



32-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 32-LX is a 100% backward compatible drop-in replacement of the 32X. Simply unplug the 32X brain, plug-in the 32-LX, power up and go. No software upgrades. No reprogramming. No missing features.



Classic Product Features

4-in-1 Points

Each of the 32 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 32-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 32-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.