

PLATINUM™ Series Demonstrator



Industry Leading Performance with Best in Class Ease of Use

**CNPT DEMO Series
Demonstration and
Evaluation Kit**



- ✓ Up to 20 Samples per Second, 24-Bit ADC
- ✓ 32 Bit, 120 Mhz ARM Processor
- ✓ USB, Serial and Ethernet Communication Ports
- ✓ Peltier Thermoelectric Heater/Cooler Unit
- ✓ Front Panel Pushbutton Digital Input
- ✓ 6V Indicator Lamp Alarm Indicator
- ✓ 4 to 20 mA Input Remote Setpoint with Potentiometer Adjustment
- ✓ Operates on 12 Vdc, 2 Amp—Non-Hazardous Power
- ✓ Current Limited Control Signals
- ✓ Pre-Wired
- ✓ Intuitive “Smart” Menu Flow
- ✓ Bright 3-Color LED Dual Display (RED, GREEN, and AMBER)
- ✓ Panel Mounted USB and Ethernet Connectivity
- ✓ Totally Firmware Configurable—No Jumpers to Set

PLATINUM Series controllers offer unparalleled flexibility in temperature and process measurement and control. While extremely powerful and versatile, great care has gone into designing a product that is very easy to set-up and use. The PLATINUM Demo & Training unit provides

*Special Pricing
Available for Schools
Offering Control
Theory Training*



CNPT-DEMO with CN8DPT-144-C24-EIP-DC controller, shown smaller than actual size.

a fully integrated temperature control system suitable as a platform to investigate the use of closed loop (PID) and simple on/off temperature control in both heating and cooling applications.



PID setup screen.

The demo unit includes a CN8DPT-144-C24-EIP-DC controller, powered by 12 Vdc, 2A universal AC to DC adaptor. It has

a thermoelectric heating/ cooling element capable of 5 to 50°C set-point and a Type K thermocouple for temperature readings. The unit comes with panel mounted USB and ethernet connectivity, an alarm indicator, a 4 to 20 mA remote set-point potentiometer, a pushbutton digital input, and an aluminum plate allowing the user to feel the temperature response.

A powerful 32-bit, 120 Mhz ARM processor provides an full PID control process with auto-tuning and a fuzzy logic based adaptive control algorithm that automatically adjusts and optimizes the control loop parameters based on external environmental or control system deviations.

A comprehensive set of alarm functions may be used to trigger output signals and/or modify the display colors for above, below, in-band and out-of-band conditions. Physical outputs may be assigned to Alarm, PID, ON-OFF control or auxiliary output functions.



PLATINUM monitor front panel.

An advance multi-stage ramp and soak sequencer supports up to 99 profiles of 8 segment ramp/soak sequences. Profiles may be linked to provide extended sequences and auxiliary outputs may be triggered based on individual Ramp or Soak states to provide external control over blowers, mixers or other auxiliary control functions.

The CN8DPT features a large, 3-color (RED, GREEN, and AMBER) programmable LED display with the capability to change color and/or change the state of designated outputs when an alarm is triggered.

An embedded ethernet connection allows the unit to connect directly to an ethernet network and transmit data in standard TCP/IP packets, or serve web pages over a LAN or the internet. The USB connection allows connecting the unit to the Windows based PLATINUM configurator software for configuration and monitoring as well as supporting USB based 'thumb drives' for directly transferring configuration data.

The PLATINUM Series family may be fully configured using an integrated 4 button keypad using a structured menu system, optimized to navigate to only those parameters applicable to the selected configuration.

The PLATINUM configurator software may be connected thru the USB, serial or ethernet port to provide a Windows based PC application to provide a point-and-click configuration interface, performance charting and logging and the ability to load and save configuration files compatible to the PLATINUM USB file transfer protocol.

- ✓ Downloadable Configurator Windows® Application Software
- ✓ Fully Configure all PLATINUM Functions/Parameters
- ✓ Auto-Connect Through USB Channel
- ✓ Load/Save PLATINUM Configuration Files
- ✓ Performance Tracking (Charting) with Data Capture



Multi ramp and soak.

Specifications

Display: 4-digit, 9-segment LED

Environmental Conditions:
0 to 50°C (32 to 122°F), 90% RH non-condensing

Max Power Consumption:
24 W (universal AC to 12 Vdc power adaptor included)

Input: Type K thermocouple

Resolution: 0.1° temperature

Temperature Stability, Thermocouple @ 25°C (77°F):
0.05°C/°C (cold junction compensation)

A/D Conversion: 24-bit sigma delta

Reading Rate: 20 samples per second

Digital Filter: Programmable from 0.05 seconds (filter = 1) to 6.4 seconds (filter = 128)

Setpoint Adjustment:
-9999 to +9999 counts

Warm-Up to Rated Accuracy:
30 mins

Remote Setpoint: Connected to front panel potentiometer (4 to 20 mA)

Digital Input: Connected to front panel pushbutton

SPDT Relay: Connected to front panel indicator

DC Pulse1: Connected to PWM controlled Peltier driver (power to heater/cooler)

DC Pulse2: Connected to heat/cool Peltier control circuit (polarity control)

Activation Voltage: Provides power to 4 to 20 mA input and Indicator Light

COMMUNICATIONS

USB: Female micro-USB, host or device (VCD)

Ethernet: Standard RJ45, IEEE 802.3 10/100 Base-T auto-switching, TCP/IP, aRP, HTTPGET

Serial: RS232/RS485, 1200 to 115k baud

Protocols: TRODEKS ASCII, MODBUS® ASCII/RTU PELTIER HEAT/COOL ELEMENT

Power: 12 Vdc @ 1.5 Amp (current limited)

Temperature Range: 5 to 50°C

Dimensions: 23 x 30 x 16.2 cm (9 x 11.8 x 6.3")

Weight: 2.05 kg (4.52 lb)

To Order

Model No.	Description
CNPT-DEMO	Platinum demonstrator
CNPT-DEMO-KIT	Platinum demonstrator with pelican case

Comes complete with CN8DPT-144-C24-EIP-DC controller and software.