64-LX CONTROLLER

Computrols LX Controllers are the culmination of years of Research and Development. The LX combines Computrols classic X-Line controller features with the latest in computer and electronics technology. Orders of magnitude bigger and faster than its predecessor, the LX brain brings true modern intelligence to HVAC controls. And for existing Computrols installations, the 64-LX is a 100% backward compatible drop-in replacement of the 64X. Simply unplug the 64X brain, plug-in the 64-LX, power up and go. No software upgrades. No reprogramming. No missing features.

Classic Product Features

4-in-1 Points
Each of the 64 points can be configured through software to be Analog In, Analog Out, Binary In or Binary Out—No Jumpers!

Two-Board Design
Computrols signature two-board design places all electronics onto one board for quick replacement.

Easily Addressable
(3) Rotary decimal switches (0-9) allow for simple addressing. No Hex. No Binary. Now supports fast IP network addressing.

Lifetime Warranty
Computrols quality guarantee continues.

Large Screw Terminals
No special screwdrivers, just simple secure terminations.

Board Status Indicators
Bright on-board LED's provide great feedback of critical controller systems.

New LX Features

Speed, Memory and Power
A 1 GHz ARM Cortex-A8 processor equipped with 4GB of on-board storage and a USB 2.0 port provides FASTER Input Sampling, FASTER PID Loops and FASTER Logic Statements. And for protocol interfaces, the 64-LX has the memory and processing power to handle 10 TIMES the number of points.

Network Security
While a built-in firewall allows the use of the 64-LX as a standalone controller on the real Internet, secure communications (SSL/TSL) bring robust network security into facilities.

Wire Check
Wire Check is a new hardware and software tool that looks for potential wiring problems, protects your controllers and end-devices, and then lets the installer know where to look for problems.

USB Port
A high-speed USB 2.0 port brings a world of integration possibilities to the LX controller. Integrate a host of plug-and-play devices on or near your equipment.
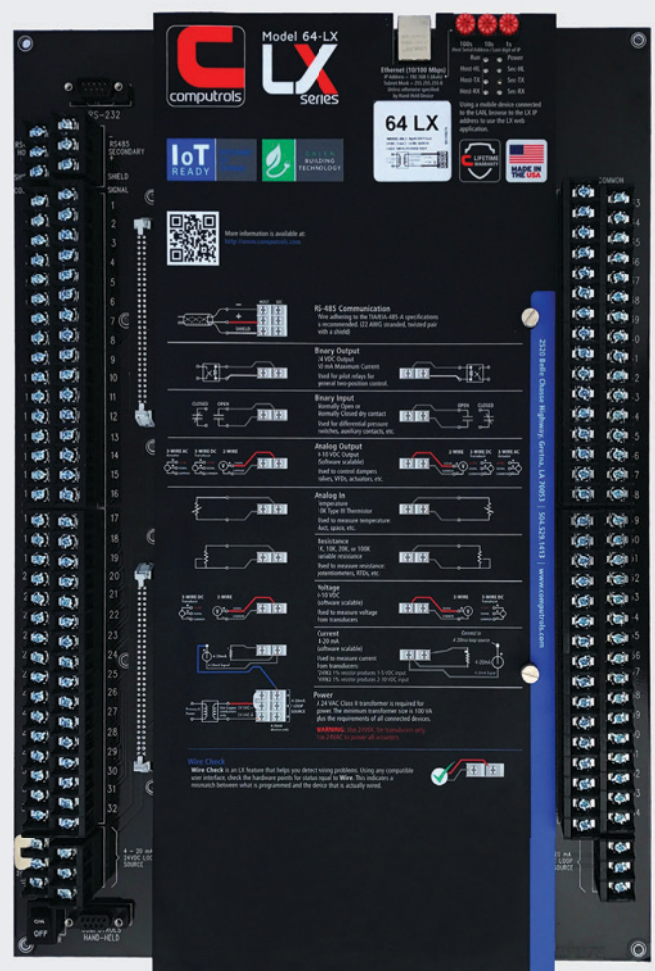
On-board Web Application
The LX runs a full on-board web server. Just pull up the controllers IP address in any browser—locally or remotely—and begin using the power of the LX web application.

Mobile Device App
In addition to support for the classic Hand-Held Terminal, LX is showcasing a new Android™ app that can do everything that an HHT can do, and much more.

IoT-Ready
Internet of Things (IoT) technologies are rapidly emerging. And because the LX brain runs a completely embedded version of a modern operating system, LX can be updated as new standards, protocols and device drivers are released.

LX Specifications

System Compatibility	Compatible with all versions of CBAS
Microprocessor	Sitara ARM Cortex-A8; 4GB non-volatile memory (expandable to 32GB); 512MB RAM
Communication Ports	10/100 Mbps RJ-45 Ethernet (100m max distance); Two multi-protocol RS485 serial ports; Local hand held terminal
Internet Protocols	TCP; UDP; DHCP; Ping; SNMP; HTTP; HTTPS; FTP
BAS Protocols	BASnet; BACnet; Modbus; OPTO-22
Point Configuration	All points software configurable as analog inputs, binary inputs, analog outputs, or binary outputs.
Analog Output Specifications	0-10 VDC voltage type
Binary Output Specifications	24VDC@50 mA
Analog Input Specifications	10K Ohm TYPE III thermistor; 0-10 VDC; 4-20 mA; 0-32K Ohm resistive (scalable)
Binary Input Specifications	Dry contact - switch closure; Pulse dry contact 10Hz max repetition rate; 100 ms minimum pulse width
Point Protection	250 VAC on each point terminal
Power Requirements	75VA@24VAC; 50/60 Hz Class 2 Transformer
Electrical Connections	Barrier terminal block 18 - 24 AWG 24 VDC loop source terminals (650 mA maximum)
Dimensions	6.5" W x 13.375" L x 1.25" H
Mounting	Mount in NEMA rated enclosure
Shipping Weight	5 lbs.
Environmental	32-158 Deg F, 10-90 %RH non-condensing

X / LX Comparison Chart

Feature Set	X-Line	LX	Compare
On-Board Hardware			
Main Processor	386EX	ARM Cortex-A8	
Processor Clock Speed	25 MHz	1GHz	**40 X**
Million Instructions/Sec (MIPS)	≈11	2000	**180 X**
Non-volatile memory	1M	4G	**4,098 X**
RAM	512 KB	512 MB	**1,024 X**
Additional Memory Type	Clock Chip	**Micro SD Card**	
Additional Memory	1 MB	32+ GB	**32,768 X**
USB Ports	-	**1**	
Networking & Communication			
Ethernet Speed	10 Mbps	10/100 Mbps	**10 X**
Network Security	Network Dependent	**Secure Sockets (SSL/TSL)**	
Max Serial Comm Speed	38.4 Kbps	115 Kbps	**3 X**
Serial Protocols	Different Firmware	**All Inclusive**	
Point Types			
4-in-1 (BI, BO, AI, AO)	✔	✔	
Thermistor/Resistance	✔	✔	
30 Volt Input (0-30 VDC)		✔	
Pulse Count (10 KHz)		✔	
Pulse Width (1 msec)		✔	
Point Features			
Overvoltage Protection	24 VAC	250 VAC	**10 X**
Point Sampling Rate	3 / sec	224 / sec	**75 X**
Noise Filtering	-	Median Filter	
A/D Resolution	12-bit	12-bit	
Max Points *	500	5000+	**10 X**
Wire Check **		✔	
DDC Speed			
PID Loop Speed	100 msec	≥ 1 msec	**100 X**
% Time used on DDC	75%	3%	**25 X**

* Max Points and other resources vary with application. This benchmark is for typical point usage in an HVAC application.

**Wire Check is a system of automatic tools for determining wiring problems.