

# T3-Nano Programmable Modbus Bacnet IP RS485 Router

## Description

T3-nano controller is a programmable controller and a low-cost high performance programmable controller. It can stand DDC panel alone or in a multiple network system with full communication capabilities. The multiple communication ports allow the controller to operate on a network or host sub networks and to communicate with local and remote operators simultaneously. Setup and programming are done on a PC not necessary to connect to live hardware as it is the case with many systems. when the program is ready for on-site testing, connect it to a live panel and download the T3000 software. Programming can be done remotely over the network and modem connections as well. The network system is very flexible and economical for the installation.



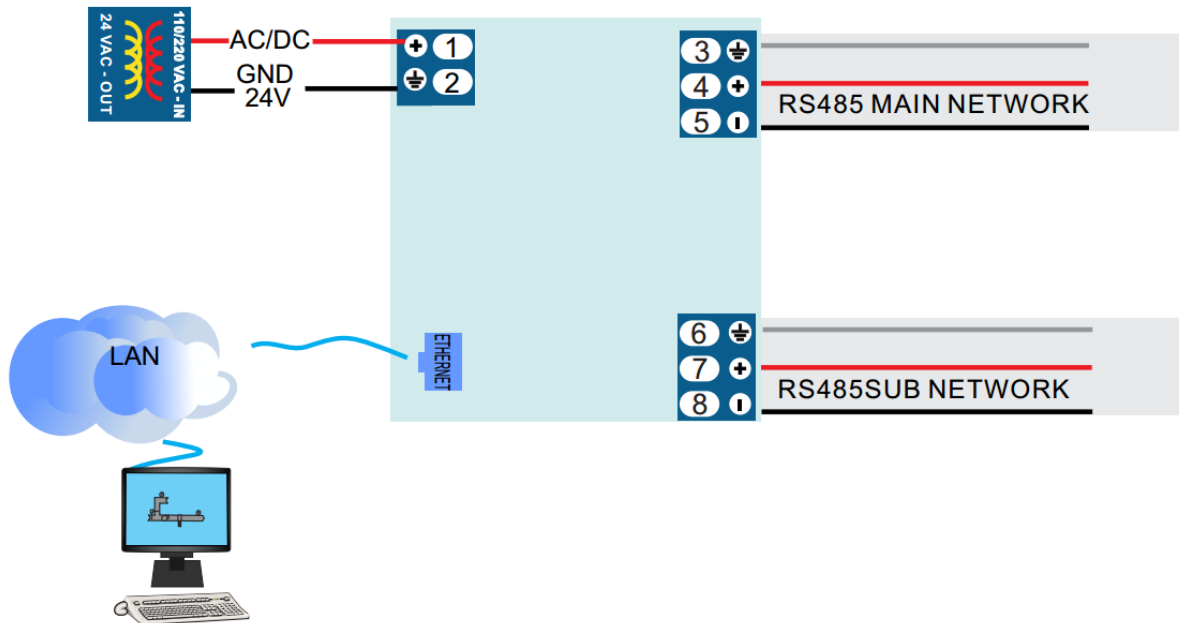
## Highlights

- Sturdy construction, consistently gets good comments from our clients.
- UL listed ABS enclosure with rubberized texture creates a high end feel
- Connect over Ethernet or RS485
- Supports Modbus and Bacnet protocols simultaneously.
- Starter space source code is available
- T3000 front end is free and open source: <http://tinyurl.com/n7kkqp6>
- Compiled version of the front end is here: <https://tinyurl.com/y7uyu9n3>

## Specifications

Interactive dynamic color graphics
Industry standard Bacnet & Modbus protocols
User programming, built in networking features
16 Control Basic programs
8 Weekly routines, 4 annual routines
128 User variables
16 PID controllers
8 passwords or users
Power Supply Voltage: 24V AC/DC
Maximum Power Consumption:6W
RS485 sub baudrates: 9600, 19200
RS485 main baudrates: 1200~921600

## Wiring Diagram



### Introduction to Power over Ethernet (POE)

Power over Ethernet (POE) is a technology that enables the simultaneous transmission of data and electricity over Ethernet cables. Here is an introduction to it:

#### Working Principle:

The POE power supply system mainly consists of a Power Sourcing Equipment (PSE) and a Powered Device (PD). The PSE is responsible for injecting electricity into the Ethernet cable, typically installed in devices such as network switches. The PD on the other hand, is a device capable of receiving electricity, such as wireless access points and IP cameras. The PSE identifies whether a device is a POE-supported device by detecting its characteristics. Once confirmed, it supplies the corresponding amount of electricity according to the PD's requirements.

#### Power Supply Methods:

**Mid-span Powering:** A POE injector is added in the middle of the Ethernet cable to inject electricity into the cable without affecting data transmission. This method is suitable for existing network cabling and does not require the replacement of switches and other devices.

**End-span Powering:** A switch with POE functionality is used to directly transmit both electricity and data to the powered device. This method is convenient for centralized management and maintenance and is a more common power supply method.

#### Advantages

**Simplified Cabling:** Only one Ethernet cable is needed to transmit both data and electricity simultaneously, reducing the laying of power cables and lowering the cost and complexity of cabling.

**Flexibility and Convenience:** It enables convenient power supply to devices in the network, without being restricted by the location of power outlets, making it easier for device installation and movement.

**Safety and Reliability:** The POE power supply system has functions such as overcurrent and overvoltage protection ensuring the safe operation of devices. At the same time, it also reduces potential safety hazards such as electrical fires.

Dimension

