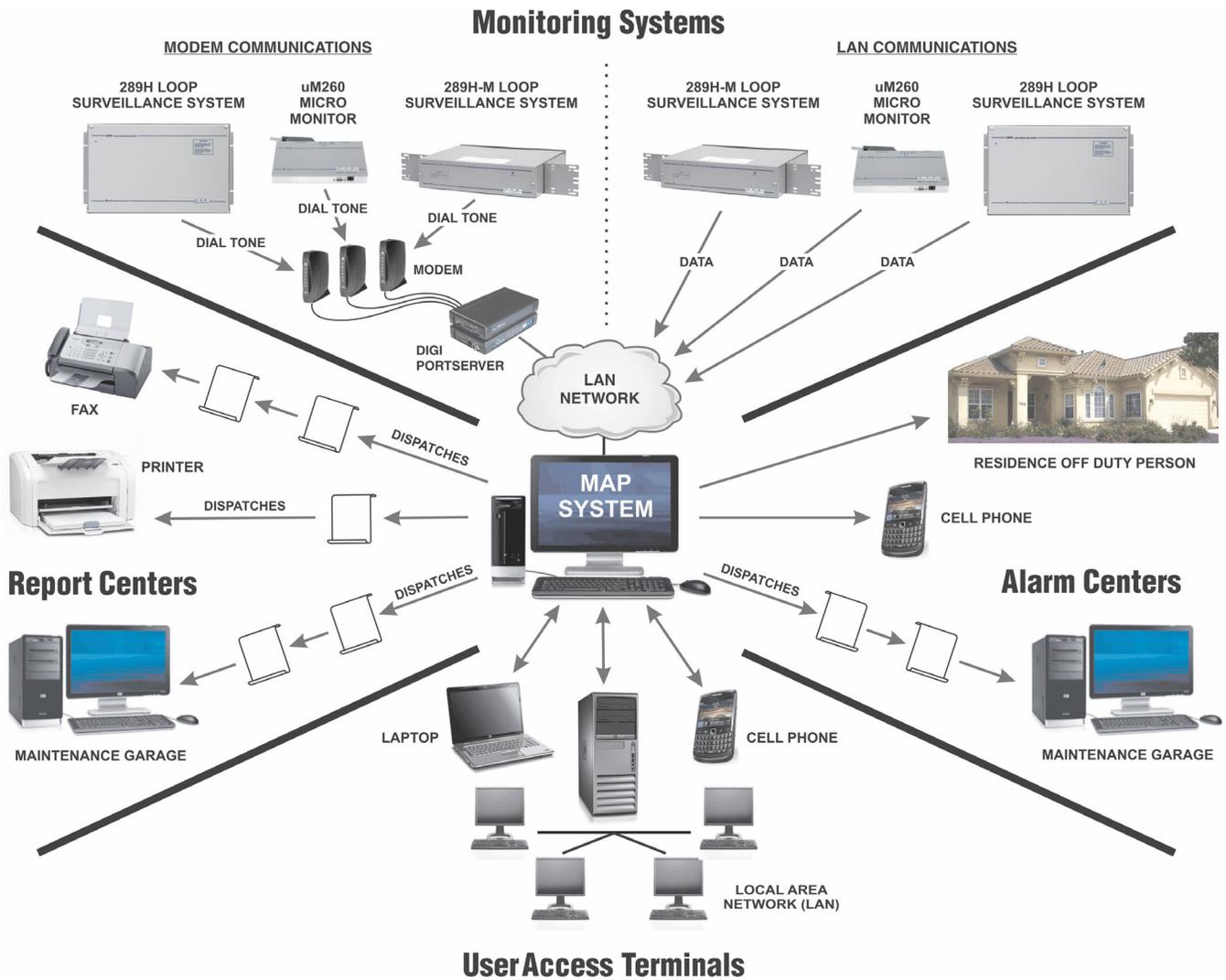


## Computer Software and Related Hardware

PressureMAP™ is a sophisticated multi-user cable pressurization system analysis, dispatching and alarming program. It interfaces with automatic monitoring systems, such as the 289H LSS™, 289H-M LSS™ and uM260 Micro Monitor™, to obtain data for prioritized dispatches, system quality reports, priority alarms, device histories, and much more. From the PressureMAP database, you can access realtime device readings, analyze specific device information, log cable opening numbers, and even generate custom reports. Depending upon the type of central office monitor you are using, you can also perform a variety of diagnostic functions on monitoring device pairs and track potential cable trouble before it becomes service-affecting.

Our CopperWATCH™ software program serves a more specialized function. It works with the uM260 Micro Monitors and Cable Section Locator (CSL) devices in the field to provide realtime detection and rapid alarming of telephone cable theft activity. One CopperWATCH application can accommodate up to 250 individual monitors. Each uM260 can monitor up to eight cable sheaths. Each monitored cable uses two CSL-equipped dedicated conductor pairs to provide the uM260 with current loop output measurements.

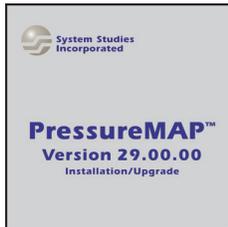
Both PressureMAP and CopperWATCH can be installed on properly-configured, user-selected computers which are accessed using either a dial-up modem or a company Local Area Network (LAN). Both monitoring applications work with the CentOS 5.5 Linux operating system.



## MAP SOFTWARE

Please note that the product numbers listed below pertain to the purchase of new PressureMAP systems and optional program enhancements. For information on upgrading your current MAP software, please contact System Studies Incorporated at (800) 247-8255 or (831) 475-5777.

### 9800-7629 Computer, Software, PressureMAP Version 29



PressureMAP Version 29 is the latest and most advanced version of PressureMAP. This software, along with the included PressureWEB 4 application, is now based on an open source relational database management system. The common database provides the infrastructure needed to

allow users to perform PressureWEB data entry via PressureWEB. It also makes it possible for users to create custom reports and access PressureMAP data via commonly used tools, such as Excel and Access. PressureMAP Version 29 includes support for the CentOS 6.x operating system and provides a restore/rebuild function in System Administration that makes it possible for users to migrate from CentOS 5.5 to CentOS 6.x. Refer to the *Software, PressureMAP, Latest Version Enhancements* section of *Airtalk.com* for an explanation of important PressureMAP Version 29 features.

### 9800-7590 Computer, Software, Office Extender

### 9800-7591 Computer, Software, Office Extender (for uM260 Micro Monitors)

The Office Extender license makes it possible to increase the maximum number of offices that can be monitored by one PressureMAP software package. The base PressureMAP system (P/N 9800-7627) will monitor up to 25 offices, but each office extender license that is purchased will allow one additional office to be added to the system. Please note that one additional modem is required for every ten offices added.

### 9800-7570 Computer, Software, System Status Viewer

This software application, which is installed on a company's central server, accumulates information regarding the operational status of the PressureMAP Systems that have been set up to report to it. It indicates whether a particular system is working or not, and provides a color-coded rendering of the individual systems that have not recently sent a system-up notification. Color-coding is used to differentiate among four possible elapsed time periods that have transpired since a system reported. These time periods are user defined. System Status Viewer output can be accessed via the Internet using a standard web browser.

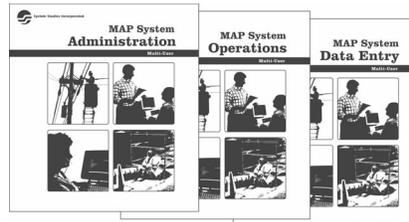
### 9800-7560 Computer, Software, BackupEDGE

BackupEDGE™ is a third party application that makes it possible to back up important PressureMAP office and device information onto a variety of media, including electronic tape cartridge, CD-ROM, DVD-ROM, RAM disk or to a remote backup source (such as another PC) via file transport protocol (ftp). It provides added versatility to PressureMAP's original tape backup only capability.

### 9800-1450-28 Computer, Software, Manual, PressureMAP System Administration

### 9800-1460-28 Computer, Software, Manual, PressureMAP Operation

### 9800-1480-28 Computer, Software, Manual, PressureMAP Data Entry



These comprehensive manuals describe PressureMAP's installation and administrative requirements, the procedures for establishing office and device data, and user requirements for

initiating program features and accessing reports. As listed above, individual manuals are available for System Administration (1450), Operations (1460) and Data Entry (1480).

## COPPERWATCH SOFTWARE

### 9800-7802 Computer, Software, CopperWATCH Version 2

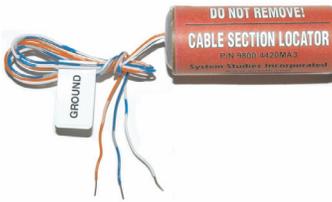
CopperWATCH is a telephone cable theft monitoring and alarming application that runs on the CentOS 5.5 Linux operating system. It works in conjunction with one or more System Studies uM260 Micro Monitors and Cable Section Locator (CSL) devices, which are installed on designated monitoring pairs in the field.

The basic CopperWATCH configuration includes monitoring capability for up to 25 uM260s (expandable to 250 monitors with the purchase of individual Office Extender licenses). A uM260 can monitor up to eight individual cables, each of which contains a Detection Pair and a Verification Pair.

CopperWATCH provides accelerated uM260 alert processing. It can positively identify a cut cable, by correlating associated monitoring pair output, and distribute alarm information to multiple individuals or alarm centers within minutes.

### 9800-7592 Computer, Software, Office Extender (for CopperWATCH uM260 Micro Monitors)

The Office Extender license makes it possible to expand the monitoring capability of a CopperWATCH system from 25 uM260 Micro Monitors to 250 monitors. One Office Extender license is required for each uM260 Monitor that is purchased for the system after the initial 25 monitors have been installed and input into the CopperWATCH database.

**COPPERWATCH HARDWARE****9800-4420MA3 Sensor, Cable Section Locator**

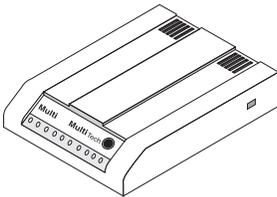
A Cable Section Locator (CSL) is a small electrical device that is installed in parallel on dedicated conductor monitoring pairs to provide information for copper cable theft detection. The CSL provides a fixed 3.0 mA

output. For the CopperWATCH monitoring application, two conductor pairs are required for each monitored cable: a Detection Pair and a Verification Pair. The Detection Pair can have as many as seven (7) CSL devices installed at evenly spaced intervals; the Verification Pair is equipped with one (1) CSL at or near the end of the monitored section. The measured loop value of these pairs is used to determine if a cable cut has occurred and approximately where the cut has taken place.

Each CSL device is equipped with three conductors: blue (wired to monitoring pair's Tip side conductor), white/blue (wired to the Ring side) and orange (wired to ground).

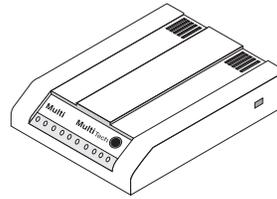
**MODEMS AND MODEM EQUIPMENT**

Over the years System Studies has certified a number of modems for use with the PressureMAP™ software. Several of the modems were required to access a specific monitor type; others were available as replacements for modems purchased with older PressureMAP systems. Because many of the certified modems are no longer available from the manufacturer or vendor, only the modems listed here can be purchased for use with PressureMAP. Non-certified modems may not be compatible with PressureMAP, and they are not supported by the System Studies Technical Support Department.

**9800-5174 Computer, Modem, MultiModem® ZDX 56 Kbps Stand-alone**

This relatively small data/fax modem is the recommended standard for PressureMAP users who require a fast, reliable modem. The Multi-Tech MultiModem® ZDX 56 Kbps Stand-alone Modem

is supplied with a DC power supply module and a 14-foot telephone cable (serial cable is not supplied). It contains a ten-LED display which provides an easy means of continually monitoring communications sessions. The modem supports data rates from 56,000 to 300 bps, automatically falling back to slower speeds in noisy line conditions and speeding up as conditions improve. This modem requires Part No. 9800-5055 (7-foot RJ-45 serial cable) when purchased for use in MultiTech ZDXModemRack™ (Part number 9800-5167).

**9800-5175 Computer, Modem, MultiModem® V.92 Voice / DTMF**

The V.92 Voice/DTMF Multi-Tech Modem is required for use with the now-discontinued Dial-a-Ducer™ monitoring device. This modem provides the dual-tone multi-frequency (DTMF)

tone dialing capability required by the Dial-a-Ducer. For standard analog data communications, use the Part No. 9800-5174 ZDX MultiModem.

**9800-5437 Computer, Miscellaneous, ConnectPort® TS 16 with Rack**

This multi-port server is a replacement for the discontinued Digi PortServer® TS 16. The unit offers up to 16 individual serial ports (RS-232), which are accessed by PressureMAP either directly via a cable at the PressureMAP computer or over a LAN/WAN. In the network application, the Digi PortServer can be placed in a local office, thus eliminating or dramatically reducing toll calls from PressureMAP for data collection, alarm and report distribution, diagnostics functions and user access. This PortServer model includes an attached mounting plate for installation in a standard 23-inch equipment rack.

**CABLES****9800-4966 Computer, Cable, Standard Modem**

This connector is included on the bill of materials for the Part No. 9800-5022 Digi PSII to Modem Cable. It can also be ordered separately for use with existing RJ-45-equipped straight cables.

**9800-5023 Computer, Cable, Digi PS TS to Multi-Tech Modem**

This cable is specially configured for Multi-Tech Modem equipment. It has one RJ-45 connector on each end.

**9800-5032 Computer, Cable, Digi PS to Teltone DTMF Modem**

This seven foot flat ribbon cable is supplied with an RJ-45 connector on one end and a male DB-9 connector on the other end. It can be used to connect a Teltone DTMF modem to the Digi PortServer® TS 16.

**9800-5033 Computer, Cable, Digi PS to NMA**

This special serial cable provides a direct connection from a Digi PortServer® TS 16 modem to one of the communications ports on the NMA monitor. The cable is equipped with one RJ-45 connector on each end.

**9800-5055 Computer, Cable, 7-Foot RJ-45 Serial, Flat**

This serial cable provides the connection between a modem, such as the Multi-Tech 56 Kbs, stand-alone modem (9800-5174), and a PC or Digi PortServer® TS 16. It is equipped with an RJ-45 connector on each end.

The words PressureMAP™, CopperWATCH™, Loop Surveillance System™, 289H LSS™, 289H-M LSS™, uM260 Micro Monitor™ and Dial-a-Ducer™ are trademarks of System Studies Incorporated.

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