INTEGRATED SECURITY SYSTEM PERFORMANCE SPECIFICATION FOR DMP MODEL XTL CONTROL PANELS

1.0 GENERAL

1.1 Manufacturer

A. The manufacturer shall have at least thirty (30) years of experience in the role of fire and security control manufacturing, and a proven track record of forward and backward compatibility for a minimum of twenty (20) years for its product's auxiliary devices, including system keypads, annunciation devices, zone expansion modules, and addressable detection devices.

B. The manufacturer must also manufacture receiving equipment that is compatible with standard dial-up telephone lines and network monitoring equipment that is compatible with a LAN, WAN, Internet, and integrated GPRS Cellular Communications. The receiving equipment shall be capable of receiving all status and alarm messages generated by the system. The receiving equipment shall be capable of updating the panel operating program and the system date and time.

C. Intrusion detection/Fire Alarm Control Panel (FACP) equipment manufacturer shall be:

Digital Monitoring Products, Incorporated (DMP)
2500 N. Partnership Boulevard, Springfield, MO 65803
Telephone (417) 831-9362 FAX (417) 831-1325

1.2 Installer

A. The installing company shall show proof of having regular experience with design, installation, service, and maintenance of manufactured systems for a minimum of the last twelve (12) calendar months from the project start date. Each system installer and service person must provide manufacturer certification of technical training for installation, service, and system maintenance. Certification shall be proven with an official document issued by the manufacturer.

B. The installing company shall provide a minimum of 8 (eight) verifiable references from its clients where the manufacturer's system has been installed within the last twelve (12) calendar months from the project start date.

C. The installing company shall furnish and install a complete electrically supervised panel, as detailed in this specification. The system shall be inclusive of all necessary function, monitoring, and control capability as detailed herein and on accompanying shop drawings.

D. The installing company shall become familiar with all details of the work, verify all dimensions in the field, and shall advise the Architect of any discrepancy before performing the work. Materials shall be installed in strict compliance with local building codes. All work shall be performed in accordance with Digital Monitoring Products, Inc. instructions. FACP and associated components must be installed and serviced by a dealer in good standing that is factory-trained by Digital Monitoring Products.

1.3 Central Reporting Station

A. The central reporting station contractor must possess an Underwriter's Laboratory (UL) listing as a "Mercantile Police Station" or "Mercantile Burglar Alarm Systems" company. A copy of the listing shall be attached as a part of this bid package.

B. The actual alarm signal receipt and processing is a significant portion of the scope of work. Third party and/ or contract stations are permitted. UL must list the monitoring station for Protective Signaling Services or Central Reporting Station Signaling Services. A copy of the station UL listing shall be attached as part of this bid package.

C. The monitoring station must provide openings/ closing activity reports, activity day and time, authorized individual, office name and account number and the system type being monitored. These reports are to be mailed to the user's office at the end of each month. The Office Manager or Contract Administrator may request an additional report if an incident occurs.

D. The contractor must have a valid Alarm Operator License. A copy of licenses shall be attached as part of this bid package.

E. The contractor may be required to monitor a portion of the alarm systems by way of the end user data network.

F. The Contractor shall become familiar with all work details, verify all dimensions in the field, and shall advise the Architect of any discrepancy before performing the work.

G. The end user shall not incur any central station setup charges by the contractor to receive alarm signals by way of the end user data network.

2.0 SCOPE

2.1 Requirements

A. Furnish and install a complete Intrusion Detection or Fire Alarm Control Panel (FACP) with the performance criteria detailed in this specification. The system shall be inclusive of all necessary functions, monitoring, and control capability as detailed herein and on accompanying Shop drawings.

B. This specification document provides the requirements for the installation, programming, and configuration of a complete panel. This system shall include, but not be limited to:

- Control panel
- Integrated Wireless Receiver
- Integrated Cellular Communications
- System enclosure
- Power supply
- Battery
- Associated peripheral devices
- Other relevant components and accessories required to furnish and install a complete and operational addressable reporting Life Safety System.

2.2 Standards

The system shall be listed as a Power Limited Device and be listed under the standards in the table. Each system shall be supplied with complete details on all installation criteria necessary to meet all of the listings.

Burglary Listings

ANSI/SIA CP-01-2007 False Alarm Reduction
ANSI/UL 1023 Household Burglar Alarm System Units
ANSI/UL 1610 Central Station Burglar

Fire Listings

ANSI/UL 985 Household Fire Warning

Related Listings

NFPA 70 National Electric Code (NEC)
NFPA 72 Household Fire Warning

3.0 SUBMITTALS

3.1 General Requirements

The contractor shall submit three (3) complete sets of documentation within thirty (30) calendar days after contract award date. Indicated in the document shall be the manufacturers' names, catalog number, type, size, style, rating, and catalog data sheets for all items proposed to meet these specifications.

3.2 Shop Drawings

Shop drawings shall be submitted in accordance with Section 3.0 Submittals and shall consist of a complete list of equipment and materials, including manufacturer's descriptive and technical literature, performance charts and curves, catalog cuts, and installation instructions.

3.3 As-Built Drawings

The contractor shall provide a complete set of as-built drawings for the entire system upon installation completion. These drawings shall include, but not be limited to, the exact locations of all equipment, connections between all equipment, and wiring for all equipment as the system is installed.

3.4 Spare Parts Data

After shop drawings are approved, and not later than thirty (30) calendar days prior to the date of beneficial occupancy, a list of spare parts data for each item of specified materials and equipment shall be submitted. The data shall include a complete list of parts and supplies with current unit prices and source of supply. Spare parts shall consist of, but not be limited to, five (5) percent of all initiating and notification appliances with a minimum of one (1) each. All spare parts shall be on site prior to commencement of acceptance testing. Depleted spare parts shall be replaced prior to beneficial occupancy.

INTEGRATED SECURITY SYSTEM PERFORMANCE SPECIFICATION FOR DMP MODEL XTL CONTROL PANELS

3.5 Operating Documents

The contractor shall furnish to the architect operating instructions outlining the step-by-step procedures required for system start-up, operation, and shutdown at least thirty (30) calendar days prior to acceptance test. The instructions shall include the manufacturer's name, system model number, service manual, parts list, and a description of all equipment and their basic operating features.

3.6 Maintenance Documents

The contractor shall furnish maintenance instructions listing routine maintenance procedures, possible breakdowns and repairs, and troubleshooting guides at least 30 calendar days prior to acceptance test.

3.7 Performance Test Reports

Upon the installed system completion and testing, test reports shall be submitted in booklet form showing all field tests performed to prove compliance with specified performance criteria.

3.8 Warranty

A copy of the manufacturer's warranty for all equipment and materials shall be provided. Warranty shall be for all equipment, materials, installation, and workmanship for a minimum of three (3) years, unless otherwise specified.

4.0 GENERAL COMPONENT REQUIREMENTS

4.1 Electronic Components

A. All system electronic components shall be solid-state type, mounted on printed circuit boards. Light duty relays and similar switching devices shall be solid-state type or electromechanical.

4.2 Control Unit

A. A battery test shall be automatically performed to test the integrity of the standby battery. The test shall disconnect the standby battery from the charging circuit and place a load on the battery. This test shall be performed 15 minutes past each hour.

B. The control unit shall be capable of operating and supervising notification appliance devices as well as addressable initiating detection devices, integrated wireless receiver, and integrated cellular communicator.

C. Control unit must be "Flash ROM" updatable, and program must be held in non-volatile RAM. The panel shall be able to function while the update is in process.

D. Control Panel shall have the ability for GPRS Cellular Communications, and two way 900mHz Spread Spectrum wireless communications to two way wireless initiating devices.

4.3 Wireless Keypads

The system shall support a maximum of Four (4) wireless keypads with the identical capabilities, functions and display layout. Operation of the keypads shall be limited to authorized users by the use of a code.

4.4 Control Designations

Controls shall be provided to ensure ease of operation of all specified characteristics. Serial Numbers for wireless Devices shall result in an addressing the device to the control panel.

4.5 Test Modes

A. The system shall include a provision that permits testing from any alphanumeric keypad. The test shall include standby battery, alarm bell or siren, and communication to the central station.

B. The system shall include a provision for an automatic, daily, weekly, thirty (30) day, or up to sixty (60) day communication link test from the control panel installation site to the central station. The communication test shall be capable testing over cellular communication paths.

C. The system shall include a provision for displaying the internal system power. Internal monitors shall include, DC power, battery voltage level, panel box tamper, transmit trouble, and cellular network trouble.

4.6 Software

A. The system shall interface with computer software with the capability to fully program the panel by connecting to the panel through:
B. The system shall interface with computer software capable of monitoring and logging all events.
C. The system shall interface with computer software capable of exporting reports in the following file formats:
   - Excel spreadsheet (*.xls)
   - Rich Text (*.rtf)
   - Windows Metafile (*.wmf)
   - QuickReport (*.qrp)
   - Text (*.txt)
   - Comma-separated (*.csv)
   - HTML document (*.htm)

D. The system shall interface with computer software capable of printing custom, filtered reports including:
   - All Events
   - Zone Action
   - Arming/Disarming
   - Area Late to Close
   - User Code Changes
   - Opening/Closing Schedule Changes
   - System Monitors
   - System Events

4.7 Control Panel Capability

The basic control panel shall provide:

- Expansion to a total of at least 30 user codes.
- Four (4) wireless keypad addresses.
- Event buffer of at least 100 events.
- A total of at least 8 programmable wireless output relays.
- Six (6) reporting areas.
- Cellular supervision.
- Shall have an integrated wireless receiver.
- Shall have an integrated Cellular GSM/GPRS transceiver capable of two-way communications to the Central Station Receiver and Remote Programming Software.

5.0 FUNCTIONAL DESCRIPTIONS

5.1 System Description

A. The system areas and zones shall be programmable, and the system shall store, log, display, and transmit specific custom designations for system areas, zones, and user names.
B. To ensure continued, one-call support, the system shall be constructed of sensing components provided directly by the system manufacturer, motion detectors, door and window position switches, glass break detectors, or other sensing devices that the manufacturer offers.
C. The system controller, user interfaces, zone input devices, relay output devices, and the system signal receiving equipment shall be engineered, manufactured, assembled, and must be distributed from a location within the United States of America.
D. The system shall support user interaction by way of wireless keypad, system software, using integrated or auxiliary devices provided by the system manufacturer.
E. The system shall support controller wireless zone input connections, wireless system keypads, and wireless system zone expansion modules. The system shall offer a seamless integrated compatibility with wireless zone expansion equipment for at least 28 wireless zones.
F. System relay outputs shall have the capability of being triggered as a result of a command from the user interface, changes in system status, changes in zone status, or by a programmable schedule.
G. System relay output states shall be programmable for momentary, maintained, pulsed, or must follow the state of an associated system zone input.
H. The system shall be completely programmable either locally from a keypad or remotely through two-way cellular communication.
I. The control unit shall be completely programmable remotely using remote annunciators, and/ or using upload/ download software that communicates using cellular network.

INTEGRATED SECURITY SYSTEM PERFORMANCE SPECIFICATION FOR DMP MODEL XTL CONTROL PANELS

5.2 Input/Output Capacity

This system shall be capable of monitoring a maximum of 28 individual wireless zones and controlling a maximum of 8 wireless output relays.

5.3 User/Authorization Level Capacity

The system shall be capable of operation by 30 unique Personal Identification Number (PIN) codes with each code having one (1) of two user profiles "Standard & Master". This allows for limitation of certain functions to authorized users. The operation of all keypads shall be limited to authorized users.
The Control Communicator shall be capable of transmitting up to sixteen characters for the user's name to the central station receiver.

5.4 Keypads

A. The system shall support a maximum of four (4) wireless keypads with alphanumeric display. Each keypad shall be capable of arming and disarming any system area based on a pass code or Proximity authorization. The keypad alphanumeric display shall provide complete prompt messages during all stages of operation and system programming and display all relevant operating and test data.
B. Communication between the control panel and all keypads and zone expanders shall be two way wireless spread spectrum technology, as recommended by the manufacturer. Two way wireless shall be of the 900MHz Spread Spectrum Technology utilizing frequency shifting technology between 903-927 MHz.
C. If at any time a keypad does not detect polling, the alphanumeric display shall indicate "SYSTEM TROUBLE." The system shall display all system troubles keypads with distinct alphanumeric messages. System must be able to acquire the wireless keypads address by a specific reset sequence with out the need to program the wireless keypads serial number in manually through the panel programming function.
D. The keypad shall include self-test diagnostics enabling the installer to test all keypad functions: display test, key test, zone test, LED test, tone test, and address test.
E. The keypad shall provide an easy-to-read English text display. The text shall exactly match the text seen in all software reports, keypad displays, and central station reports.
F. The keypad user interface shall be a simple-to-use, menu-driven help system that is completely user friendly.

5.5 Zone Configuration

A. A minimum of 28 wireless zones shall be available for approved wireless devices manufactured by the control panel manufacturer.
B. Each zone shall function in any of the following configurations: Night, Day, Exit, Fire, Supervisory, Emergency, Panic, Auxiliary 1, Auxiliary 2, Cross Zone, Priority, and Key Switch Arming.
C. The wireless keypads shall be able communicate wirelessly to the control panel. Installations where communications can not be met due to the type of construction and distance from the panel wireless repeaters shall be used to insure that communications between the control panel and wireless keypads and transmitters.
D. Each zone shall function in any of the following configurations:

- Night
- Day
- Exit
- Fire
- Supervisory
- Emergency
- Panic
- Fire Verify
- Auxiliary 1
- Auxiliary 2
- Cross-Zone
- Priority
- Arming

5.6 Integrated Cellular Communication

A. The system shall be capable of signaling to two remote monitoring station receivers by way of a GSM/GPRS Cellular Network. The message shall be sent using First GPRS APN and the First IP Address. If no acknowledgment is received, First GPRS APN and the Second IP address are used, followed, if needed, by Second GPRS APN and first and second IP addresses, respectively. Alarm, Supervisory/Trouble, Opening/Closing and User Reports, and Test reports shall have the ability to be assigned to either the first receiver or the second receiver or both.

INTEGRATED SECURITY SYSTEM PERFORMANCE SPECIFICATION FOR DMP MODEL XTL CONTROL PANELS

5.7 Integrated E-Mail/SMS Communication

A. The control panel shall have the ability to communicate messages over the cellular network to private E-mail and SMS accounts with the following information:
Zone Alarms by Zone Name
- Zone Troubles by Zone Name
- Zone Bypass by User
- Disarming (Opening) by User
- Arming (Closings) by User
- Late to Close
- AC Power Trouble and Restoral
- System Low Battery and Restoral
- Ambush
- Abort, Cancel, and Alarm Verified by User
- Check-in by User
- System Inactivity

5.7 Integrated Text Messaging

The system shall be capable of being controlled by cellular text messaging. The system shall be capable of responding to the following text messages:
- Arm/Disarm Messages
- Alarm Cancel
- Turn Outputs On/Off
- Check Armed Status
- Subscribe to Text Messages

6.0 FALSE ALARM REDUCTION FEATURES

The system shall be capable of providing false alarm reduction features, functions, capabilities, or processes that either require alarms be verified or potential alarms be corrected before a system or zone can be placed into an armed state. The system must meet ANSI/UL CP-01-2007 False Alarm Reduction requirements.

6.1 Exit Error Alert and Reporting

The panel shall be able to provide an automatic function to prevent a false alarm from occurring if an exit door does not properly close after the system is armed.

6.2 Entry and Exit Delay Annunciation

A. When arming, the system shall provide clear annunciation indicators to the user about the need to exit the premises prior to the exit delay time expiring.
B. When disarming, the system shall notify the user the need to disarm the system prior to the entry delay time expiring.

6.3 Remote Annunciation

The system shall be able to provide entry and exit delay time period notification. This notification can be from DMP keypads, remote annunciators, or bell tests.

6.4 Abort Reporting

The system shall be capable of sending an Abort report to the central station if the system is disarmed while the alarm is still sounding. The Abort report shall be sent *after* the alarm report to notify the central station that an authorized user has cancelled the alarm.

6.5 System Testing

The system shall offer testing features that are simple, quick, and complete and provide the highest measure of safety by ensuring that alarm conditions are detected and communicated to the proper authorities in a timely manner and on a regularly scheduled basis.

6.6 Ambush Code

The system shall offer ambush codes for those dangerous encounters where the user is instructed to either arm or disarm the system under threat of harm. The duress code shall disarm the system without giving local indication of an alarm that might put the user well-being in jeopardy.

6.7 Two-Button Panic Feature

The system shall support DMP keypads that provide the option to use only two-button panic codes. The user shall be required to press and hold two designated keys for approximately two seconds before the system generates a panic alarm.

6.8 Swinger Zone Bypassing

The system shall be capable of automatically bypassing a zone if it goes into an alarm or trouble condition a specified number of times within a one-hour period. The panel shall be able to track the number of times the zone trips while armed and compare that against a programmed number. When that number is reached, the panel shall be able to automatically bypass the zone. The panel shall be capable of resetting the zone when the area to which it is assigned disarms, is manually reset from the keypad or remotely, or remains normal for one hour.

6.9 Recently Armed Report

The system shall be capable sending a System Recently Armed report, along with a zone alarm report, to the central station any time an alarm occurs within five minutes of the system arming. The System Recently Armed report allows the central station operator to follow a "call the subscriber first" procedure instead of immediately dispatching the police to what could be a false alarm.

6.10 Transmit Delay

The system shall be capable of programming the panel to wait up to 60 seconds before sending burglary alarm reports to the central station. If an alarm is accidental, the user shall be able to disarm the system within the programmed Transmit Delay time. An Abort report shall be sent in place of an alarm report after the system disarms. During the alarm, sirens and panel relay outputs shall not be delayed and shall still provide local condition annunciation.

6.11 Cancel/Verify

The system shall be capable of sending either a Cancel Report or Verify Report to the Central Station to signify that the end user has Canceled and Alarm or Verified and Alarm condition.

7.0 FIRE CONTROL SPECIFICATIONS

7.1 FACP Standards

The Fire Alarm Control Panel (FACP) system shall be listed as a Power Limited Device and be listed under the standards below. Each system shall be supplied with complete details on all installation criteria necessary to meet all of the listings.

Fire Listings

- ANSI/UL 985 Household Fire Warning

Related Listing

- California State Fire Marshal

7.2 Keypads

The system shall include a menu selected "SENSOR RESET" option. This option, without disarming and re-arming the fire system, with use of any pass code, shall reset the display after they have been tripped.

7.3 Zone Configuration

A. The FACP system shall have the ability to have a maximum of 28 wireless zones listed for Household fire applications.

B. The system shall be capable of providing wireless Smoke Detectors with integrated sounders.

7.4 Annunciation Lamps/LEDs

A. Visual Annunciators used on Annunciator modules and elsewhere throughout the system shall be either electric lamps or light emitting diodes (LEDs, LCDs).
B. The control unit shall be completely programmable remotely using keypads, and/ or using upload/ download software that communicates using IP Address over cellular networks. On-site programming from a personal computer shall also be permitted. Programming changes shall comply with NFPA 72 for acceptance or re-acceptance testing.

7.5 Fire Control Equipment

Fire Control detection equipment shall communicate to the system by way of the control panel 900MHz receiver. The detection equipment shall have a three (3) year warranty and meet or exceed features offered in the products listed in Section 9.0 of this document.

8.0 BURGLARY CONTROL SPECIFICATIONS

8.1 Burglary Standards

The Burglary system shall be listed as a Power Limited Device and be listed under the standards in the table below. Each system shall be supplied with complete details on all installation criteria necessary to meet all of the listings.

Burglary Listings

- ANSI/UL 1023 Household Burglar Alarm System Units
- ANSI/UL 1610 Central Station Burglar
- ANSI/SIA CP-01-2007 False Alarm Reduction

8.2 Area System

A. The system user shall be capable of selectively arming and disarming any one or more of 6 areas within the intrusion detection system based on the user PIN code and/or keypad used. Each of the 28 zones shall be able to be assigned to any of the 6 available areas. The system shall be capable of having up to a sixteen (16) character length name programmed for each area.
B. The system user shall be capable of assigning an opening and closing schedule to all areas or to each of the 6 areas separately. Each area shall be able to arm or disarm automatically by a schedule.

8.3 Zones

The system shall have a minimum of twenty eight (28) Two Way Wireless zones available from the control panel.

8.4 Burglary Equipment

Burglary detection equipment shall communicate to the system by way of the control 900MHz receiver. The detection equipment shall have a three (3) year warranty and meet or exceed features offered in the products listed in Section 9.0 of this document.

9.0 COMPILED DETECTION EQUIPMENT LISTING

9.1 Keypads

Wireless Keypads shall have up to 4 addresses. The equipment shall have a three (3) year warranty as stated in the current DMP Product Catalog and meet or exceed features offered in the following products:

- 9000 Series LCD Keypads – DMP Models 9060 & 9063

9.2 Wireless

Wireless detection equipment shall communicate to the system by way of a compatible 900MHz receiver utilizing two way communications, capable of receiving up to 28 wireless zones. The wireless system shall be programmed directly from the control panel, and shall not require a separate device programmer. The wireless detection equipment shall have a three (3) year warranty. It shall be capable of sending transmitter and battery status to the control panel's compatible receiver up to once every 0, 60, or 240 minutes and must meet or exceed the following products:

- Input transmitter – DMP Model 1101, 1102 , 1103, 1105, 1131, 1114
- Pendant Panic Transmitter – DMP Model 1147
- Smoke Detector Transmitter – DMP Model 1161, 1162
- Motion Detector – DMP Model 1121, 1125, 1126, 1127
- Glass Break Detector – DMP Model 1129
- Panic Transmitter – DMP Model 1142
- Bill Trap Transmitter – DMP Model 1139
- Wireless Relay – DMP Model 1116
- Wireless LED Annunciator – DMP Model 1117
- Wireless Key Fobs – DMP Model 1145, & 1146
- Wireless Siren – DMP Model 1135
- Wireless Repeater – DMP Model 1100R

10.0 INSTALLATION

10.1 System Component Installation

Materials shall be installed in strict compliance with all local, state, county, province, district, federal and other applicable building, safety, and fire standards, laws, codes, regulations, and guidelines including, but not limited to, all appendices and amendments and the requirements of the local authority having jurisdiction (AHJ).

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