



Benchtop Configuration, shown with feet and tilt stand is 5-1/2" x 10" x 10"

## PRODUCT DATA SHEET

# Synergy Nano

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### MULTI-CHANNEL PROCESS CONTROLLER AND DATA LOGGER FOR PRECISION TEMPERATURE TEST

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#### DESCRIPTION

The Synergy Nano equips temperature chambers and thermal platforms with capable and reliable controlling functionality. The flexible Nano supports the ability to optimize equipment and processes. They are feature rich while still being easy to use. Features include logging, configurable inputs and outputs, alarms, displays, remote programmability options plus easy to build and reproduce local test profiles. Module features:

##### LCD

- LCD Type: Color Display
- Backlight: LED
- Touch Screen Type: Resistive

##### USB Device

- USB Flash Memory for program & log files
- USB Mouse

##### Universal Sensor Inputs

- RTD's
- Thermocouples
- Signal Conditioner, 5V, 10V, 4-20mA

##### Auxiliary Outputs (6)

- 0 to 24 VDC max

##### Event Outputs (6) Optional

- Hot and Cold indication lights triggered by temperature
- Purge Gas on/off state triggered by temperature

##### Data Logging

- Sample Interval: 1 Second to 60 Minutes
- Long duration logging runs
- Data: Process Variables, Process Setpoints, PID Variables & Constants, UUT T-Type T/C

##### Alarm Types

- Open Sensor
- High/Low Process Limit
- High/Low Deviation Limit
- User Programmable Alarms

##### Communications

- 10/100 BaseT Ethernet
- RS - 232 Communications
- IEEE 488 (Optional)

##### Programming

- Windows-friendly program file names
- Step Types: Set Point, Jump Loop, Auto Start, Hold, Pause, and Stop
- Software Features: Real Time clock with battery backup, automatic resume after power failure, many preloaded configuration files

##### Synergy Nano Controller Options:

- Synergy Lab Manager Software
- Synergy UUT Thermocouple Monitor
- Synergy LabVIEW Driver
- Synergy 488 GPIB option

**Controller is universal 120-230 Volts AC. Platforms and Chambers are typically not universal voltage.**

#### Available Controller Configurations

- Standard Bench Top with Tilt Bar
- 3U 19 Inch Rack Mount (example shown, next page)
- Chassis Mounted
- Independent Safety Shutdown (next page)
- Dual Zone Capability (next page)
- Custom Controller Umbilical Length (next page)
- Umbilical Secondary In-line Sensor
- High Current for Faster Heating
- IEEE 488 GPIB Board

#### Available Controller Configurations

- Advanced Temperature Control Algorithm
- 16-Channel Temperature Monitor, up to 64 Channels
- Extended Temperature Ranges
- Cryogenic or Mechanical Cooling
- Purge Gas On/Off State Triggered By Temperature
- Hot and Cold Indication Lights Triggered By Temperature (next page)
- Retrofit Controllers for Aging Systems
- Hybrid Benchtop Chamber Dual Zone
- Chambers, Thermal Platforms and more

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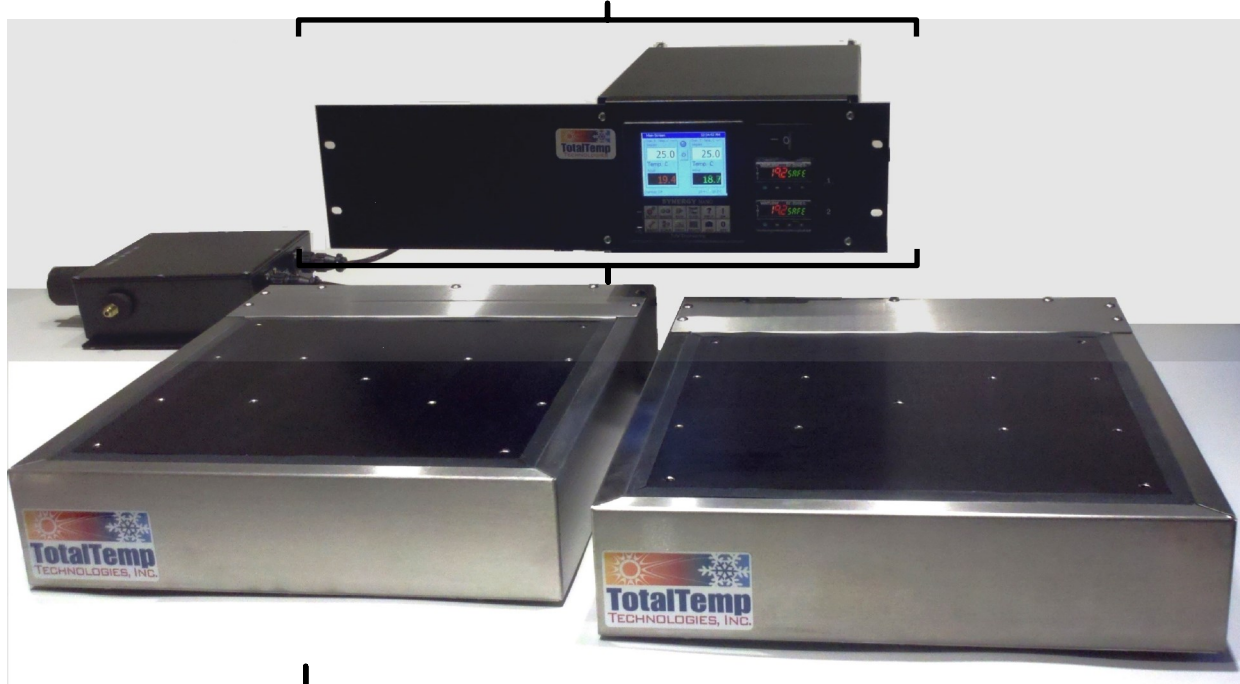


## PRODUCT DATA SHEET

# Synergy Nano

### Available Controller Configurations

3U 19 Inch Rack Mount with Dual Zone Capability and Two Independent Safety Shutdown Limit Controllers. Due to the limitation of cryogenic valves needing to operate in only a few orientations below left is a remote valve box that allows the Thermal Platforms to be oriented in any direction. Shown with two 12" x 12" SD144 cryogenically cooled Thermal Platforms.



Nano Controller in standard housing with Custom Length Umbilical



Controller can indicate Hot/Cold safety status at platform panel (SD288 Thermal Platform shown has a 12" x 24" surface)



TotalTemp also offers the [EZ-ZONE PM Controller](#) a cost-effective temperature controller for manual single setpoint

More Options & Accessories: <https://www.totaltemptech.com/thermal-platforms-coldplates-options-and-accessories/>

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