

# TAC I/A Series

## WorkPlace Tech Tool 5.7

- Allows upload of controller databases and re-creation or modification of applications in a graphical format.
- Hardware wizard speeds controller and sensor configuration.
- Interface provides fully-prompted menus and selectable English or metric units in displays.
- Controller database management capabilities include editing and compiling of programs off-line.
- Allows a PC or laptop computer to access all TAC I/A Series MicroNet controllers on a LONWORKS or BACnet communications network.
- Project-based method of organizing applications simplifies multiple database management tasks.
- Allows storage and reuse of applications and configurations, reducing the time needed to engineer and commission a job.
- Capable of importing 24 points of historical point trending for system diagnostics (MNL-800).
- Custom objects allow users to create and store standard routines for future use.
- On-line or off-line documentation enables the printing of logic diagrams.
- Commissioning of TAC I/A Series BACnet system networks and controllers.
- Flow balance of TAC I/A Series BACnet VAV controllers.
- Support for Remote I/O Modules in MNB-1000 Plant Controller applications.

The TAC I/A Series® WorkPlace Tech Tool 5.7 (WP Tech) is a cohesive, flexible system-engineering tool compatible with Microsoft™ Windows™ XP Professional or Windows Vista™ Business, Ultimate, or Enterprise. It uses a Microsoft Visio™ 32-bit drawing interface for graphic representation of control applications and control objects. WP Tech is designed for use with all TAC I/A Series MicroNet™ controllers. Using WP Tech, a user customizes an application to fit specific job requirements, compiles the application, and downloads the application to a standalone or networked controller. WP Tech allows a user to program TAC I/A Series MicroNet controllers using its extensive library of specialized, individual control objects. WP Tech features easily understood drag-and-drop graphic representations of common control algorithms and functions, and easy-to-use “wizards” that automate controller configurations. WP Tech works with TAC I/A Series devices on LONWORKS™ FTT-10 Free Topology, TCP/IP, BACnet™ Ethernet, and BACnet MS/TP communications networks.

WP Tech 5.7 allows the user to upload existing TAC I/A Series MicroNet controller application databases, recreate or re-draw, and modify applications in a graphical object oriented format.

WP Tech provides file management using a project-based method of accessing applications, modifying application parameters, and saving applications for future use. WP Tech's file management system allows a user to save, edit, and reuse a controller's application within the same project or in other projects.

WP Tech uses unique TAC shapes for control objects and tags. The control objects are easily copied (dragged and dropped) from stencils as needed, and have built-in “connection wires” that define the logic and flow of data in an application.

WP Tech also provides online diagnostic functions (monitor tags) that allow real-time monitoring of the outputs of each object. This allows the user to temporarily override or write values to inputs during testing of the program.

## Communications

WP Tech can communicate to any TAC MicroNet controller on a LONWORKS or BACnet network. The PC can be connected directly to the LONWORKS or BACnet network, to the LON or BACnet MS/TP jack of a TAC MicroNet controller, or to the LON or BACnet MS/TP jack of an MN-Sx Wall Sensor.

WP Tech can also communicate to remote TAC I/A Series LON or BACnet controllers via IP (Internet Protocol) addressing. IP connectivity for LON requires installation of TAC I/A Series VLON Tunnel software on the WP Tech PC and installation of an appropriately configured TAC I/A Series Network Controller.

## Supported Controllers

### TAC MicroNet LON Controllers

WP Tech supports TAC MicroNet standard LON controllers and the MNL-800. Each standard controller has a specific LonMark HVAC functional profile, determined by its model. A LonMark profile describes the general application purpose and the network image of a device. A profile is made from a standardized set of data slots (input and output) available to other LON-installed nodes. Controller profiles are set at the factory.

The MNL-800 differs from the standard TAC MicroNet LON controllers in that its network image or profile is completely customizable through the selection and use of SNVT objects, which are not available in the other TAC MicroNet LON controllers.

### TAC MicroNet BACnet Controllers

WP Tech supports TAC MicroNet BACnet controllers, which are interoperable controllers with native

BACnet IP, BACnet Ethernet, and MS/TP communications support. When programmed using WP Tech, TAC MicroNet BACnet controllers provide a wide range of control strategies for packaged rooftop, heat pump, fan coil, unit ventilator, and similar applications.

## Supported Sensors

All TAC MicroNet S-Link sensor functions are fully programmable and defined by the application control logic, which is downloaded from WP Tech to the TAC MicroNet controller. Twelve digital temperature sensor models are available, six of which include humidity sensing. Sensor models differ by features, and eight have an integral LCD.

# SPECIFICATIONS

## SYSTEM REQUIREMENTS

### Personal Computer Configuration

**Note:** These are minimum recommended specifications. WP Tech may operate on a PC that does not meet the recommended specifications. However, for best performance, and to ensure efficient operation, you should use a computer that meets or exceeds the recommended specifications.

### Type

PC, capable of running Windows XP Professional or Windows Vista Business, Ultimate, or Enterprise.

### Microprocessor

Pentium™ microprocessor, 1.3 GHz.

### RAM

1 GB.

### Operating System

Microsoft Windows XP Professional with Service Pack 2 or Microsoft Windows Vista Business, Ultimate, or Enterprise.

### Additional Software

Microsoft Office Visio 2003 with Service Pack 3 or Microsoft Office Visio 2007 with Service Pack 1. Microsoft Internet Explorer 6.0 or later (when using Visio 2007).

### LON™ Connectivity

Echelon™ LONTALK™ adapter card, WPA-LON-x.

### BACnet Connectivity

BACnet/Ethernet, BACnet/IP, or MS/TP.

### Ethernet Adapter

For BACnet/Ethernet communications.

### EIA-485 (RS-485) Adapter

For MS/TP communications.

### Disk Drives

2 GB hard drive free space for software installation.

CD-RW or DVD drive.

### Video

SVGA graphics card and monitor, 1024 X 768 resolution or higher (recommended).

### Printer

Any printer compatible with Windows XP or Windows Vista. (Printer is optional).

## SOFTWARE SPECIFICATIONS

### WP Tech 5.7 Software

#### Controller Templates

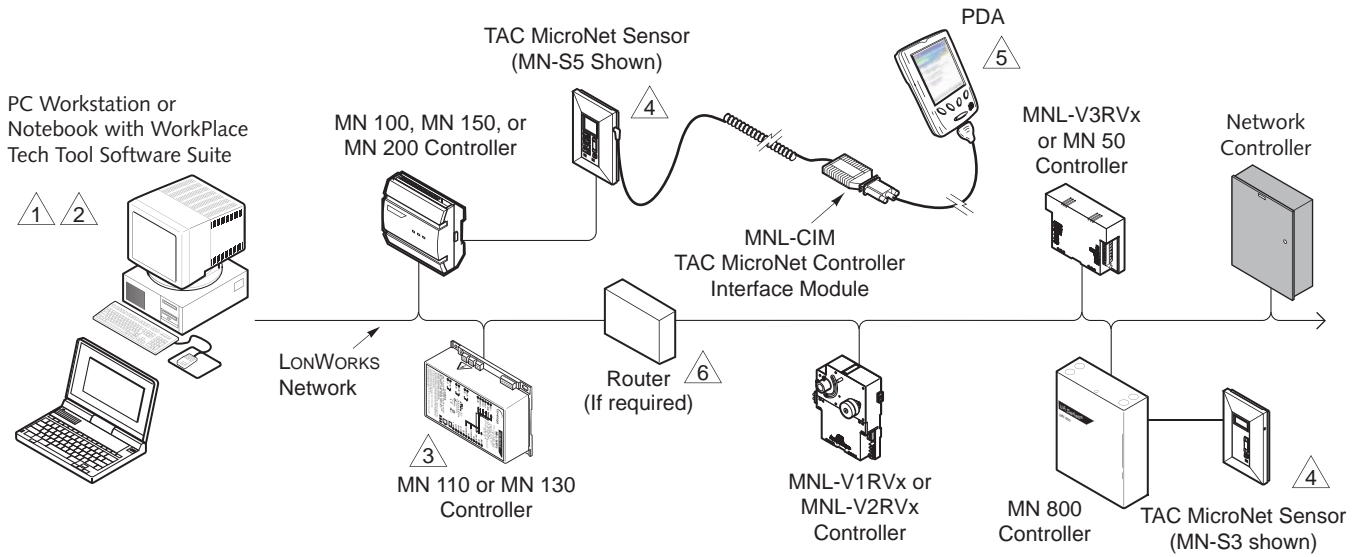
Templates are sets of reusable control logic and controller properties, provided to save time and help provide consistency among applications of similar types. Controller templates provide the drawing page (foreground and background), the TAC stencils (Control objects and Object tags), the Hardware Wizard and Add-ons, as well as all the Visio functions. Each template is specific to a particular controller.

#### Custom Application Templates

Custom templates can be created from any WP Tech 5.x application. These templates can be used to start development of new applications. The new template-based application can be modified without changing the template itself.

#### Stencils

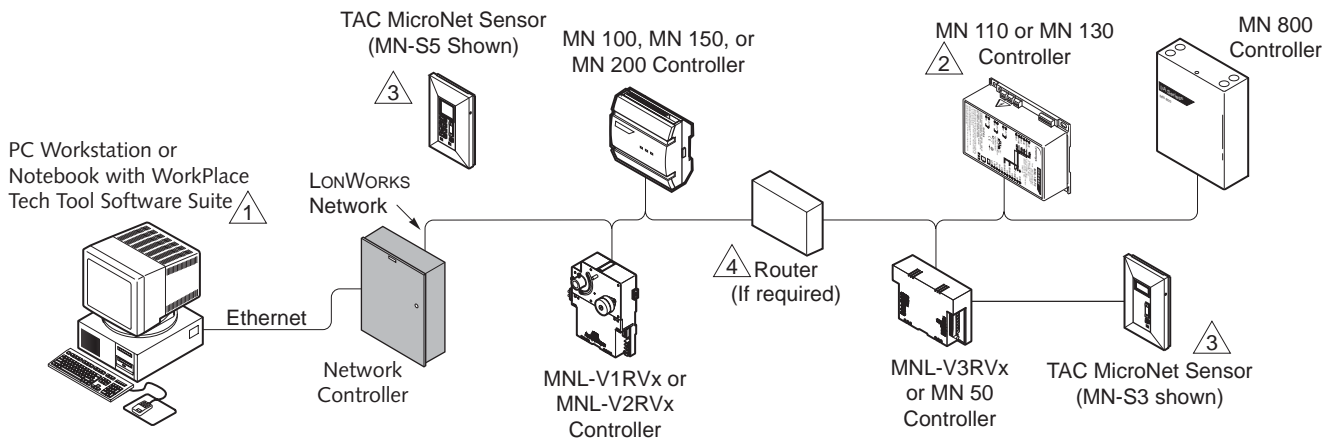
As a Visio-based program, WP Tech contains a number of stencils, which are collections of related Visio master shapes. In addition to the standard WP Tech stencils, custom stencils of Custom objects can be created.



- 1 A PC can be connected to the LONWORKS TP/FT-10 network, either directly or through the LONWORKS network jack of a LONWORKS controller or MN-Sx wall sensor. The PC must have an Echelon LONTALK Adapter card.
- 2 Programming any of the TAC I/A Series controllers, or the TAC I/A Series MN 800 controller, requires WorkPlace Tech Tool (WP Tech).
- 3 This controller is not suitable for exposed mounting on a wall or panel, or in any other easily accessible place due to the possibility of personal contact with the high-voltage terminals.

- 4 TAC MicroNet sensors can be connected to any TAC I/A Series MicroNet controller.
- 5 A PDA running the TAC Pocket I/A interface software may be used to communicate with TAC MicroNet LON controllers.
- 6 When routers are used, WP Tech is able to communicate through them to any of the TAC MicroNet LON devices on the network.

Figure-1 Topology - Direct LON Network.



- 1 Programming any of the TAC MicroNet LON controllers, or the TAC I/A Series MN 800 controller, requires WorkPlace Tech Tool (WP Tech).
- 2 This controller is not suitable for exposed mounting on a wall or panel, or in any other easily accessible place due to the possibility of personal contact with the high-voltage terminals. It must be mounted inside a suitable grounded metal enclosure.

- 3 TAC MicroNet sensors can be connected to any TAC I/A Series MicroNet controller.
- 4 When routers are used, WP Tech is able to communicate through them to any of the TAC MicroNet LON devices on the network.

Figure-2 Topology - LON Network with Web Enterprise System.

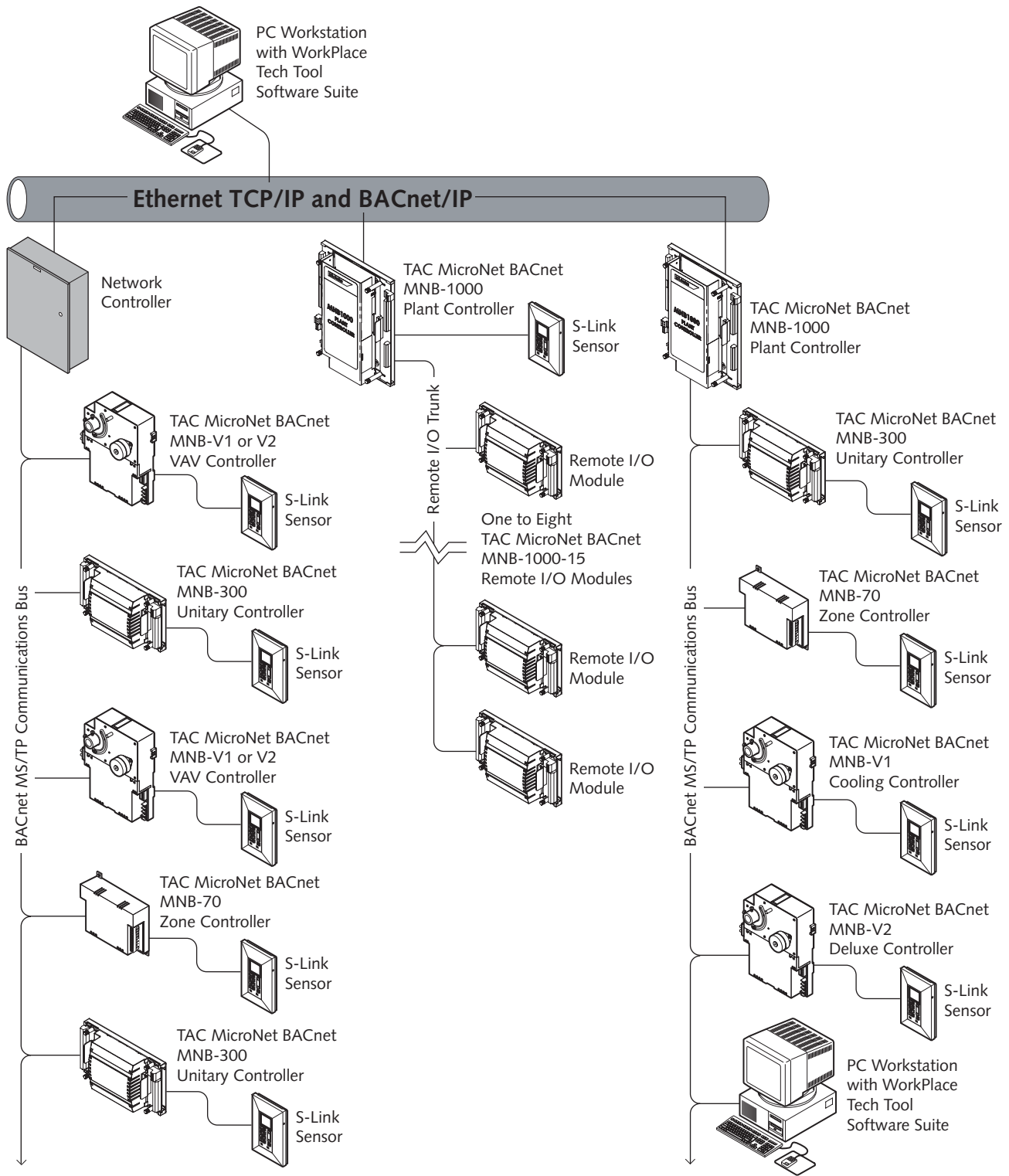


Figure-3 Topology - BACnet Network with Web Enterprise System.

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