

2070LDX CONTROLLER

35X/34X/33X/170 STYLE TRAFFIC SIGNAL CONTROLLER



OVERVIEW

The Q-Free 2070LDX Controller is a modern workhorse for advanced traffic signal operations that sets the scene for the connected world.

Now standard with a modern Velocity™ V⁵ ARM processor, the 2070LDX offers massively increased power and performance. Legacy PowerPC processors are available for agencies that require Caltrans TEES chip set compliance. Both options provide solid performance and the multi-thread capabilities you expect of a modern traffic signal controller.

The controller meets and exceeds current ATC, Caltrans, and NTCIP standards providing agencies with a robust, industry-leading, open architecture hardware platform.

The 2070LDX brings Ethernet ports, USB and serial connections to the front panel for ease of access.

Utilizing a Linux-based operating system that meets and exceeds current ATC, NEMA, and NTCIP standards, the 2070LDX Controller provides agencies with a robust, scalable platform to meet transportation needs today and tomorrow.

BENEFITS

- Fast, reliable intersection control
- Powerful CPU with expandable memory configurations
- Schedule updates or run live
- Install firmware and operating system updates without placing the controller in flash
- Compatible with ATC, Caltrans, and NEMA cabinets
- Exceeds latest ITE/NEMA/AASHTO ATC standard
- Unrestricted use license for MIBs
- Built and sourced in the USA for full BABA compliance



ARM processor
standard



Built-in web server



Advanced edge/
IoT capabilities



Secure
communication

MODERN PLATFORM

OPEN ARCHITECTURE

- Linux operating system
- Linux and API library
- Software development kit (SDK) provided at no charge to qualified ATC software developers
- Unrestricted use license for NTCIP MIBs

COMMUNICATION INTERFACES

- 3.3v DataKey socket
- 10/100 Mbit Ethernet ports (5)
- USB (4)
- SD Card (1)
- TEES compliant D type 25 pin C13S port

CABINET INTERFACES

- ATC cabinets
- Caltrans cabinets
- NEMA cabinets
- ITS cabinets

INDUSTRY STANDARDS

- ATC 6.25, ATC 5201 (current), ATC 5401 API as an option
- Exceeds Caltrans 2020 TEES (2070-1C)
- NTCIP 1201, 1202, 1211, and applicable base standards

TECHNICAL SPECIFICATIONS

Form factor:	EIA 19" rack mount
Dimensions* (HWD):	7" x 19" x 13" 18 x 48 cm x 33 cm
Power:	Variable power supply (89-250 VAC 50/60 Hz, or 48VDC)
Power connector:	2070-4A heavy-duty power supply
Temperature:	-40°C to +80°C

* Dimensions rounded to nearest 1.0

USER INTERFACE

- 2070-3D 16 line x 40 character LCD display
- 4x4 and 3x4 tactile keyboards

I/O MODULE OPTIONS

- 2070LDX includes 2070-2A/2E/2E field I/O module for parallel interface to 170/170E/2070 cabinets
- 2070LDX-2N includes a field I/O module for serial interface with ITS and NEMA TS 2 type 1 cabinets
- 2070LDX-N includes 2070-N1 extensions for TS 1 & TS 2 type 2 cabinets
- 2070LDX-B includes a field I/O module for interface to ITS cabinets and other RS-485 peripherals

PROCESSING & MEMORY

ENGINE BOARD CPU SPECIFICATIONS*		
	Velocity V ⁵ ARM	Legacy PowerPC
Processor:	Quad-core 1.6 GHz ARM Cortex A53 CPU with 800 MHz ARM Cortex M7 coprocessor	NXP MPC8248 32-bit, 400 MHz PowerPC Instruction
Neural Processing Unit for AI/ML:	✓	—
DRAM:	4,096MB (4GB)	128MB
Flash memory:	32,768MB (32GB)	64MB
Industry standards:	Exceeds Caltrans TEES functional specifications	Exceeds/Meets Caltrans TEES functional & chip set specifications

* All models fully 2070 hardware and software compliant with the latest ITE/NEMA/AASHTO ATC standard

