NL240

Wi-Fi Communications Peripheral

Powerful Wi-Fi Network Link
Extremely low power consumption

Overview

Campbell Scientific's NL240 is a powerful Wi-Fi network link interface that provides a wireless network connection to dataloggers and peripherals. It supports sophisticated networking capabilities, especially when used in PakBus networks with PakBus devices. For example, with the NL240, multiple PakBus clients can be connected to a single datalogger at the same time.

Benefits and Features

> Low power consumption
> Wi-Fi-to-CS I/O bridging provides direct access to Internet protocol capabilities of CR6, CR800, CR850, CR1000, or CR3000 loggers
> Powerful PakBus routing capabilities
> Serial server functionality for networking Campbell Scientific devices as well as third-party devices
> Provides IP connectivity for communication with LoggerLink smartphone app and LoggerNet PC software

Powering the NL240

The NL240 is typically powered by the datalogger through the CS I/O port. When the NL240 is connected to the RS-232 port, a field cable (pn 14291) is used to connect the NL240 to an appropriate 12 Vdc power supply. A wall charger (pn 15966) is used when the NL240 is in an office next to a computer.

Ordering Information

Network Link Interface

NL240   Wi-Fi Communications Peripheral—shipped with an SC12 cable for connecting to the datalogger's CS I/O port, and hardware for mounting to an enclosure backplate

Temperature Range Options (choose one)

-ST   -25° to +50°C

-XT   -55° to +85°C

Accessories

15966   AC/DC adapter that can power the NL240 independently from an AC power outlet.

14291   Field power cable allows powering the NL240 from a 12 Vdc source.

10873   DB9 Female to DB9 Male Cable (6 feet)—connects the NL240 to the datalogger's RS-232 port

16005   Unity gain (0 dBd), 1/2 wave whip, omnidirectional antenna, which features an articulating knuckle joint that can be oriented vertically or at right angles.

Specifications

❭ View EU Declaration of Conformity Documentation at: www.campbellsci.com/nl240

❭ Material: Aluminum case with black anodized finish

❭ Dimensions: 16 x 6.73 x 2.54 cm (6.3 x 2.65 x 1 in)

❭ Weight: 177 g (6.3 oz)

❭ Configuration:
Device Configuration Utility over USB or Wi-Fi
Terminal menu over Telnet
Terminal menu over RS-232

❭ CS I/O Port: SDC 7, 8, 10, or 11 (does not support ME)

❭ RS-232 Port: DTE, DB9 Male

❭ USB Port: Micro-B

WLAN

❭ Antenna Connector: RPSMA

❭ Supported Technologies: 802.11b/g/n, WPA, WPA2 (Personal)/ TKIP or AES, WEP, WEP(open), APIPA/AutoIP, IPv4, IPv6, ICMP/ Ping, ICMPv6/Ping, TCP, DHCP Client, SLAAC, DNS Client, HTTPS Proxy, Telnet Server, TLS, PakBus, Modbus, TCP/IP

❭ Topologies: infrastructure and ad-hoc

❭ Transmit Power: 7 to 17 dBm (5 to 50 mW)

❭ Rx Sensitivity: -97 dBm (< 8% PER)

❭ Frequency: 2.4 to 2.5 GHz (2.4 GHz ISM band)

Operating Temperature Range

❭ Standard: -25° to +50°C

❭ Extended: -55° to +85°C

Communication Rate

❭ RS-232 Port: 1200 to 115.2k bps

❭ CS I/O Port: 9600 to 460.8k bps

Power

❭ Power Connector
CS I/O Port
DC barrel connector
(not powered over USB)

❭ Supply Voltage: 7 to 20 Vdc

Power Consumption

❭ Maximum: 950 mW

❭ Typical, Always On: 600 mW idle, 670 mW communicating, 65 mW searching for out of range network

❭ Typical, Low Power Mode Enabled: 73 mW idle, 480 mW communicating, 50 mW searching for out of range network

❭ Sleep: 16 mW