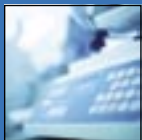


NL900 NL900LAN NL2400

- Simple cable replacement for retrofits & new installs
- Transmits around corners, through walls & obstructions
- Reliable communication at rates up to 115.2 Kbps

APPLICATION IDEAS



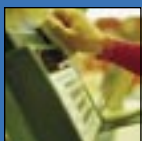
Weigh Scales

Instantly access weight and measurement data. Link virtually cuts wires to all brands of scale equipment, from indicators to receipt printers.



Process Control

Set up any factory more conveniently. Engineers and technicians can quickly move data links from machine to machine without costly wiring.



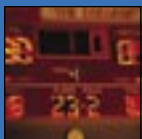
Kiosks & P.O.S.

Small & portable, Links make it possible to set up equipment where it best serves customers. Use at retail stores, service stations, events, etc.



Data Logging

Upload data to your PC from your logger or monitor without getting up from the chair. Use Link for tank level-monitoring, control instruments, etc.



Electronic Signs

Faster, cheaper & less invasive than trenching to lay cable, Links simply attach to the serial ports of the PC and sign or scoreboard.

making **RF** the strongest link

Industrial Wireless Modems

PRODUCT OVERVIEW



RF Neulink's NL900 and NL2400 stand-alone transceivers can be set up in minutes to virtually cut the cables between RS232/RS485/RS422 devices. Their flexibility and price allow users to quickly upgrade wired terminals to cordless operation in industrial, commercial, even residential applications.

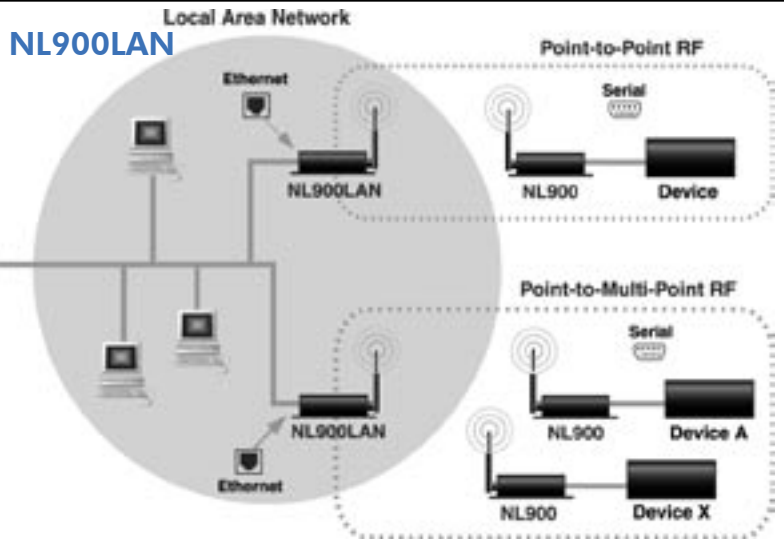
Powered by a 1000mW 900 MHz or a 200mW 2.4 GHz radio, each unit is small and easily portable for use in mobile and temporary settings as well as for fixed installations. Optional software enables custom configurations based on user needs.

These units implement a proprietary communication protocol to provide secure local data transmissions. Because it uses FHSS technology, the data remains reliable over distances of up to 20 miles line-of-sight (900 MHz). Use of license-free frequency bands ensures that the NL900 & NL2400 are ready to use with no further certification requirements. Every unit is backed by a 30-day guarantee and full warranty with technical support.

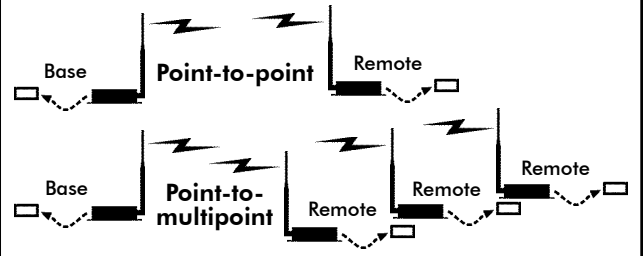


SPECIFICATIONS

PARAMETERS	900MHz MODELS	2.4 GHz MODEL
Standard interface	RS232 (DB9 male), RS485 or RS422 (DB9 female) (RJ-45 (NL900LAN))	RS232 (DB9 male), RS485 or RS422 (RJ11)
Frequency band	902 to 928 MHz	2.402 to 2.478 GHz
Modulation	FHSS FSK	FHSS FSK
Serial interface data rate	Up to 115.2 Kbps	Up to 115.2 Kbps
Output power	1000mW variable	200mW fixed
Input power	7Vdc to 18Vdc	7Vdc to 18Vdc
Power Consumption (@12VDC)	400mA Tx, 40mA Rx	400mA
Power Supply	AC transformer via 6-foot cable (183 cm)	AC transformer via 6-foot cable (183 cm)
Electrical requirements	Line voltage 100-120V (240V outside U.S.); Frequency 50-60 Hz	Line voltage 100-120V (240V outside U.S.); Frequency 50-60 Hz
Channels	Up to 32	Up to 77
Security	1-byte system ID, DES	8-byte system ID
Sensitivity	-99 dB @ full RF data rate	-90 dB @ full RF data rate
Range	Up to 20 miles (32 km)	Up to 2 miles (3.2 km)
Temperature	-40° to +80°C	-40° to +80°C
Humidity (non-condensing)	10% to 90%	10% to 90%
Dimensions	4.75 x 2.75 x 1.17 inches (121 x 70 x 30 mm)	4.75 x 2.75 x 1.17 inches (121 x 70 x 30 mm)
Weight	<6 oz. (<170 g)	<6 oz. (<170 g)
Antenna; connector	Dipole; RPSMA jack (female)	Dipole; RP-SMA jack (female)
Configuration software	Optional, for Windows OS	Optional, for Windows OS
Physical layer	10/100 BaseT (NL900LAN only)	N/A



RF ARCHITECTURE — NL900



ORDERING INFO

Select features from the list below to identify the appropriate part number. More product lines are available for industrial and commercial applications.

RF232® TRANSPARENT PROTOCOL

Change configuration commands: Configuration can be changed through a command/data interface signal or AT commands. Change-on-the-fly parameters include base or remote designation, destination MAC address, channel number (to communicate with a different base), enter/exit low-power modes, etc. Custom settings are available by user request. **Handshaking:** CTS to hold off the host; RTS to hold off the transceiver. Full modem-mode available. **In-range indicator:** Hardware link indication of remote in range of base.

ERROR HANDLING

Error detection: Multi-stage error detection with transmitter retries for RF system and raw data. Duplicate packets are filtered out when data is received more than once due to retries and missed ACKs. **Data encryption standard (DES):** DES uses an established algorithm and a 56-bit key stored in onboard EEPROM to protect data. Available in 900 MHz version only.

SETUP AND OPERATION

The complete system is comprised of a central base and any number of remote nodes that can operate in point-to-point or point-to-multipoint networks. Multiple sub-networks can be created by assigning unique radio addresses to specific device groups. RF Neulink is available to support in-system design and applications.

DESCRIPTION

PART

900 MHz Models

NL900 1000mW transceiver unit with standard interface	
RS232 (DB9 male)	NL900-1000-232
RS485 (DB9 female) stand-alone	NL900-1000-485
RS422 (DB9 female) stand-alone	NL900-1000-422
RJ45	NL900-LAN

2.4 GHz Model

NL2400 200mW transceiver unit with standard interface	
RS232 (DB9 male) stand-alone	NL900-200-232
RS485 (RJ11) stand-alone	NL900-200-485
RS422 (RJ11) stand-alone	NL900-200-422

