

## SmartZonePLUS EC1

## Commercial & Residential HVAC Expandable Zoning System up to 33 Zones

### General Description

The **SmartZonePLUS™** family of residential and light commercial zone controllers provides reliable control of up to thirty-three (33) zones from a single forced-air HVAC system. All electronic boards include LED displays with full text for status monitoring and diagnosis of the zoning system and equipment. Each thermostat, equipment terminal and zone damper terminal has color-coded LEDs for easy monitoring of all thermostats and system status. A supply air plenum temperature sensor is included with each EC1 (Equipment Controller) for constant monitoring of supply temperature. XCI's exclusive Electronic Limit Control™ (ELC) technology protects the system compressor or heat exchanger from potential issues associated with over-cooling and over-heating. Fresh air control is also integrated into the **SmartZonePLUS™** EC1 controller. Indoor air quality is improved as pushbuttons allow for quick and easy adjustment of high and low cut-out limit fresh air temperatures as well as fresh air timing. XCI's unique **ECONOMY** mode allows the SmartZonePLUS system to be configured for maximum efficiency.

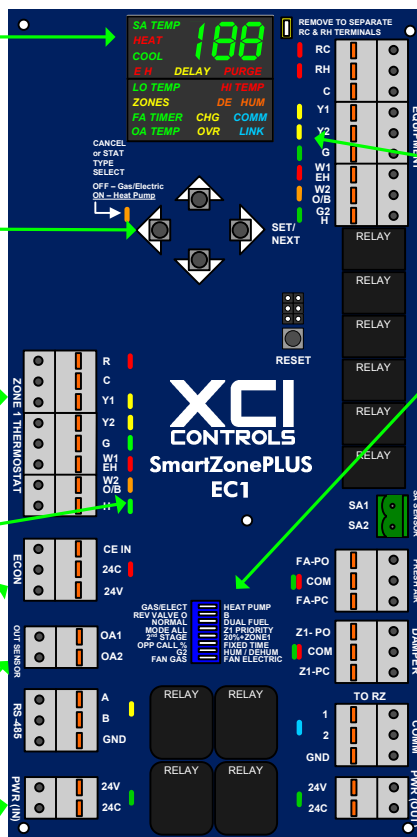
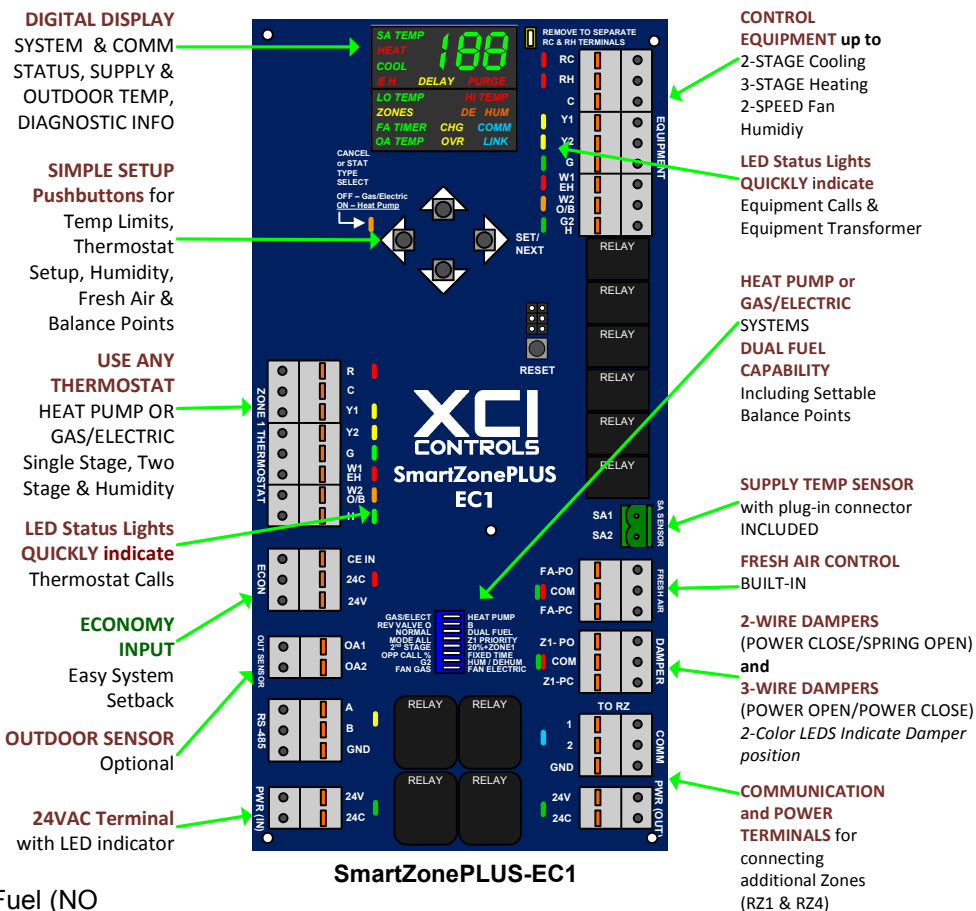
### Flexible Installation

- UP to 33 Zones
- Same Controller Handles Heat Pump, Dual Fuel (NO Dual Fuel Kit required) and Gas/Electric Systems
- Supports up to 3-Stage Heating and 2-Stage Cooling Equipment
- Configurable Balance points and Fresh Air Temp limits
- Humidity Control from Zone 1 Thermostat
- Simple Pushbutton and Dipswitch Configuration
- Quick-Connect Screwless Terminals
- Innovative Enclosure Design with Multiple Wiring & Mounting Options

### Simple Service

- Monitor Entire System from SmartZonePLUS EC1 Panel, including Supply Air Temp, Cut-Out, Purge and Fresh Air Conditions, Equipment Mode
- Color Coded Diagnostic LED Indicators for Each Thermostat Call
- Two-Color LED Indicators for Each Damper Position
- Electronic Limit Control™ (ELC) Protects Compressor and Heat Exchanger

### SmartZonePLUS EC1 Equipment Control Board



SmartZonePLUS-EC1

### Easy Operation

- Gas/Electric and Heat Pump Thermostats
- Built-In Adjustable Fresh Air Damper Control from 0 to 60 Minutes per Hour with Outdoor temperature limits
- Intelligent Staging Based on Supply Air Temperature and Time or Zone 1 thermostat.
- Automatic Changeover for Maximum Comfort
- Pushbutton ELC™ for Adjustable Temperature Cut-Outs
- Monitor # of cool calls, # of heat calls, # of total zones, minutes before changeover, outdoor air temp

### Convenient Customer Features

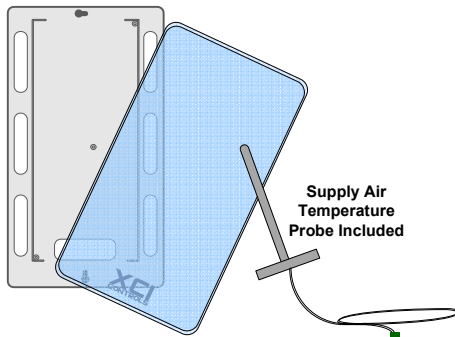
- Unique **ECONOMY** Mode for optimum efficiency
- Customer Never Needs to Use the Control Panel
- Selectable Zone-1 Priority for More Customer Control
- Enable Emergency Heat from Heat Pump Thermostat
- Superior 5-Year Limited Factory Warranty

### SPECIFICATIONS

POWER	EC1	14VA MAX (350 mA @ 24VAC)
	SYSTEM	14VA + Thermostat (3VA) + Damper (3 to 10 VA) = Total Transformer Size
	PROTECTION	Integrated Electronic Auto-Reset Fused links (Field supplied transformer should also be fused)
OUTPUTS	EQUIPMENT	<b>2 AMP @ 24VAC Contact Rating</b> RH – 24VAC HOT from Heating Transformer on Equipment (RED) RC – 24VAC HOT from Cooling Transformer on Equipment (RED) C – 24VAC COMMON from Transformer on Equipment (none) Y1 – 1 <sup>st</sup> Stage Compressor (YELLOW) Y2 – 2 <sup>nd</sup> Stage Compressor (YELLOW) G – Fan (GREEN) W1/EH – 1 <sup>st</sup> Stage Heat OR Emergency Heat (RED) W2/OB – 2 <sup>nd</sup> Stage Heat OR Reversing Valve (RED) G2/H – High Speed Fan OR Humidity Control (ORANGE)
	DAMPERS	<b>10 AMP @ 24VAC Contact Rating (40VA)</b> Power-Close / Spring-Open Dampers (10VA) Power-Open / Spring-Close Dampers (10VA) Power-Open / Power-Close Dampers (3VA)
	COMMUNICATION	COMM – 3 wire reliable communications to EC1 (BLUE) [Use Cat5 Cable ONLY] RS485 – External RS485 port for PC or automation system interface
INPUTS	THERMOSTAT	<u>LABEL – DESCRIPTION (LED COLOR)</u> R – 24VAC HOT (RED) C – Common (NONE) Y1 – 1 <sup>st</sup> Stage Compressor (YELLOW) Y2 – 2 <sup>nd</sup> Stage Compressor (YELLOW) G – Fan (GREEN) W1/EH – 1 <sup>st</sup> Stage Heating OR Emergency Heat (RED) W2/OB – 2 <sup>nd</sup> Stage Heating OR Reversing Valve (ORANGE) H – Humidity Control (Orange)
	ECONOMY	CE INPUT – System Wide Economy Mode (RED)
	TEMPERATURE	<b>10K Type III Thermistor</b> SA Sensor – Supply Air Temperature Sensor (Provided with EC1) OA Sensor – Outdoor Air Temperature Sensor (Optional)
CONFIGURATION	DIP SWITCHES	Gas/Electric or Heat Pump Reversing Valve O or B Normal or Dual Fuel for Heat Pump Priority for ALL Zones or for Zone ONE Allow 2 <sup>nd</sup> Stage ALWAYS or ONLY with 20% Calling Zones Opposing Call Time Dynamic % Changeover or Fixed time Variable Speed Fan Control or Humidity Control Fan Gas (with plenum switch) or Fan Electric (with EC1)
	DISPLAY MENU	Supply Air Temperature Outdoor Temperature Zones calling for Heat/Cool Total Zones Change Over time Low Temp / High Temp Cutouts Humidify / Dehumidify Fresh Air

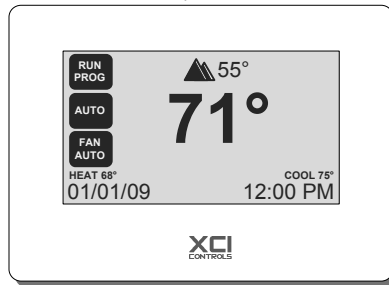
#### Clear Cover Plastic Enclosure

Included with SmartZonePLUS EC1



#### TrueTouch Thermostats

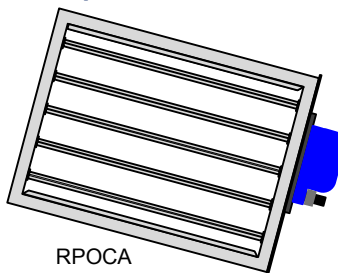
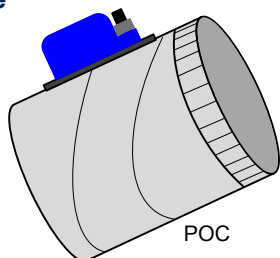
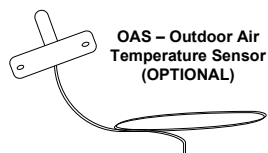
Optional



TSZ-2 w/ Wireless Outdoor Temp Sensor

#### SmartZone Dampers

#### Outdoor Temperature



### Part Numbers

- **EC1**  
SmartZonePLUS-EC1 (Equipment Controller)
- **EC1-SP**  
SmartZonePLUS-EC1 w/ SmartPanel Bracket
- **RZ4**  
SmartZonePLUS-RZ4 (4-Zone Expander)
- **RZ4-SP**  
SmartZonePLUS-RZ4 w/ SmartPanel Bracket
- **RZ1**  
SmartZonePLUS-RZ1 (1-Zone Expander)
- **RZ1-SP**  
SmartZonePLUS-RZ1 w/ SmartPanel Bracket

### Other References

- **SmartZonePLUS System Manual** for a full guide to this product
- **SmartZonePLUS Quick-Start Guide** for a step by step process for installation
- **SmartZonePLUS EC1 Quick-Reference & RZ Quick-Reference** for a brief overview of this product answering most installation questions
- References available at [xcicontrols.com](http://xcicontrols.com) or by calling toll free 866-924-4822

### Accessories

#### Sensors

- SmartZonePLUS-Outdoor Temperature Sensor [OAS]

#### Dampers

- Round Power-Close/Spring-Open [SZD]
- Round Power-Open/Power-Close [POC]
- Rectangular Power-Open/Power-Close [RPOCA]
- Static Pressure Controlled Bypass [SPC]
- Barometric Bypass [BBB]
- Fresh Air [FAD]

#### Thermostats

- **TrueTouch** touch-screen thermostats [TSZ-1, TSZ-2, TSH-2]
- **NetworkThermostats** for PC based control

### Included with EC1

- Plastic Enclosure or SmartPanel Bracket for multiple mounting options
- Supply Air Temperature Sensor Probe with pluggable connector
- SmartZonePLUS EC1 & RZ Quick-Reference
- Superior 5-Year Limited Factory Warranty

## SmartZonePLUS RZ1 & RZ4

## Commercial & Residential HVAC Expandable Zoning System up to 33 Zones

### General Description

The **SmartZonePLUS™** family of residential and light commercial zone controllers provide reliable control of up to thirty-three (33) zones from a single forced-air HVAC system. The RZ4 expander module includes an LED display with full text for status monitoring and diagnosis of each zone as well as equipment mode. The RZ4 is fully communicating with the equipment controller (EC1). This allows each RZ4 to be mounted near the zones which it serves. This requires less stat wire and damper wire on large projects. On large projects, SmartPanel™ allows stowaway installation with easy wiring and locking door (see SmartPanel™ Spec Sheet). Heavy-duty damper relays allow multiple dampers to be connected (parallel daisychain) when several dampers are required on each zone. Permanent Comfort/Economy mode can be applied to all four zones or individually applied Comfort/Economy mode can be operated through each thermostat for true utility savings.

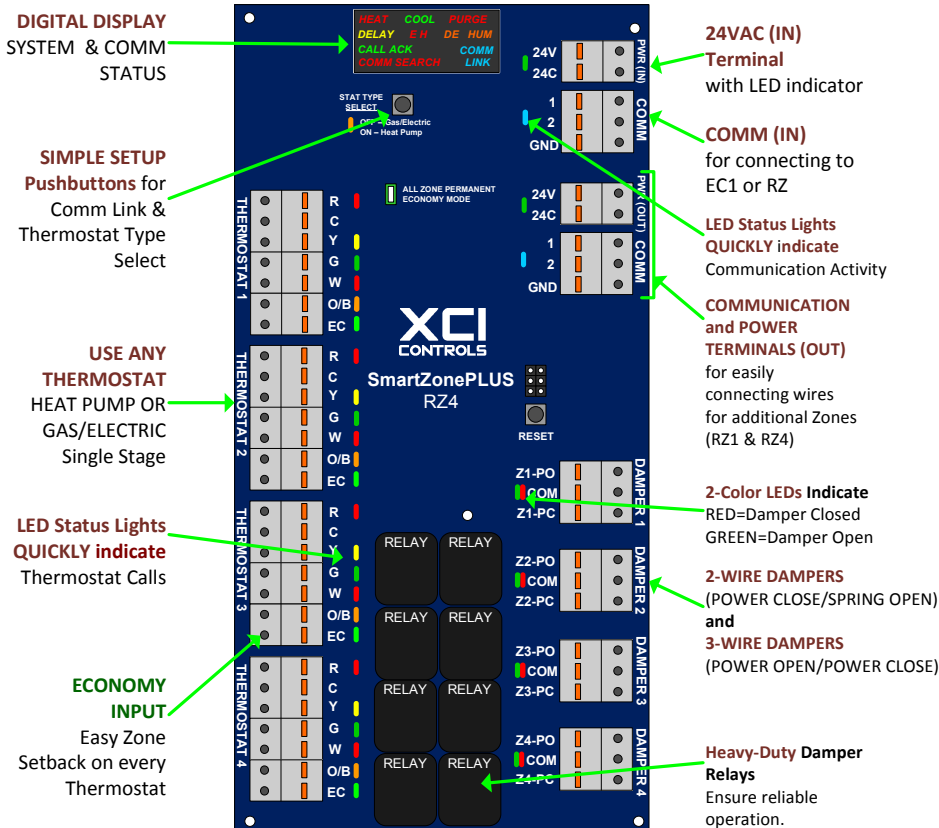
### Expandable Installation

- UP to 33 Zones
- Same Controller Handles Heat Pump, Dual Fuel (NO Dual Fuel Kit required) and Gas/Electric Systems
- Supports up to 3-Stage Heating and 2-Stage Cooling Equipment
- Configurable Balance points and Fresh Air Temp limits
- Humidity Control from Zone 1 Thermostat
- Simple Pushbutton and Dipswitch Configuration
- Quick-Connect Screwless Terminals
- Innovative Enclosure Design with Multiple Wiring & Mounting Options

### Simple Service

- Monitor System Status from every SmartZonePLUS RZ Panel, including Equipment Mode, Heat, Cool, Emergency Heat, Delay, Purge, Humidity, Call Acknowledgement and Comm status
- Color Coded Diagnostic LED Indicators for Each Thermostat Call
- Two-Color LED Indicators for Each Damper Position

### SmartZonePLUS RZ4 4-Zone Expander



SmartZonePLUS-RZ4 (RZ1 also available)

### Easy Operation

- Link communications to EC1 with one button push
- Set thermostat type for entire RZ board with a 2 second button push
- Intelligent Staging Based on Supply Air Temperature and Time or Zone 1 thermostat.
- Automatic Changeover for Maximum Comfort
- Electronic Limit Control™ (ELC) Protects Compressor and Heat Exchanger

### Convenient Customer Features

- Unique ECOMOMY Mode for optimum efficiency
- Customer Never Needs to Use the Control Panel
- Selectable Zone-1 Priority for More Customer Control
- Enable Emergency Heat from Heat Pump Thermostat
- Superior 5-Year Limited Factory Warranty

### SPECIFICATIONS

POWER	RZ1	10VA MAX (275 mA @ 24VAC)
	RZ4	14VA MAX (350 mA @ 24VAC)
	SYSTEM	RZ (14 or 10 VA) + Thermostat (3VA) + Damper (3 to 10 VA) = Total Transformer Size
	PROTECTION	Integrated Electronic Auto-Reset Fused links (Field supplied transformer should also be fused)
OUTPUTS	COMMUNICATION	COMM – 3 wire reliable communications to EC1 (BLUE) [Use Cat5 Cable ONLY]
	DAMPERS	<b>10 AMP @ 24VAC Contact Rating (40VA)</b> Power-Close / Spring-Open Dampers (10VA) Power-Open / Spring-Close Dampers (10VA) Power-Open / Power-Close Dampers (3VA)
INPUTS	THERMOSTAT	<u>LABEL – DESCRIPTION (LED COLOR)</u> R – 24VAC HOT (RED) C – Common (NONE) Y – Compressor (YELLOW) G – Fan (GREEN) W – Heating OR Emergency Heat (RED) OB – Reversing Valve (ORANGE)
	ECONOMY	EC – Single Zone Economy Mode (GREEN)
	COMMUNICATION	COMM – 3 wire reliable communications to EC1 (BLUE) [Use Cat5 Cable ONLY]
CONFIG	PUSHBUTTONS / JUMPER	
	Initialize COMM with EC1 Set Thermostat Type Reset Jumper to set Permanente Economy Zone(s)	DISPLAY MENU HEAT COOL PURGE DELAY Emergency Heat Humidify / Dehumidfy COMM SEARCH COMM LINK

### Part Numbers

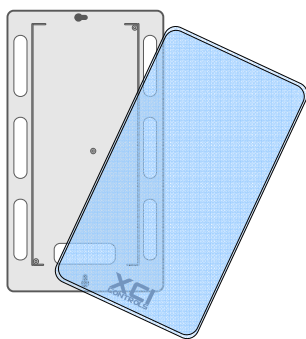
- **EC1**  
SmartZonePLUS-EC1 (Equipment Controller)
- **EC1-SP**  
SmartZonePLUS-EC1 w/ SmartPanel Bracket
- **RZ4**  
SmartZonePLUS-RZ4 (4-Zone Expander)
- **RZ4-SP**  
SmartZonePLUS-RZ4 w/ SmartPanel Bracket
- **RZ1**  
SmartZonePLUS-RZ1 (1-Zone Expander)
- **RZ1-SP**  
SmartZonePLUS-RZ1 w/ SmartPanel Bracket

### Other References

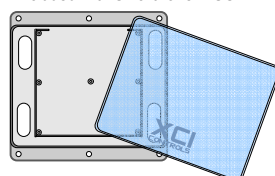
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#### Clear Cover Plastic Enclosure

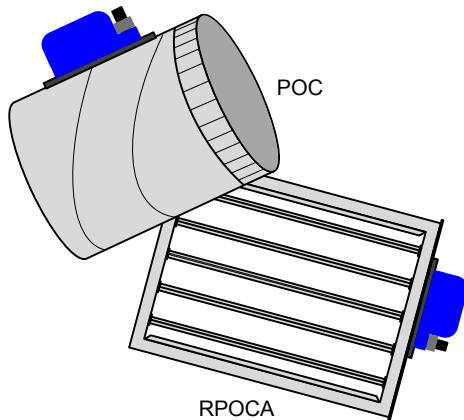
Included with SmartZonePLUS RZ4



Included with SmartZonePLUS RZ1

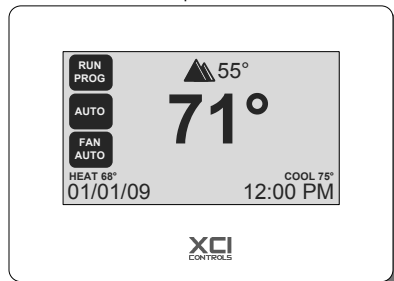


#### SmartZone Dampers

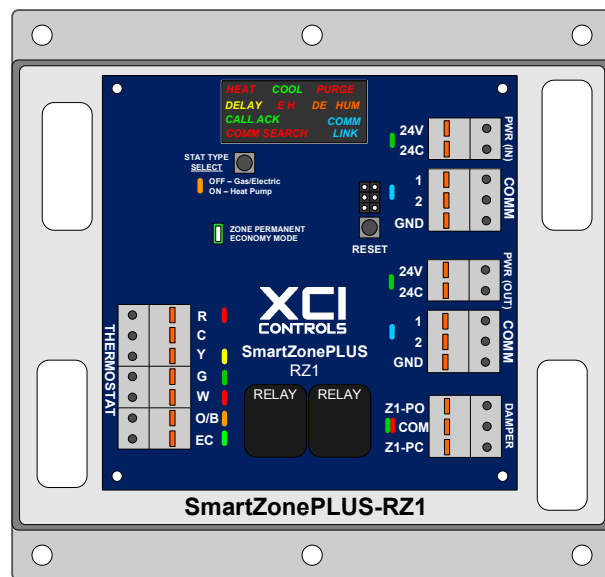


#### TrueTouch Thermostats

Optional



TSZ-1 w/ Wireless Outdoor Temp Sensor



#### Included with RZ1 & RZ4

- Plastic Enclosure or SmartPanel Bracket for multiple mounting options
- Superior 5-Year Limited Factory Warranty