

- 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

# INFINET II

# 2920 System Controllers

The Infinett II (i2) 920 System Controller is perfect for your most demanding control and monitoring applications with its versitile input/output mix and its ability to add *additional* points using Andover's i2 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 removeable connectors, and an optional 4-line display with keypad. Similar to other Infinet II controllers, the i2920 has an additional room sensor input, which supports Andover's *Smart Sensor*, or any standard room temperature sensor.

The i2920 communicates with the entire Andover Controls Infinet™ RS-485 field bus; i.e., both Infinet and Infinet II controllers, and is compatible with both the *Continuum* CyberStation and *Infinity* SX 8000 front-ends. Up to 254 Infinet devices can be networked to any Andover 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 *Smart Sensor*, or any standard room temperature sensor.



WE'RE BUILDING SMART

#### **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 Andover xP expansion modules directly on the bottom of the controller. The xP family of modules includes the DI-8, D0-2, D0-4, 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. The Local Display Module is also available factory-mounted directly onto the i2920.

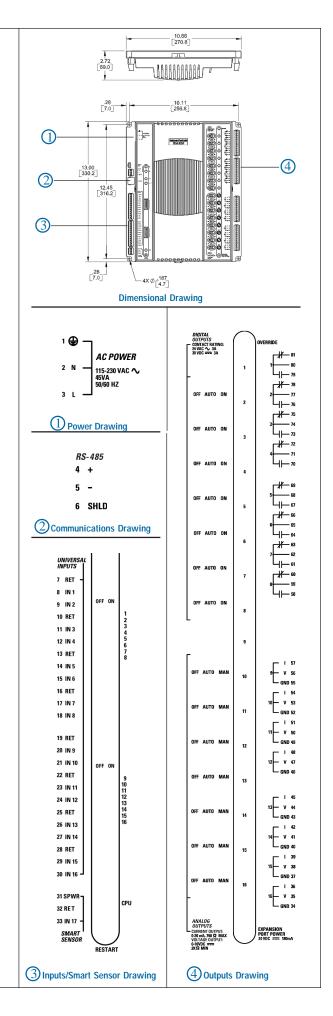
#### **SOFTWARE CAPABILITIES**

The dynamic memory of the i2920 can be allocated for any combination of programs, scheduling, alarming, and data logging using the powerful Andover Controls *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 *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's *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

## 920 System Controller

#### **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** 

**Battery Backup:** Replaceable, non-rechargeable, lithium

battery. Provides 5 years typical accumulated power failure backup of RAM memory

**COMMUNICATIONS** 

Communications Interface: Through Infinet RS-485 field bus to network

controller

**Communications Speed:** 1200 to 19.2K baud

**Bus Length:** 4,000 ft. (1,220m) standard for Infinet, I2

Infilink module allows extension to longer distances and is required after every group of

32 units on the network.

**Bus Media:** 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:  $\pm 7.5 \text{mV} (\pm 0.25 ^\circ \text{C from -23 }^\circ \text{C to +54 }^\circ \text{C}) \text{ or}$ 

(±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)

### **INPUTS/OUTPUTS (CONTINUED)**

Output Rating: Maximum 3A, 24VAC/30VDC, ±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

 Service Port:
 4-position shrouded connector

#### **USER LEDS/SWITCHES**

Status Indicator LEDS:

CPU CPU Active
TD Transmit Data
RD Receive Data

Output Status (per output)

EXPANSION PORT PWR Power Status

Switches:

RESET

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

#### **GENERAL**

Memory:1MB SRAM, 2MB FLASHProcessor: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)

# Andover Controls Corp. World Headquarters

300 Brickstone Square

Andover, Massachusetts 01810 USA Tel: +1 978 470 0555 Fax: +1 978 470 0946

#### **Andover Controls Europe**

Smisby Road Ashby-de-la-Zouch

Leicestershire LE65 2UG England

Tel: +44 1530 417733 Fax: +44 1530 415436

#### **Andover Controls Germany**

Am Seerhein 8 D-78467 Konstanz Germany

Tel: +49 7531 99370 Fax: +49 7531 993710

#### **Andover Controls France**

Immeuble Dolomites 2 58 Rue Roger Salengro 94126 Fontenay Sous Bois

France

Tel: +33 1 53 99 16 16 Fax: +33 1 53 99 16 15

#### **Andover Controls Poland**

Radzikowskiego 56 31-315 Krakow

Poland

Tel: +48 126385500 Fax: +48126385501

#### **Andover Controls Asia**

Unit 1201-02, Phase 1, Cheuk Nang Centre

9 Hillwood Road, Tsim Sha Tsui East Kowloon, Hong Kong Tel: +852 2739 5497

Fax: +852 2739 7350

#### **Andover Controls Mexico**

Insurgentes Sur 1722-501

Col. Florida

Mexico D.F. 01030, Mexico Tel: +5255 5661 5672 Fax: +5255 5661 5415

www.andovercontrols.com

A Balfour Beatty Company

