

# XN ITS CONTROLLER

## ATC TRAFFIC SIGNAL CONTROLLER



### 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 offering 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 and NTCIP standards, the XN Controller provides agencies with an industry leading, robust and scalable open-architecture platform to meet transportation needs today and tomorrow.

### BENEFITS

- Fast, reliable intersection control
- Powerful CPU processor with expandable memory
- 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



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 (TS 2 detection devices only)
- C12S SDLC/HDLC (ITS/ATC cabinets)
- RS232 external serial port (1)
- RS232 ASYNC consol port (1)
- Integrated GPS/GNSS

INDUSTRY STANDARDS

- ATC 5201, current
- ATC API 5401
- NTCIP - 1201, 1202, and applicable base standards

TECHNICAL SPECIFICATIONS

Form factor:	Shelf or rack mount
Dimensions* (HWD):	Rack Mount 7" x 18.8" x 7.8" 17.8 x 47.8 x 19.8 cm
Power:	AC 90-135V, 60Hz±3Hz, 1.3A max. 1Ø Phase
Power connector:	Standard power cord
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 <sup>5</sup> 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

