

XN-2 CONTROLLER

ARM-BASED NEMA TS 2, TYPE 2 ATC TRAFFIC SIGNAL CONTROLLER



◀ XN-2 Controller
with Velocity™ V⁵
ARM processor

OVERVIEW

The XN Controller is a modern workhorse for advanced traffic signal operations that sets the scene for the connected world.

Now available with a modern Velocity™ V⁵ ARM processor for massively increased power and performance or a legacy PowerPC processor.

Its open architecture platform organizes and improves traffic signal operations while reducing the amount of equipment in traffic cabinets through multi-application support for things like:

- Managing Ethernet traffic
- Monitoring detection devices
- Integrating with third-party devices

An OLED screen improves visibility in all conditions, during the day and at night.

Utilizing a Linux-based operating system that meets and exceeds current ATC, NEMA, and NTCIP standards, the XN-2 Controller delivers 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
- Exceeds current ATC standards
- Unrestricted use license for MIBs
- Built and sourced in the USA for full BABA compliance



ARM processor
available



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

USER INTERFACE

- 128 x 256 pixels OLED display (16x40 characters)
- 4x4 and 3x4 tactile keyboards

COMMUNICATION INTERFACES

- 10/100 Mbit Ethernet ports (4)
- USB (3)
- AUX Serial (1)
- SD Card (1)
- External SDLC port (NEMA cabinets)
- C12S SDLC/HDLC (ITS/ATC cabinets)
- RS232 external serial port (1)
- Integrated GPS/GNSS

INDUSTRY STANDARDS

- ATC 5201, current
- ATC API 5401
- NEMA TS 2-2016 v3.07
- NTCIP - 1201, 1202, 1211, and applicable base standards

TECHNICAL SPECIFICATIONS

Form factor:	Shelf mount
Dimensions* (HWD):	10.3" x 13.4" x 8.5" 26.2 x 34 x 21.6 cm
Power:	AC 90-135V, 60Hz±3Hz, 1.3A max. 1Ø Phase
Power connector:	Standard NEMA Type 2 'A'
Temperature:	-40°C to +80°C

* Dimensions rounded to nearest 0.1

ON-BOARD WEB SERVER

Secure, modern communications for traffic operators to access controller functions wirelessly or via wired Ethernet connections from any internet-enabled device (smart phone, tablet, laptop).

- 40 phases, 16 rings, 32 overlaps, 16 preempts
- HTTPS communication between device and Q-Free central system
- Advanced functionality comes standard
 - Master/closed loop
 - Peer-to-peer communications
 - Transit signal priority

See MAXTIME ic product sheet for more details.

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:	Meets/Exceeds NEMA and ATC standards	Meets/Exceeds NEMA and ATC standards

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

