



# INFINET II

## i2920 System Controllers

The Andover Infinet™ II (i2) 920 System Controller is perfect for your most demanding control and monitoring applications with its versatile input/output mix and its ability to add additional points using xP Expansion Modules.

Designed for control of large Air Handling Units, chillers, boilers, and other mechanical plant equipment, the i2920 features plenty of dynamic memory for application programs as well as for expanded local data logging of critical data. The i2920 also features a fast 32-bit processor, universal inputs, override switches on all outputs, two-piece removable connectors, and an optional 4-line display with keypad. Similar to other Andover Infinet II controllers, the i2920 has an additional room sensor input, which supports Andover Continuum Smart Sensor, or any standard room temperature sensor.

The i2920 communicates with the entire Andover Infinet™ RS-485 field bus; i.e., both Andover Infinet and Andover Infinet II controllers, and is compatible with both the Andover Continuum CyberStation™ and Infinity™ SX 8000 front-ends. Up to 254 Andover Infinet devices can be networked to any Andover Continuum network controller.

### INCREASED RELIABILITY WITH FLASH MEMORY

The i2920's non-volatile Flash memory stores your operating system and application programs, so that in the event of a power loss, your application will be restored when power is returned. In addition, the Flash memory allows for easy upgrades of your operating system via software downloads, eliminating the need to swap out proms. The i2920 controllers include an on-board battery to safeguard your runtime data — protecting all point data and log data from being lost if power is removed.

### INPUTS

The input configuration on the i2920 series consists of sixteen full range, 12-bit Universal inputs that accept voltage (0-10VDC), digital (on/off), counter signals (up to 4Hz), temperature signals, or supervised alarm circuits for security applications. The i2920 offers an additional input to support the Andover Continuum Smart Sensor, or any standard room temperature sensor.

### OUTPUTS

The i2920 contains 16 outputs - eight Form C relay outputs, each rated for 24 VAC/VDC, 3 amp, and eight analog outputs (0-10V, 4-20mA). Both the relay and analog outputs have manual override switches, with software feedback of the switch position.

### I/O EXPANSION

The i2920 contains an I/O expansion port for the addition of up to two xP Expansion Modules directly on the bottom of the controller. The xP family of modules includes the DI-8, DO-2, DO-4, UI-4, AO-2, and AO-4. In addition, the I/O bus supports the xP Local Display Module, which allows the user to view and change point values.

- Compatible with Both Continuum and Infinity Systems
- Powerful, Flexible System Controller for the Most Demanding Applications
- Expandable I/O Meets Additional Point Count Needs
- Non-Volatile Flash Memory Provides Utmost Reliability — Stores Both Application Program and Operating System
- Optional Local Display/Keypad Provides Easy Operator Interface
- Local, Extended Storage of Log Data
- View and Modify Information with Optional Smart Sensor Display
- Local, On-Board Service Port

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The Local Display Module is also available factory-mounted directly onto the i2920.

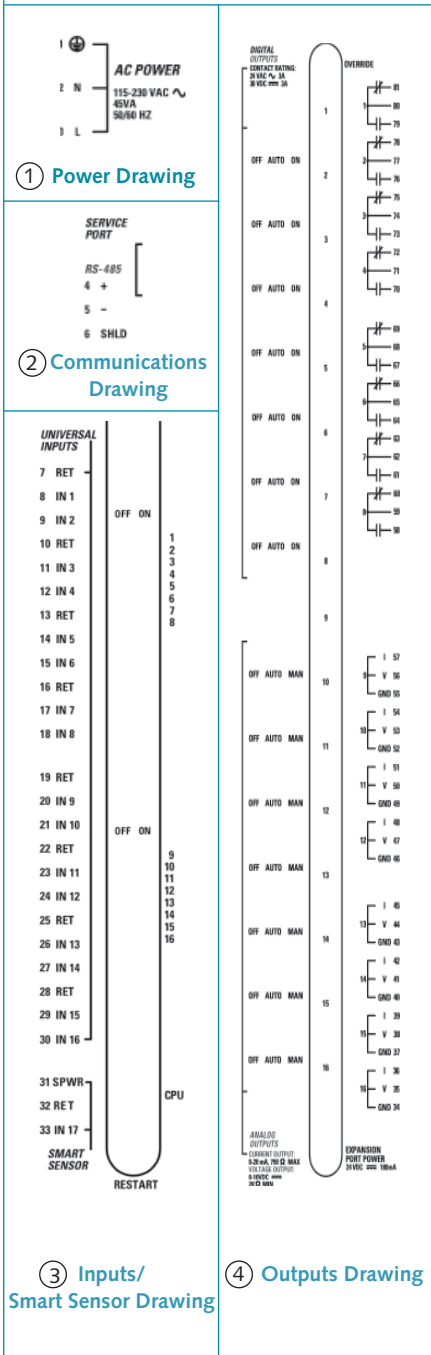
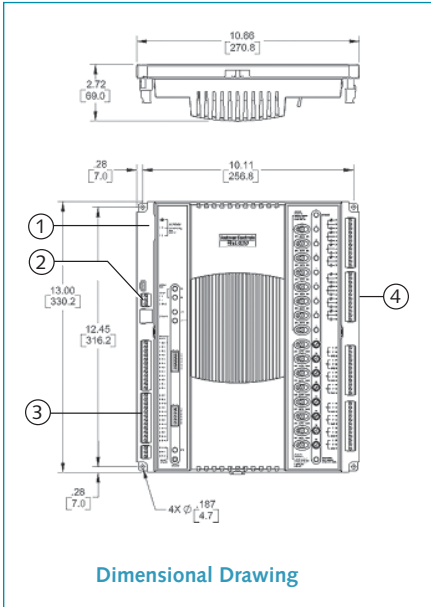
## SOFTWARE CAPABILITIES

The dynamic memory of the i2920 can be allocated for any combination of programs, scheduling, alarming, and data logging using the powerful Andover Plain English™ programming language. Our object-oriented Plain English language with intuitive keywords provides an easy method to tailor the controller to meet your exact requirements. Programs are entered into the i2920 using the Andover Continuum CyberStation. Programs are then stored and executed by the i2920 controllers.

Programming multiple i2920 controllers is inherently easy with Plain English. A complete copy of one i2920's programs can be loaded directly into other i2920s without changing any point names or programs.

## SMART SENSOR INTERFACE

The i2920 provides a built-in connection for Andover Continuum Smart Sensor. The Smart Sensor provides a 2-character LED display and a 6-button programmable keypad that enables operators and occupants to change setpoints, balance VAV boxes, monitor occupancy status, and turn equipment on and off. An enhanced version of the Smart Sensor is also available with a 4-digit custom LCD that provides the following icons: PM, %, °, Setpoint, Cool, Heat, CFM, Fan, OA, and SP.



# SPECIFICATIONS

## i2920 System Controllers

### ELECTRICAL

#### Power

115/230 VAC, +10% -15%, 50/60 Hz

#### Power Consumption

45 VA

#### Overload Protection

Fused with 3 amp fuse. MOV protected

#### Real-Time Clock

Battery-backed real-time clock

### MECHANICAL

#### Operating Environment

32°–120°F (0–49°C), 10–95% RH (non-condensing)

#### Size

13.00" H x 10.66" W x 2.72" D  
(330.2H x 270.8 W x 69.0 D) mm

#### Weight

3.5 lbs. (1.58 kg)

#### Enclosure Type

UL Open class, IP 10. Flammability rating of UL94-5V

#### Mounting

Panel mount

### BATTERY BACKUP

Replaceable, non-rechargeable, lithium battery. Provides 5 years typical accumulated power failure backup of RAM memory

### COMMUNICATIONS

#### Communications Interface

Through Andover Infinet RS-485 field bus to network controller

#### Communications Speed

1200 to 19.2K baud

#### Bus Length

4,000 ft. (1,220m) standard for Andover Infinet, I2 Infilink module allows extension to longer distances and is required after every group of 32 units on the network

#### Bus Media

Andover Infinet: twisted, shielded pair, low capacitance cable

#### Comm. Error Checking

International Standard CRC 16

#### Compatibility

Continuum Cyberstation and Infinity SX 8000 systems

### INPUTS/OUTPUTS

#### INPUTS

16 Universal inputs: Voltage (0-10 VDC); Temperature -30°F to 230°F (-34°C to 110°C), Digital (on/off), Counter (up to 4Hz at 50% duty cycle, 125 ms min. pulse width). Supervised Alarm (single or double resistor). Current input (0 - 20 mA) using external 500 ohm resistor

1 Smart Sensor Temperature Input (32°F to 105°F) (0°C to 41°C)

#### Input Voltage Range

0-10 volts DC

#### Input Impedance

30.1K ohm to 10V or 5M ohm with pull-up resistor disabled

#### Input Protection

24 VAC or 24 VDC temporarily on any single channel, ±1000V transients (Tested according to EN61000-4-4)

#### Input Resolution

2.5 mV

#### Input Accuracy

±7.5mV (±0.25°C from -23°C to +54°C) or (±0.46°F from -10°F to +130°F)

#### DIGITAL OUTPUTS

8 single pole single throw (SPST) Form C relays (Any two consecutive Form C outputs can be configured as one Form K Tri-state)

#### Output Rating

Maximum 3A, 24VAC/VDC, ±1500V transients (Tested according to EN61000-4-4)

#### Output Accuracy

0.1 sec. for pulse width modulation

#### ANALOG OUTPUTS

8 analog outputs

#### Output Rating

0-10 VDC, or 4-20mA per channel

#### Output Resolution

0.1V for 0-10V; 0.1mA for 4-20mA

#### Output Overrides

Each output is equipped with a manual override switch. Software feedback of the switch position is provided, for display and alarming

#### Expansion Bus

Interfaces to optional xP I/O Expansion Modules

### CONNECTIONS

#### Power

3-position fixed screw terminal connector

#### Inputs

Removable two-piece terminal strip

#### Outputs

Removable two-piece terminal strip

#### Smart Sensor

Removable two-piece terminal strip

#### Communications

Removable two-piece terminal strip

#### Expansion Port

6-position shrouded connector

# SPECIFICATIONS

(Continued)

## Service Port

4-position shrouded connector

## USER LEDS/SWITCHES

### Status Indicator LEDS

CPU	CPU Active
TD	Transmit Data
RD	Receive Data
Output	Output Status (per output)

### EXPANSION

PORT PWR	Power Status
OVERRIDE	Override Status

## Switches

RESET  
Input Pull-up Resistor Switch (per input)  
Individual Output Override Switches

## GENERAL

### Memory

1MB SRAM, 2MB FLASH

### Processor

Motorola 32-bit Coldfire

## AGENCY LISTINGS

UL/CUL 916, FCC CFR 47 Part 15, ICES-003, EN55022, AS/NZS 3548, Class A, CE

## OPTIONS

UL864, Smoke Control System Equipment, UUKL (i2920-S)

i2920-D, i2920 with factory mounted display

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