US DIGITAL DESIGNS

Customer Tasks for Station Alerting Installation

For a successful installation of the Phoenix G2 Station Alerting System, US Digital Designs will need information from the Customer prior to system installation. In addition, the Customer is responsible for completing some tasks related to the installation and integration of the system. This document outlines the information and tasks for which Customers are responsible.

To begin installation of system equipment, the information in this document must be completed. This allows installation to proceed without interruption or delays, and also avoids change orders or travel charges resulting from insufficient information.

Communications Gateways (need prior to Communications Gateway installation)

Equipment Physical Installation

The Communications Gateway server pairs are typically installed in a data communications room adjacent to the primary dispatch center. If there is a secondary dispatch center, a second Communications Gateway pair may be located there as well. The Communications Gateways will be shipped pre-configured with IP addresses and a basic system configuration to allow system integration and testing. VPN remote access is required for final system configuration and for warranty and support after installation. Remote access must be configured and available before installation can be started.

1. Provide street address for each installation location of Communications Gateways.

2. Provide rack / cabinet space of 2 RU for the installation of the pair of Communications Gateway servers and 2 RU for each GARI Radio Interface on the order. Each Gateway pair is composed of two servers each 1 RU high.

3. Provide four 15A 120VAC outlets for Communications Gateways within 4’ of Communications Gateway installation location, on one or two UPS powered circuits. Each Communications Gateway server has two power supplies.

4. Provide 1 15A 120VAC outlet for each GARI Radio Interface.

Data Network Services

USDD recommends that the Communications Gateways not be located on the same network as the CAD system or other critical systems. Best practices dictate that access lists or firewalls should be used to isolate critical systems from each other to provide defense in depth.

THE COMMUNICATIONS GATEWAY CAN SUPPORT MULTIPLE ETHERNET INTERFACES FOR NETWORK SEPARATION. IF A SEPARATE NETWORK CONNECTION IS REQUIRED FOR CAD OR OTHER PURPOSES, ADDITIONAL DESIGN WORK MUST BE DONE PRIOR TO GATEWAY SHIPMENT.

5. Provide 4 100/1000baseT customer LAN switch ports for the Communications Gateways' CAD Interface and Integrated Remote Management.

   - 2 for the Communications Gateway CAD interface, one on each Gateway
   - 2 for the Communications Gateway integrated remote management, one on each Gateway.

   The CAD interface LAN ports must have connectivity from the CAD system interface server for the Communications Gateways and from the Communications Gateways to the to the fire station networks for station alerting. The integrated remote management interfaces only require connectivity from the VPN access point. See the Network Protocol Diagram for details on protocols necessary for the system operation.

6. Provide 4 CAT6 patch cables from customer LAN switch ports to the Communications Gateway installation location.

7. Assign 5 IP addresses on the primary network where the Gateways will reside. Provide addresses, subnet mask, and default gateway address prior to the shipment of the Communications Gateways. IP addresses are for:

   - 2 - Communications Gateways server address
   - 1 - Active Communications Gateway
   - 2 - Integrated Remote Management service on each Gateway

   The 3 Communications Gateway IP Addresses must be able to communicate with the CAD System interface and the Station Controller IP addresses (see below) as described in the Network Protocol Diagram. Details of the CAD interface and connection establishment depend on the CAD system and interface used.

8. Provide 1 IP address at each station location for the Station Controller. This IP address must be able to communicate with the Communications Gateways as described in the Network Protocol Diagram provided as a separate document.

9. Provide IP address and access to internal DNS server or access to DNS outside the agency network.

10. Provide IP address for internal NTP server for Communications Gateway time synchronization OR allow outbound access to time.nist.gov or pool.ntp.org on NTP (UDP 123). It is important to have the CAD system and Gateways in time synchronization for logging purposes.

11. Provide VPN access to the IP addresses assigned to the Gateways and Station Controllers (see below). Remote access is required to all USDD-provided equipment on TCP Ports for SSH (22), and HTTPS (443).
    VPN ACCESS IS CRITICAL FOR USDD TO CONFIGURE AND SUPPORT THE STATION ALERTING SYSTEM. PLEASE REVIEW NETWORK AND VPN NEEDS PRIOR TO SHIPMENT

12. OPTIONAL - Provide IP address and credentials for outbound SMTP access to send email alerts for system and station alarms.

13. OPTIONAL - If the agency will be using the USDD FSA-Mobile smartphone application, allow the Communications Gateway Shared IP address to access the URL https://fsa-mobile.com (note the use of https indicating use of TLS on TCP port 443). This is used to push incident alert information to the smartphone application.

CAD System Integration

14. Provide a CAD interface to Phoenix G2 Station Alerting System on the existing or new CAD System. If this requires software installation or development for the Customer's CAD system, the Customer must contact the CAD vendor and schedule this work. US Digital Designs will work with the CAD vendor to implement and test the CAD interface.

15. Provide lists of: all units with their assigned home quarters, nature codes with spoken and displayable forms, street type codes with spoken form and other dispatch operations information as needed to configure automated dispatching.

16. If customer wants to review street pronunciations in the VoiceEditor, provide list of all unique street names.

Voice Communications System

1. Procure and install Control Station(s) or Radio Console(s), if necessary, and integrate with existing radio system. Radio or console must have PTT input, audio input, transmit confirmation output, and COR (channel busy) output for full system functionality. Provide any 3rd party console software licenses as necessary.

2. Provide network access from Communications Gateways to Radio Consoles if radio console control is part of the project.

3. Provide Control Radios, Radio Consoles, or other radio system access hardware necessary to interface the Gateway Audio Interface to the Customer voice radio system. NOTE: Customer is responsible for working with USDD on connection of the Gateway Audio Interface to the customer's radio system.

Station Equipment Installation

Detailed station requirements will be determined during detailed design.

Minimum customer requirements at each station for ATX Station Controller installation are:

Equipment Physical Installation

1. Provide mounting location for ATX Station Controller

2. Provide one 15A 120 VAC outlet within 4' of the ATX Station Controller location preferably on a Generator circuit.

3. Provide installation location for ATX Station Controller UPS, if necessary.

Data Network Services

4. Provide one 10/100BASET LAN connection within 6' of the Station Controller from station LAN with 2-way TCP/IP and UDP/IP connectivity to Communications Gateway network (dispatch center or computer equipment location).

5. Provide one IP address, subnet mask, and default gateway for each station location.

6. Provide external VPN access to the IP addresses assigned to the Station Controllers. Access will be required for SSH (22) and HTTPS (443).

Voice Communications System

7. Provide connection to existing 70 volt speaker system if existing amplifier and/or speaker system is to be used.

8. Provide dispatch radio for audio source for dispatch alerting, if necessary. Provide documentation on the Make and Model of radio to be used, as well as any connector pinouts if USDD is responsible for connections per the Contract. NOTE: Customer is responsible for connection to customer radios unless otherwise specified in the purchase contract.

9. Provide connections from telephone intercom, secondary dispatch radio, or other existing audio sources to the ATX Station Controller, if necessary. Provide technical documentation on any interfaces that USDD is responsible for per the Contract. NOTE: Customer is responsible for connection to customer equipment unless otherwise specified in the purchase contract.

10. Provide technical documentation on all existing equipment to which the Station Controller or Peripherals are to be interfaced. NOTE: Customer is responsible for connection to customer equipment unless otherwise specified in purchase contract.