# LNL-2220

Overview

The LNL-2220 Intelligent Dual Reader Controller (IDRC) by Lenel provides a single board solution for interfacing one or two doors to an OnGuard® system. In addition, other I/O and reader interface modules can be added on the LNL-2220's downstream port to expand its capabilities. The LNL-2220 revolutionizes access control system architecture by allowing Ethernet connection directly from an entry location to the OnGuard server, while still providing the security, functionality, and modularity of Lenel's proven hardware platform. The LNL-2220 is scalable for any access control application, from the most basic to the most sophisticated. In the event of communication loss, the LNL-2220 allows nearly all local functionality to continue unimpaired until the server connection is restored.

Utilizing its native Ethernet communications and an advanced 32-bit processor, the LNL-2220 can communicate upstream to the host computer through its Ethernet port (with a throughput up to eight times greater than the fastest serial connections), or at up to 115.2 Kbps using RS-232 communication directly or through an external dial-up modem. The LNL-2220 can store up to 250,000 cardholders in non-volatile flash memory, and supports selective download for larger cardholder databases. The downstream RS-485 two-wire port can be used to connect up to 32 devices (maximum 64 doors).

Two on-board reader ports support Data1/Data0, Clock/Data, Bioscrypt RS-485 readers and the bidirectional RS-485 Open Supervised Device Protocol (OSDP) communications. Each LNL-2220 supports up to eight different card formats. The LNL-2220 includes eight inputs that support normally open, normally closed, supervised, and unsupervised circuits. In addition, four output relays support fail-safe or fail-secure operation.
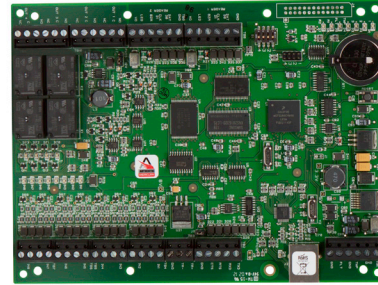
FEATURES & FUNCTIONALITY

Controller Functionality

- On-board Ethernet 10/100Base-T port provides up to 8 times greater throughput than serial-to-Ethernet converters. DHCP and fixed IP addressing supported.
- DNS device naming through DHCP extended commands
- 6 MB of available on-board, non-volatile flash memory
- Battery-backed, non-volatile storage of 50,000 events
- Firmware stored in flash memory, background download of firmware updates supported
- Supports up to 16 different formats (8 card formats and 8 asset formats)
- Biometric template storage support for Schlage Recognition Systems®, Bioscrypt®, and Identix®.
- Direct connection of Bioscrypt RS-485 devices
- Enhanced anti-passback capabilities
- Up to 32,000 access level permissions
- 255 holidays with grouping, 255 timezones, each with 6 intervals
- Elevator control support for up to 128 floors
- Individual extended held open and strike times (ADA required)
- Up to 9-digit user PIN codes
- 20 status LEDs
- 2 dedicated inputs for tamper and power failure status
- 12 or 24 VDC input power
- Advanced Encryption Standard (AES) 128-bit algorithm for communications

Reader Interface Functionality

- Supports Data1/Data0, Clock/Data and Lenel OSDP-compatible RS-485 readers and keypads
- 4 Form-C relay outputs, 5 A at 30 VDC
- Door contact supervision (open/closed) and REX push-button monitor for each door
- Strike control and auxiliary output for each door
- Bicolor reader status LED support plus beeper control, or 2-wire LED support
- On-board regulator allows 12 VDC reader power from 24 VDC power source
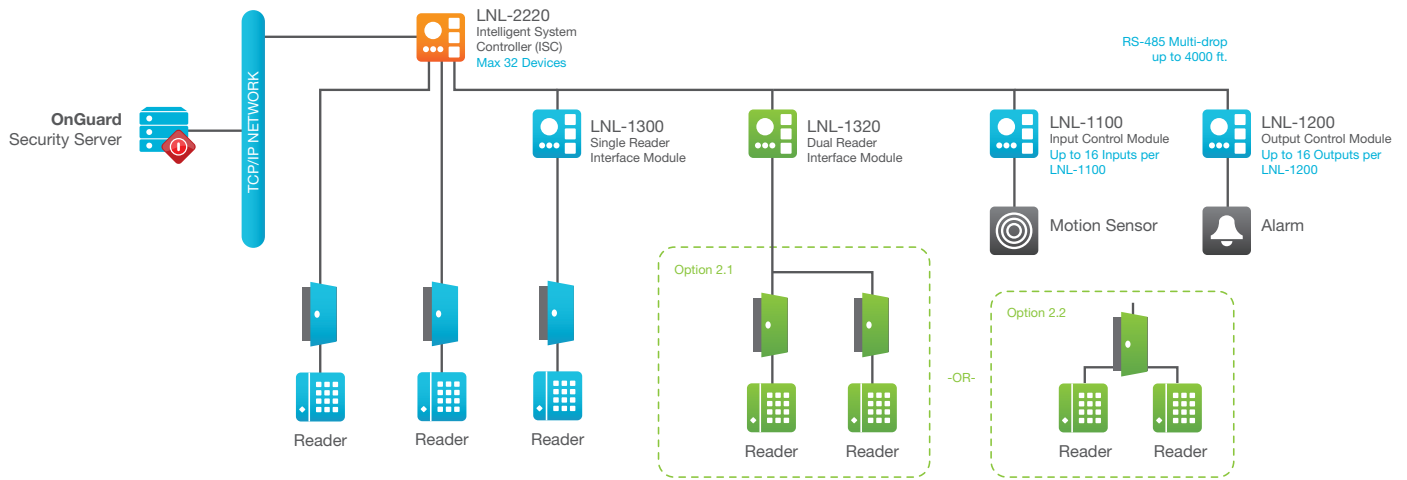
Controller Features

LNL-2220	6 MB On-board flash memory available for cardholder & asset database,
	50,000 event battery backed RAM for event log
Dial-Up Modem	
LNL-56KEXT	56 K external modem with cables
LNL-DC336K	12 VDC-powered/33.6 K external modem

Specifications

Primary Power (DC or AC)	* The LNL-2220 is for use in low voltage, power-limited, class 2 circuits only.
DC input:	12 or 24 VDC ± 15%. 500 mA maximum
AC input:	12 VAC ± 15%. 400 mA RMS
Memory and Clock backup	3 V lithium, type BR2325, BR2330, CR2330
Communication Ports	
Primary (Ethernet) Port:	10/100Base-T Ethernet high-speed port
Alternate Upstream Port 1:	RS-232 9600 to 115.2 Kbps async
Downstream Port 2:	RS-485 (2-wire) 9600 to 38.4 Kbps async
Inputs	
Tamper and Power Fail Monitors:	Unsupervised, dedicated
Door position, REX, and AUX:	8, each programmable as normally open or normally closed, supervised or unsupervised circuits
Outputs	
Relay outputs:	4 Form-C 5 A at 30 VDC relay outputs: 2 strike, 2 auxiliary

Reader Power	
DC output:	12 VDC, 125 mA regulated when 24 VDC powered, or 12 to 24 VDC 125 mA current limited
Reader Port Compatibility	Wiegand Data1/Data0, Magnetic Clock/Data, F/2F single-wire protocol, Bioscrypt RS-485,
	OSDP (Open Supervised Device Protocol RS-485)
Environmental	
Temperature:	Operating: 32° to 158° F (0° to +70° C)
	Storage: -67° to 185° F (-55° to +85° C)
Humidity:	0 to 95% RHNC
Mechanical	
Dimensions:	6 x 5 x 1 in. (152 x 127 x 25 mm)
Weight:	8 oz. (230 g) nominal
Approvals	UL 294, CE-marked, RoHS compliant
Supported Readers	Schlage Wireless - WA 5296, WA 5696, WA 5694, WA 993, WRI, WPR
Approvals:	FCC Part 15, CE, RoHS, UL 294, UL 1076, ULC CSA-C22.2, CAN/ULC-S319-05, cUL/ORD-C1076

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