Reliable controls ®

Web server. Simplified.

Publish your building automation system to the Web quickly and easily with the Reliable Controls® MACH-ProWebCom™. The first 3-in-1 device of its kind, the MACH-ProWebCom™ combines a BTL-listed BACnet Building Controller (B-BC), a BTL-listed BACnet Operator Workstation (B-OWS), and a powerful web server, all in a single package with an installed footprint of a typical building controller.

Better by design

BACnet International

TECH SPECS

Processor
- 100 MHz, high-performance, 32-bit embedded microcontroller

Memory
- 8 MB operating RAM
- 1 MB non-volatile RAM (trends and dynamic values)
- 128 MB Flash EEPROM operating system, database, JavaScript, graphics, and controller configuration

Supply Voltages
- 24 VAC ±10% 20 VA max.
- 24 VDC ±10% 4 W max.

Communications
- IEEE 802.3 Ethernet 10/100 BaseT
- 2 EIA-485 @ 76.8 kbps max.
- 1 EIA-232 @ 115.2 kbps max. PC or modem
- SMART-Net port @ 16 sensors max.

Browser Support
- IE 8, Firefox 3, Chrome 5, Safari 5, or higher
- JavaScript must be enabled on client
- Flash required for animations and flood fill

Expansion Modules
- Up to 8 MACH-ProPoint™ expansion modules

Real-Time Clock
- ±1 second per day

Memory/RTC Backup
- 72 hour backup
- 10 years for database

Dimensions
- 15.2 cm L x 13.7 cm W x 3.9 cm H (5 $^5/_{16}$" L x 5 $^3/_8$" W x 1 $^1/_2$" H)

Mounting
- #8 clearance holes on 12.7 cm L x 11.0 cm W (5" L x 4 $^5/_{16}$" W)
- Screw depth 25 mm (1")

Weight
- 0.25 kg (0.6 lb.)

Ambient Limits
- Operating: -20 °C to 55 °C (-4 °F to 131 °F)
- Shipping: -40 °C to 60 °C (-40 °F to 140 °F)
- Humidity: 10% to 90% RH non-condensing

FEATURES

Protocol
- BACnet®
  - B/IP x 2, Ethernet, MS/TP and PTP
- HTTP/1.1
  - Hyper Text Transfer Protocol
- Reliable Controls Protocol
  - Backward compatibility with previous generation systems
- Modbus
  - Supports both RTU and TCP in both master and slave configurations
- SMTP
  - Provides standard email communications for broadcasting email alarms
- SMS
  - GSM/GPRS modem
- SNMP
  - Simple Network Management Protocol

Inputs & Outputs
- Up to 8 MACH-ProPoint™ expansion modules
- Maximum possible inputs of 128
- Maximum possible outputs of 64
- Maximum total I/O of 160 per controller

256 Variables
- Selectable standard and custom ranges, as well as fixed program-driven values

64 PID Loops
- Standard P, PI, or PID controllers for closed loop control
- BACnet loops supported

32 Weekly Schedules
- 4 On/Off times for each weekday and 2 override days
- BACnet schedules supported

8 Annual Schedules
- Days of the year designated as holidays
- BACnet calendar supported

20 Custom Tables
- For creating custom scaling functions

64 System Groups
- Allows related points to be grouped on to one display
- 160 points/group

128 Control-BASIC™ Programs
- User programmable control strategy in a readable, BASIC-like language
- 3200 bytes per program

96 Trend Logs
- Each Trend Log stores 512 samples and up to 6 points
- Values recorded at user defined intervals
- BACnet Trend Logs supported

128 Runtime Logs
- Totals the On time and records the On/Off times of a digital point
- Holds 200 events

128 User Passwords
- Protects access to system
- Each user is assigned a user name and an access level

16 Custom Units
- 8 analog engineering units
- 8 digital engineering units

SMART-Net™ Port
- Networks up to 16 SMART-Sensors™

Real-Time Clock

Warranty
- 5 years

Certification
- BTL Listed (B-OWS)
- BTL Listed (B-BC)
- UL 916 Listed
- FCC CFR 47 Part 15/B
- CE

ORDERING

MPW-C
- MACH-ProWebCom™ controller/Web server

ACCESSORIES

MPP-IO
- MACH-ProPoint™ I/O expansion module with 12 universal inputs and 8 outputs

MPP-IO-H
- MPP-IO with HOA (Hand/Off/Auto) switches and pot adjust

MPP-IO-DL
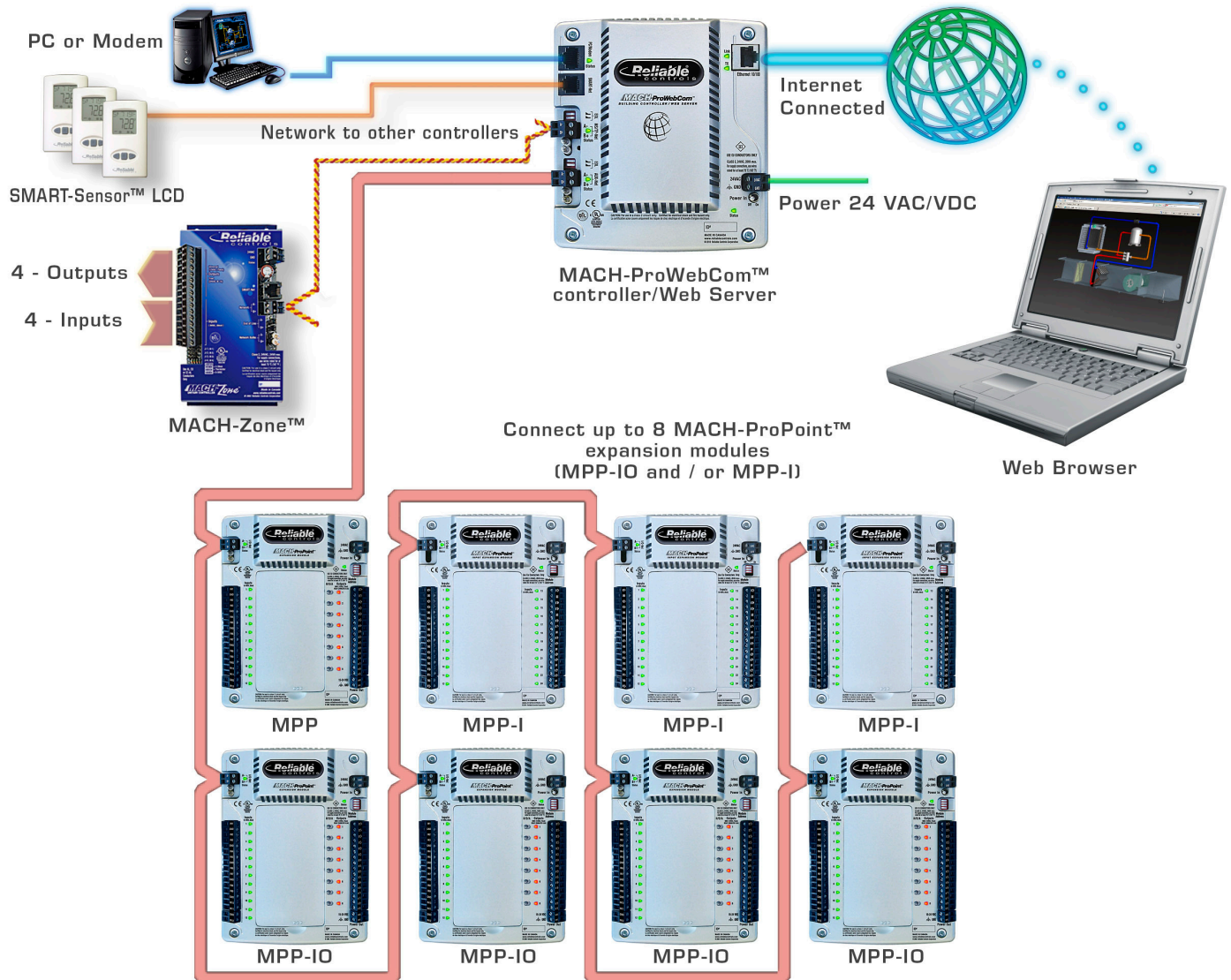- Door lid decal kit for MP-S, MP-S-H, MPW-S, MPW-S-H, MPP-IO, and MPP-IO-H

MPP-I
- MPP Input expansion module with 24 universal inputs

MPP-I-DL
- Door lid decal kit for MPP-I

Designed and Manufactured in Canada

APPLICATION DIAGRAM

PC or Modem

SMART-Sensor™ LCD

Network to other controllers

Internet Connected

Power 24 VAC/VDC

MACH-ProWebCom™ controller/Web Server

4 - Outputs

4 - Inputs

MACH-Zone™

Web Browser

Connect up to 8 MACH-ProPoint™ expansion modules (MPP-IO and / or MPP-I)

MPP

MPP-I

MPP-I

MPP-I

MPP-IO

MPP-IO

MPP-IO

MPP-IO

Connect up to 8 MACH-ProPoint™ expansion modules (MPP-IO and MPP-I) with a maximum possible input count of 128, a maximum possible output count of 64, and a maximum total I/O of 160 per controller.

2011 AHR Expo®
INNOVATION AWARDS
Value
Impact
Application
Honorable Mention

MACH-ProWebCom™

RELIABLE controls®

The Reliable Controls® MACH-ProWeb™ combines the field controller, configurable Web server and browser driven workstation into a single device which is simple to use, flexible to engineer and highly economical.

FIELD CONTROLLER

Program the MACH-ProWeb™ point database, Control-BASIC sequence, and graphics just as you would for any other Reliable Controls® product. The MACH-ProWeb™ is a fully functional BACnet Building Controller (B-BC).

Right-click to access MACH-ProWeb Tools

WEB SERVER

Using the MACH-ProWeb™ Tools in RC-Studio® 2.0, it is extremely simple to select and post resource files to the MACH-ProWeb™ and manage future changes.

Drag and drop selected PC workstation resources using the MPW **Resource Manager**.

With the MPW **Tree Builder**, drag and drop graphics and objects to make your own customized navigation tree.

With the MPW **Web Users** tool, assign public and private Web users with complete permission control.

Designed and Manufactured in Canada
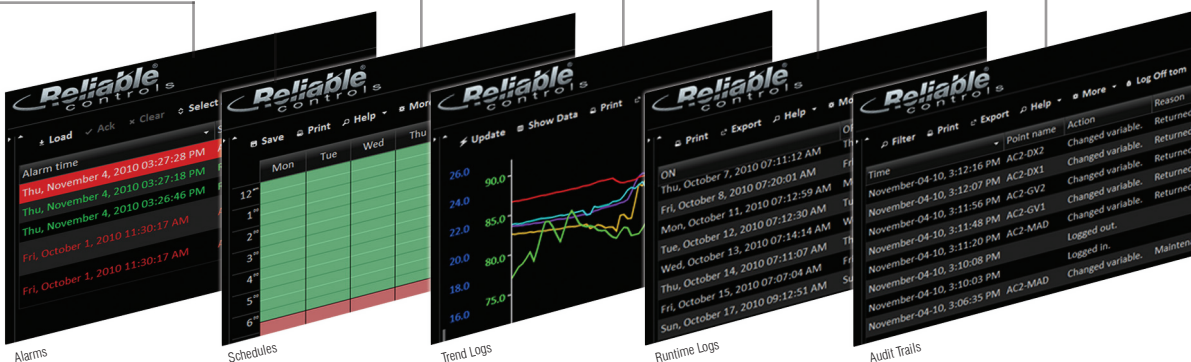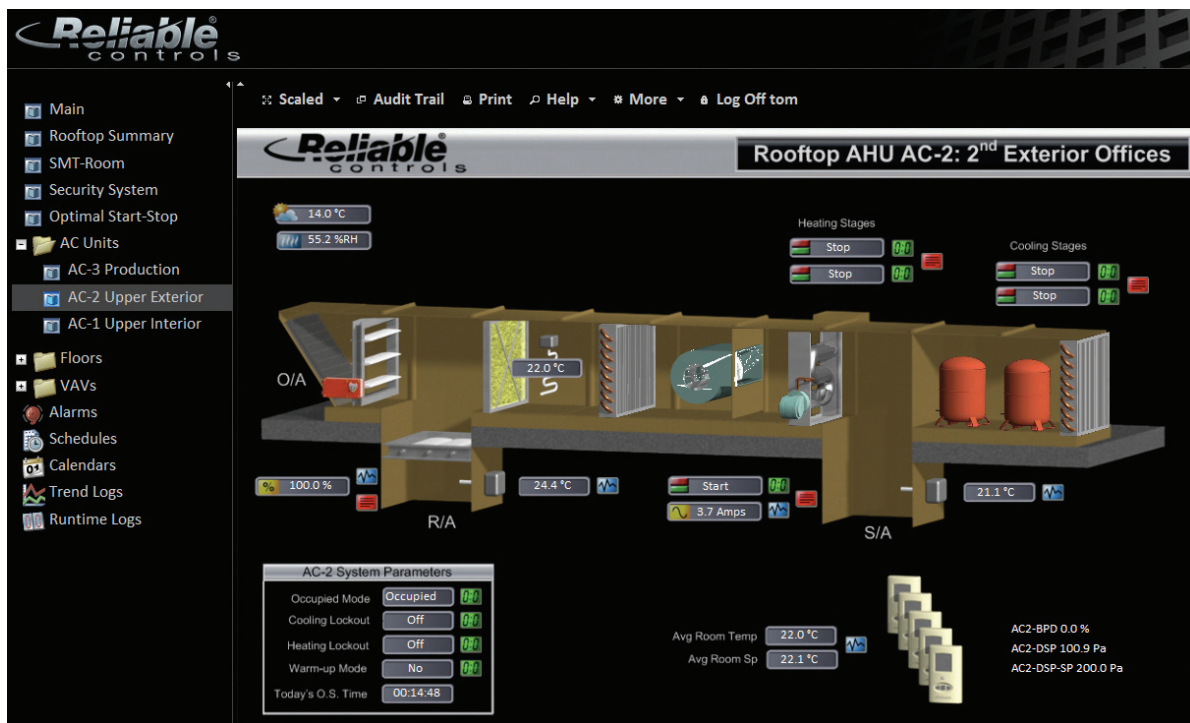
MACH-ProWebCom™

WORKSTATION

The MPW interface provides total functionality required for day-to-day building operations, and is a BTL-listed BACnet Operator Workstation (B-OWS). Using a standard browser (IE 8, Firefox 3, Chrome 5, Safari 5, or greater) on a PC or Mac, enter the URL of the MACH-ProWeb™ and navigate through the system to access and print point values, alarms, schedules, trend logs, runtime logs, and audit trails.

Public users can hit the MACH-ProWeb™ URL and access the system graphics assigned for public views.

Private users log in with credentials.

The MACH-ProWeb™ is the first three-in-one device of its kind, combining B-BC, B-OWS, and Web server capabilities into a single package with an installed footprint of a typical building controller.

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