Your product saved me a bunch of money and time... I usually contact support organizations... about how bad their products are. I felt like I had to say how well yours worked!”

-Thomas A.  
Software engineer

# LabJack

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