AI Edge Controller

XNC Professional Series

Overview

The XNC Professional Series AI edge controllers are advanced IP programmable controllers which are part of Adveco LUBAN solutions. The controllers are designed for a wide variety of complex applications, such as cooling, heating, water supply and drainage, lighting, air handling unit and ventilation systems, etc. These devices feature RS485 ports for BACnet™ MS/TP, Modbus RTU, Ethernet ports for MQTT, BACnet™ IP and Modbus TCP devices,

Equipped with built-in real-time clock, the XNC Professional Series controllers enable time-based related functions, such as schedules, calendars, alarms, and trends. The controllers continue to perform time-based operations even when disconnected from the system network. Furthermore, the super-capacitor inside of the XNC Professional Series controllers also can retain the clock up to 72 hours after power loss.

These controllers can be mounted on a DIN rail in horizontally orientations.

Features

- Delivers higher performance with Dual-core ARM Cortex-A7 32-bit CPU.
- BTL tested BACnet communication on BACnet IP or MS/TP, conforms to BACnet™ Standard ANSI/ASHRAE 135 protocol version 1.20 (ISO 16484-5).
- BACnet Auto-Discovery enables seamless integration of new devices with no manual configuration.
- Adaptable to Linux/Open Harmony operating system for diverse market requirements.
- Engineering and commissioning with the XControl tool using graphical function charts.
- 512MB memory and 4GB flash support standard or custom complex applications downloading from XControl.
- Integration of Modbus data points via RTU and / or TCP.
- End-of-Line (EOL) switch enables the controller to act as termination device on the communication bus.
- Pluggable terminal blocks for easy installation and maintenance.
- Modern design LED to show the operational status of the controller.
- Standard DIN rail mounting.

Ordering Information

Product Number	Point Capacity (Max)	Ethernet Port	RS485 ↓ Port	USB Port	Onboard I/O
BAC-3551-150	1000	2	3	1	9UI 2DO 4AO
BAC-3551-240	1000	2	3	1	16UIO 5DI 3DO
BAC-3451-030	1000	2	3	1	N/A
BAC-3551-151	3000	2	3	1	9UI 2DO 4AO
BAC-3551-241	3000	2	3	1	16UIO 5DI 3DO
BAC-3451-031	3000	2	3	1	N/A

Remark: RS485 ↓ Port means the connected extension port of the controller

Product Specification

Processor	Dual-core ARM Cortex-A7 32-bit
Memory	512MB RAM and 4GB flash memory
Operating System	Linux / Open Harmony
Power Requirement	24VAC±20%, 50/60Hz; 24VDC (-10%~+20%)
Power Consumption	12 VA (Typical)
Super Capacitor	Super-capacitor maintains power to the onboard real-time clock for a maximum of 72 hours when supply power to the controller is disconnected.
Environment	**Operating:** -4°F to 122°F (-20°C to 50°C); 10 to 90% RH non-condensing **Storage:** -40°F to 176°F (-40°C to 80°C); 5 to 95% RH non-condensing
Communications Protocol	MQTT, BACnet IP, BACnet MS/TP, Modbus TCP, Modbus RTU
Terminations and Ports	**I/O:** Pluggable screw terminal blocks **Power Supply & RS485:** 2-wire or 3-wire pluggable screw terminal blocks **Ethernet:** RJ45 ports
Protection	IP20(IEC529)
Housing Material	ABS+PC
Certification	CE, RoHS, REACH, BTL(under certification for B-ASC)
Mounting	35mm DIN rail mounting (horizontal orientation)
Dimensions (W×H×D)	160mm ×149mm × 50 mm

Input/Output	
UI	0-10VDC, 4-20mA, Resistance, Dry contact

AO	0-10VDC, 4-20mA
DO	TRIAC output 24 VAC (requires external power supply)
DI	Dry Contact, Pulse counting (Max.50Hz)
UIO	**Input:** 0-10VDC, 4-20mA, Resistance, Dry contact **Output:** 0-10VDC, 4-20mA
UI Resolution	24 bit
AO Resolution	16 bit
UIO Resolution	**Input:** 16 bit; **Output:** 13 bit

Dimensions (mm)