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WHEN MEASUREMENTS MATTER

NL240
Wireless Network Link Interface

Powerful Wi-Fi Network Link

Extremely low power consumption

Overview

The NL240 is a powerful Wi-Fi network link interface that provides a wireless network connection to data loggers 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 data logger 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 dataloggers

❯ 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

Detailed Description

The NL240 can take advantage of the thousands of Wi-Fi hotspots available in cafés, universities, hotels, and airports. Wi-Fi also provides encryption to protect traffic and uses a global set of standards so the same device can be used internationally.

The NL240 is an industrial device that goes beyond the typical Wi-Fi serial device server. It supports Wi-Fi communication with an iOS or Android device when used with our LoggerLink apps. By providing direct access to all the IP capabilities of the CR800, CR1000, and CR3000 dataloggers, the NL240 provides:

❯ M2M communication of data and events

❯ PakBus communication over TCP/IP for remote configuration, control, and data collection

❯ HTTP and FTP for posting, retrieving, and local hosting of data

❯ Email client for data and control messaging

❯ ModBus TCP/IP, DNP3, and NTCIP ESS industrial protocol support

Powering the NL240

The NL240 is typically powered by the data logger 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

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appropriate 12 Vdc power supply. A wall charger (pn 15966) is used when the NL240 is in an office next to a computer.

Specifications

Compliance	CE compliant
Material	Aluminum case with black anodized finish
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
Operating Temperature Range	› -25° to +50°C (standard) › -55° to +85°C (extended)
Power Connector	CS I/O Port, DC barrel connector (not powered over USB)
Powered Over	CS I/O or barrel plug
Supply Voltage	7 to 20 Vdc
Connections/Routes Supported	› Supports 50 simultaneous TCP connections. › PakBus Router supports 50 routes. › Up to 10 of the 50 TCP connections can be used for TLS. › 15 Modbus Server Transactions (maximum)
Dimensions	16 x 6.73 x 2.54 cm (6.3 x 2.65 x 1 in.)
Weight	177 g (6.3 oz)

Communication Rate

RS-232 Port	1200 bps to 115.2 kbps
CS I/O Port	9600 bps to 460.8 kbps

WLAN

Antenna Connector	RPSMA
Technologies Supported	802.11b/g/n, WPA, WPA2 /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)

Power Consumption

Maximum	950 mW
Typical (Always On)	› 670 mW (communicating) › 600 mW (idle) › 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

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