

Part Number	Description
NVIO-SKUS-SE84	Preconfigured starter kit for remote monitoring and control

Description

The Nvio™ Starter Kit from Opto 22 provides in one turn-key system all the elements needed to monitor and manage remote devices so you can quickly evaluate or implement a machine-to-machine (M2M) application.

This packaged solution combines device interface and wireless communications hardware, wireless service on a nationwide network, and data logging and graphing capabilities—everything you'd otherwise need to acquire and integrate yourself to build a remote M2M application.

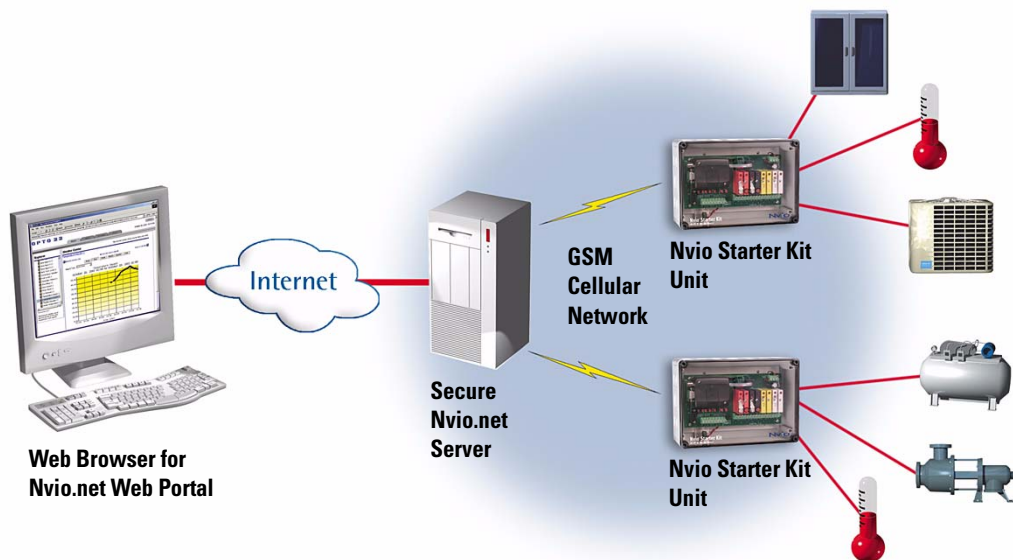
Device Data

The Nvio Starter Kit unit collects information about remote electrical and mechanical devices using proven Opto 22 input/output (I/O) technology, including industry-standard G4 digital I/O modules. The Nvio Starter Kit unit is designed for collecting device data out of the box; it includes a temperature probe and digital inputs that can be switched on and off. For simple access monitoring applications, door switches (contacts) and installation instructions are also included.



The **Nvio Starter Kit** includes device interface and communications hardware, wireless data service, and access to a secure central Web portal.

Nvio Starter Kit Architecture



Nvio-based systems can monitor and manage:

- On/Off status and control of lights, doors, machinery, and other remote devices
- Environmental conditions, including temperature and humidity.

Wireless Communications

The Nvio Starter Kit delivers device data to a secure server using communications hardware from Sony Ericsson and existing Global System for Mobile Communications (GSM) networks. The kit includes a pre-activated SIM card and three months of wireless data service. (Wireless data service for the Nvio Starter Kit is currently available only within the continental United States.)

Data Logging and Graphing

At the secure server location, device data is logged into a database and can then be accessed securely via the Nvio.net™ Web Portal™ using a standard Web browser and your PC. The Web portal is available 24 hours a day, seven days a week, and includes unlimited authorized users (administered by you), all messaging, data archival, alarming, and trending. A user account is established when you purchase the Nvio Starter Kit, so device data can be collected as soon as power is applied to the Nvio Starter Kit unit.

Use the Nvio.net Web Portal to easily monitor temperature, door switch status, and other device inputs. Alarms can be defined for all inputs; alarm actions include sending an email message, or calling a telephone number with a synthesized voice alert.



The Nvio Starter Kit unit packages the Sony Ericsson GT48 GSM terminal, Opto 22 G4-series input/output (I/O) modules, and a mounting rack in a compact enclosure.

Starter Kit Contents

The Nvio Starter Kit includes:

- 90-day Nvio.net Web Portal account for monitoring and controlling remote devices from a Web browser
- 90 days of wireless data service on a GSM network (2 MB data and 300 SMS messages per month included)
- Sony Ericsson GT48 terminal with a pre-activated SIM card for data communication over a GSM wireless network
- Pre-calibrated ICTD temperature analog input
- Door switch (contact) digital input and wiring
- Three digital input modules to monitor device states
- Four digital output modules to turn devices on and off
- Three additional built-in analog inputs to monitor changing voltage or current levels
- 110 VAC to 12 VDC power adapter.

Specifications

Wireless Communication*	GSM/GPRS data service from GSM network provider
Power Requirements	12–24 VDC (110 VAC to 12 VDC power adapter provided)
Dimensions	180 x 524 x 90 mm (7.1 x 10.0 x 3.5 in.)
Operating Temperature	-10° to +55° C (14° to +131° F)
Storage Temperature	-40° to +85° C (-40° to +185° F)
Operating Humidity	20–75% non-condensing
Storage Humidity	5–95% non-condensing

* Wireless network and Web portal service is currently available only within the continental United States. Contact Opto 22 for more information.

Ordering

To order an Nvio Starter Kit today or for more information, call **877-NVIO2DAY** (684-6232). The Nvio Starter Kit is based on the OptoGSM I/O rack, which can be purchased separately. See Opto 22 form 1496 for more information. The Sony Ericsson radio and Opto 22 G4 modules for a variety of input and output signals can also be purchased separately.

Products

Opto 22 produces a broad array of reliable, flexible hardware and software products for industrial automation, remote monitoring, enterprise data acquisition, and machine-to-machine (M2M) applications.

SNAP Ethernet Systems

Based on the Internet Protocol (IP), SNAP Ethernet systems offer flexibility in their network connectivity and in the software applications they work with. The physical network may be a wired Ethernet network, a cellular wireless network, or a modem. A wide variety of software applications can exchange data with SNAP Ethernet systems, including:

- Opto 22's own ioProject™ suite of control and HMI software
- Manufacturing resource planning (MRP), enterprise management, and other enterprise systems
- Human-machine interfaces (HMIs)
- Databases
- Email systems
- OPC client software
- Custom applications
- Modbus/TCP software and hardware.



SNAP Ethernet system hardware consists of controllers and I/O units. Controllers provide central control and data distribution. I/O units provide local connection to sensors and equipment.

SNAP OEM Systems

Opto 22 SNAP OEM I/O systems are highly configurable, programmable processors intended for OEMs, IT professionals, and others who need to use custom software with Opto 22 SNAP I/O modules.

Linux® applications running on these systems can read and write to analog, simple digital, and serial I/O points on SNAP I/O modules using easily implemented file-based operations. Applications can be developed using several common development tools and environments, including C or C++, Java, and shell scripts.



M2M Systems

Machine-to-machine (M2M) systems connect your business computer systems to the machines, devices, and environments you want to monitor, control, or collect data from. M2M systems often use wireless cellular communications to link remote facilities to central systems over the Internet, or to provide monitoring and control capability via a cellular phone.

Opto 22's Nvio™ systems include everything you need for M2M—interface and communications hardware, data service plan, and Web portal—in one easy-to-use package. Visit nvio.opto22.com for more information.

Opto 22 Software

Opto 22's ioProject and FactoryFloor® software suites provide full-featured and cost-effective control, HMI, and OPC software to power your Opto 22 hardware. These software applications help you develop control automation solutions, build easy-to-use operator interfaces, and expand your manufacturing systems' connectivity.



Quality

In delivering hardware and software solutions for worldwide device management and control, Opto 22 retains the highest commitment to quality. We do no statistical testing; each product is made in the U.S.A. and is tested twice before leaving our 160,000 square-foot manufacturing facility in Temecula, California. That's why we can guarantee solid-state relays and optically-isolated I/O modules *for life*.

Product Support

Opto 22's Product Support Group offers comprehensive technical support for Opto 22 products. The staff of support engineers represents years of training and experience, and can assist with a variety of project implementation questions. Product support is available in English and Spanish from Monday through Friday, 7 a.m. to 5 p.m. PST.

Opto 22 Web Sites

- www.opto22.com
- nvio.opto22.com
- www.internetio.com (live Internet I/O demo)

Other Resources

- OptoInfo CDs
- Custom integration and development
- Hands-on customer training classes.



About Opto 22

Opto 22 manufactures and develops hardware and software products for industrial automation, remote monitoring, enterprise data acquisition, and machine-to-machine (M2M) applications. Using standard, commercially available Internet, networking, and computer technologies, Opto 22's input/output and control 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.