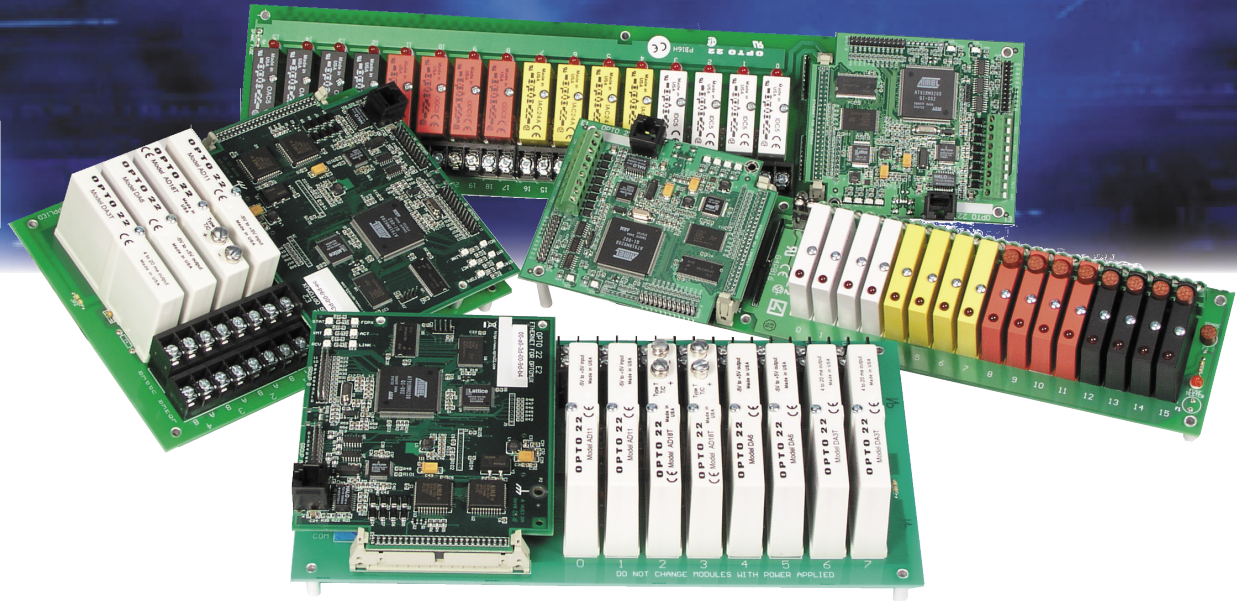


*E1 and E2 brain boards add powerful networking, software, and protocol options to your Optomux system.*



### **Ethernet-Enabled Optomux®**

Opto 22's E1 and E2 brain boards are next-generation I/O and communication processors that let you add Ethernet to your Opto 22 Optomux-based serial I/O systems simply by replacing existing B1 or B2 brain boards. With this simple swap-out, a 20-year-old I/O system can quickly and easily be upgraded to communicate over any Ethernet network. Moving to Ethernet delivers fast performance and offers more communication options, including the ability to transfer I/O data to business applications on your corporate network.

### **Choose Your Software**

Because E1 and E2 brain boards offer both 10/100 Mbps Ethernet and RS-422/485 serial networking capability, you can continue to use

your existing Optomux-based software by making a serial connection to a single Ethernet brain board that then serves as a bridge to other Ethernet brain boards on the network. Alternatively, E1 and E2 users can choose to implement the powerful ioProject™ software that includes a sophisticated control and data acquisition environment capable of PID control, subroutines, and other advanced functions. You can even run both software applications simultaneously.

### **Preserve Existing Hardware and Wiring**

Optomux users upgrading to Ethernet via E1 and E2 brain boards can make the switch by simply replacing their B1 and B2 brain boards. No additional I/O modules, racks, sensors, actuators, or wiring is required.

### **Communication Options**

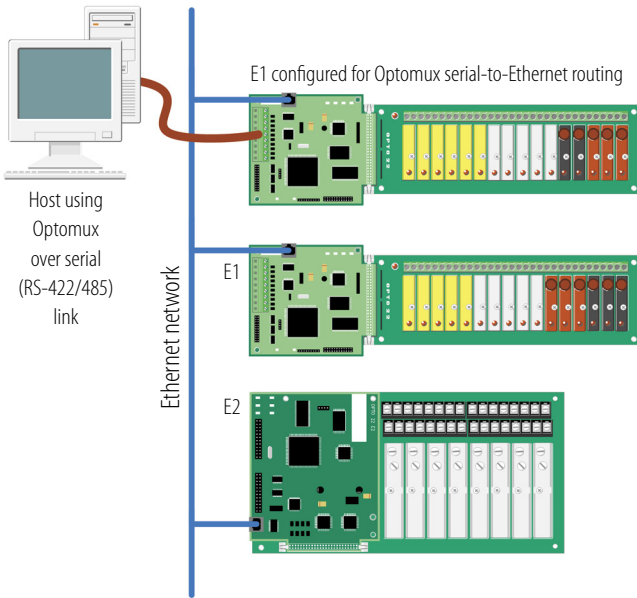
The E1 and E2 support multiple protocols simultaneously, giving you more communication options than ever before. Besides the well-established, documented, and license-free Optomux protocol over serial, the E1 and E2 also support OptoMMP™ (memory-map protocol used with Opto 22 SNAP Ethernet systems), Optomux over Ethernet, OPC, and Modbus/TCP.

For both existing and new users of Opto 22 hardware, the E1 and E2 serve as the foundation of a low-cost monitoring, control, and data acquisition system—one that offers the flexibility of single-point I/O, a migration path from existing Optomux installations to the latest hardware and software offerings, and a reliability record earned over decades of trusted service in the field.

# E1 and E2 System Architecture Examples

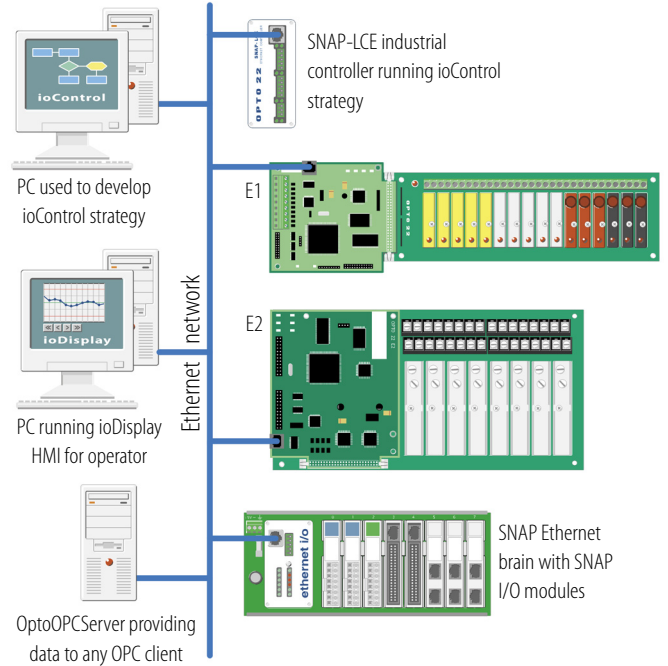
## Migrating Existing System to Ethernet

Each original B1 or B2 brain board has been replaced with an E1 or E2, and all brains are connected to an Ethernet network.



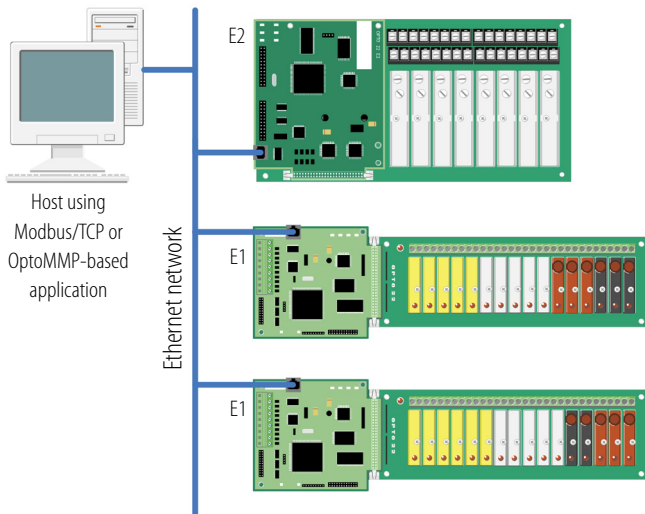
## Using E1s and E2s with ioProject Software

E1 and E2 I/O units are integrated into a contemporary Opto 22 control system with all devices connected over an Ethernet network.



## Using Modbus/TCP or OptoMMP Driver Toolkit

Software using Modbus/TCP or OptoMMP protocols and drivers running on a PC communicates with the E1s and E2s over an Ethernet network.



Opto 22 manufactures and develops hardware and software products for applications in industrial automation, remote monitoring, and enterprise data acquisition. Using standard,

commercially available Internet, networking, and computer technologies, Opto 22's SNAP systems allow customers to monitor, control, and acquire data from all of the mechanical, electrical, and electronic assets that are key to their business operations. Opto 22's products and services support automation end users, OEMs, and information technology and operations personnel. Founded in 1974 and with over 85 million Opto 22-connected devices deployed worldwide, the company has an established reputation for quality and reliability. For more information, contact Opto 22 headquarters at 800-321-OPTO or visit [www.opto22.com](http://www.opto22.com).

# OPTO 22

43044 Business Park Drive, Temecula, CA 92590-3614  
tel 800.321.OPTO • tel 951.695.3000 • fax 951.695.3095