DATAREMOTE

INSTALLATION GUIDE

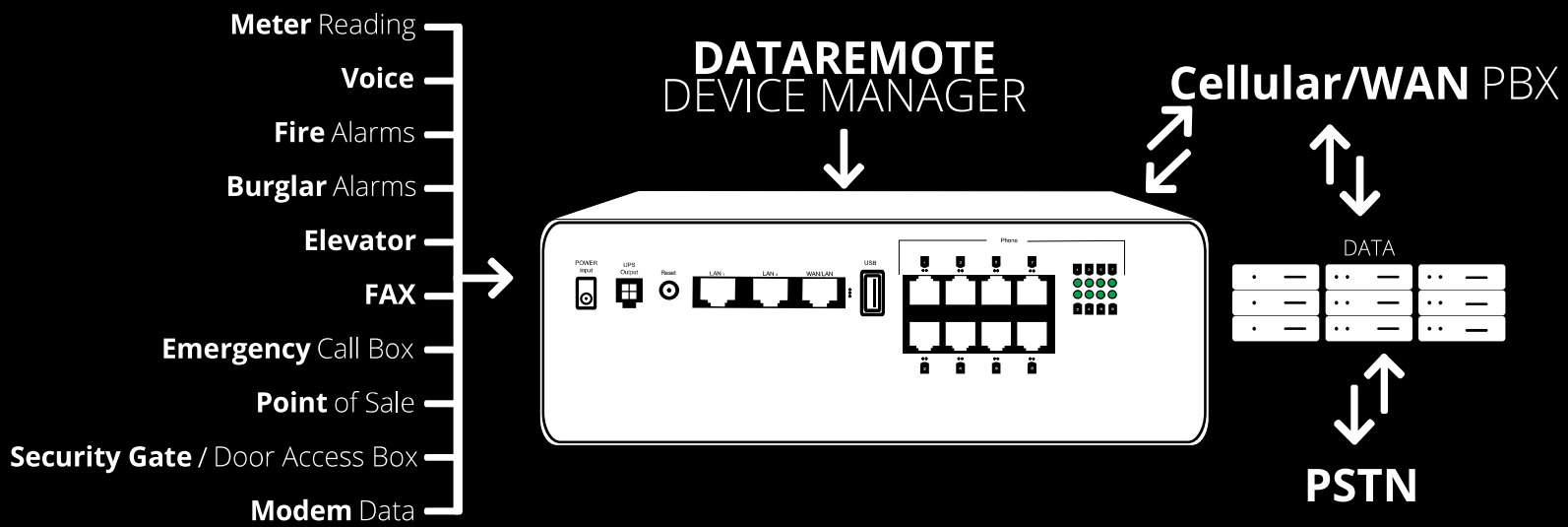
90X1
POTS Solution

WHAT CAN YOUR NEW DEVICE DO?

Applications that require a copper hard-line can now be replaced with one managed device!

ONE DEVICE
TO REPLACE ALL LANDLINES

DataRemote® offers enterprise-grade solutions for traditional landline replacement. The DataRemote suite of products converts all existing legacy landlines to next-generation digital. Such as voice, FAX, burglar, fire alarms, elevators, ATMs, emergency call boxes, point of sale systems, and more.



The DataRemote 90X1 POTS line solution with VoIP is a backup device that facilitates clear and reliable voice quality over the Internet. It is fully compatible with Session Initiation Protocol (SIP) industry standards and can integrate with many other SIP devices and software on the market.

HARDWARE **INSTALLATION**

FOLLOW ALL THE STEPS AS SHOWN IN THIS GUIDE. FOR ANY QUESTIONS RELATED TO THE HARDWARE INSTALLATION, PLEASE VISIT THE KNOWLEDGE BASE DEDICATED TO THE DEVICE.

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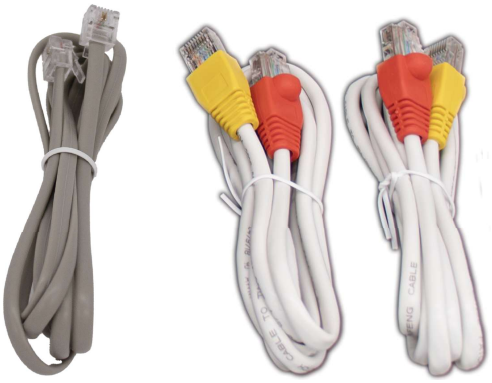
WHAT COMES IN THE BOX

90X1 DEVICE

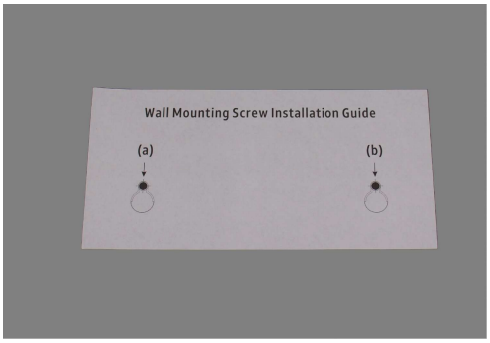
Cellular Antennas

AC Power Adaper



Phone (RJ-11) and Ethernet (RJ-45) cords

Set of Mounting Hardware



Mounting Diagram

BEFORE INSTALLING THE DEVICE

A high-speed internet connection can be accessed through 5G/LTE wireless networks and cable modems.

The 90X1 device should be connected near a power source and away from sources of extreme heat/humidity.

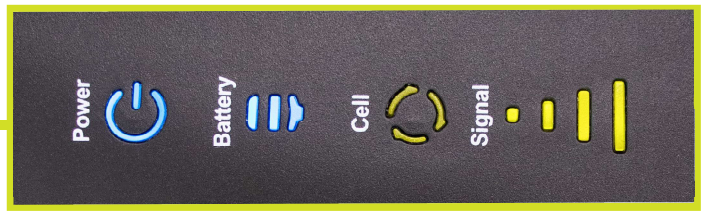
This device can use 5G and LTE. Please make sure the device is being installed in an area providing good cellular reception.

⚠ ***IMPORTANT: Please refrain from putting furniture or other obstacles in front of the device. This may influence signal quality, thus degrading cellular reception.***

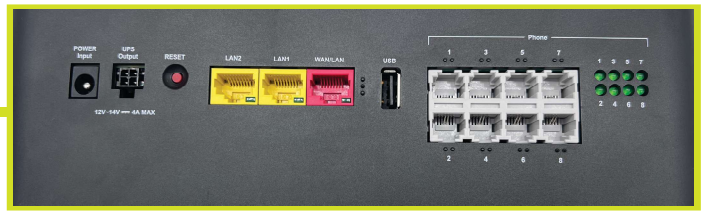
LED LIGHT INDICATORS

Please get acquainted with the LED indicators and connectors before use.

FRONT PANEL



BOTTOM PANEL



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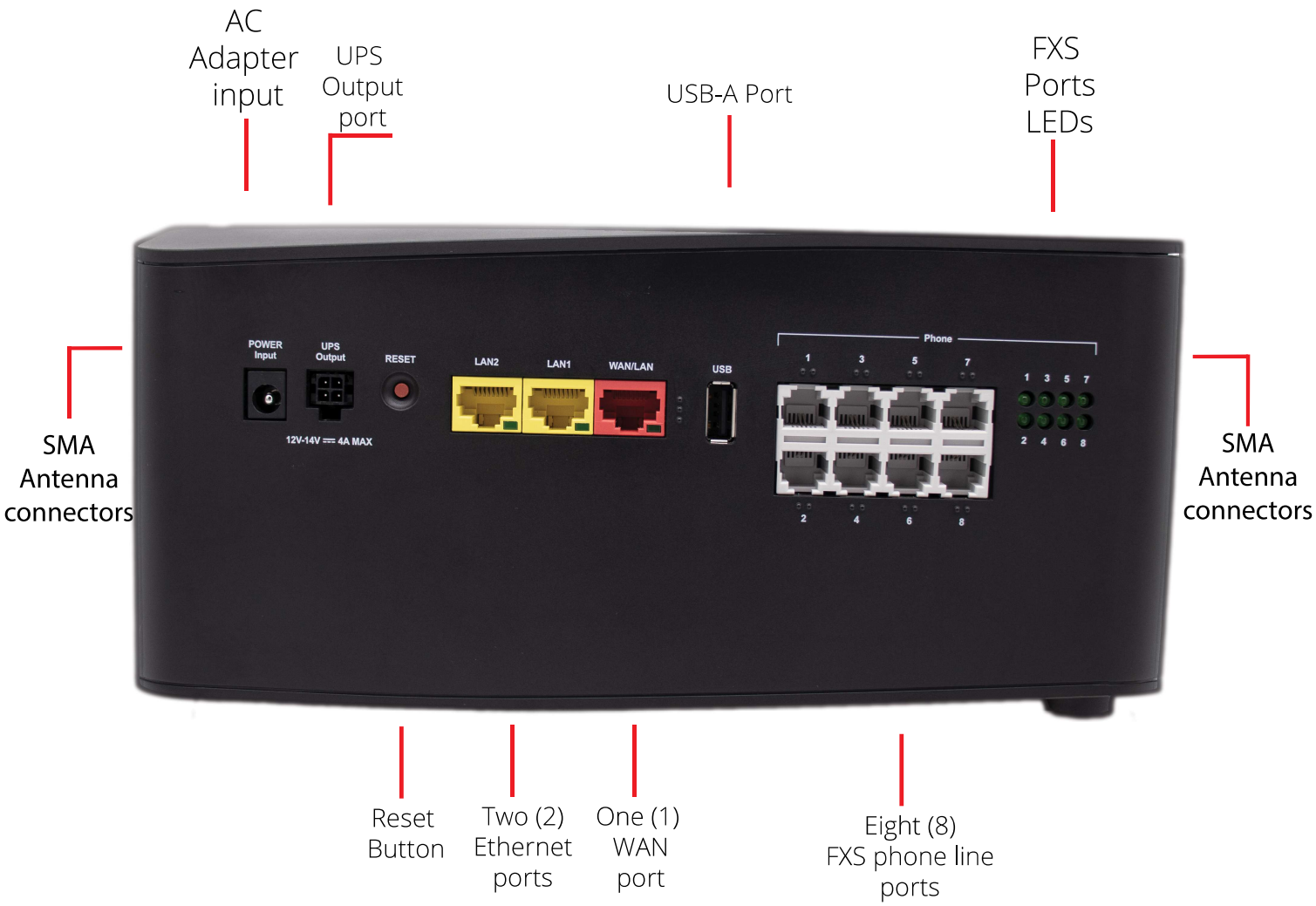
LED	STATUS	
Power	Solid (GREEN)	The device is powered on and connected to WAN.
	Slow Flashing (GREEN)	Reboot mode
	Fast Flashing (GREEN)	Factory Reset mode
	Solid (BLUE)	The device is powered on and connected to cellular WAN
	Slow Flashing (BLUE)	Kernel done booting. Device POST stage
	Fast Flashing (BLUE)	Boot-loader / Kernel boot
	Solid (RED)	Factory Reset mode
	Fast Flashing (RED)	Boot-loader booting issue. Invalid / Absent / Corrupted firmware
	Slow Flashing (AMBER)	Firmware upgrade in progress
	OFF	Device powered off
Battery	Solid (GREEN)	Battery charged (power connected)
	Flashing (BLUE)	Battery charging
	Flashing (AMBER)	Battery Discharging (power not connected)
	Flashing (RED)	Battery low & power not connected
Cell	Solid (GREEN)	Connected to 5G
	Slow Flashing (GREEN)	Connected to 4G
	Fast Flashing (GREEN)	Attempting to connect
	OFF	Disconnected
Signal	4x GREEN	Strong: All bars solid - RSSI <-50dBM to -69dBM
	3x GREEN	Only three bars solid - RSSI <-70dBM to -79dBm
	2x GREEN	Two bars solid - RSSI <-80dBm to -89dBm
	1x GREEN	One bar solid - RSSI <- 90dBm to 120dBm
	OFF	OFF - RSSI 120dBm and below
	On (GREEN)	Good LTE Signal Detected
LAN 1	Flashing (GREEN)	Port is sending or receiving data
	OFF	Disconnected
LAN 2	Flashing (GREEN)	Port is sending or receiving data
	OFF	Disconnected
WAN/LAN	Flashing (GREEN)	Port is sending or receiving data
	OFF	Disconnected
Phone 1 - 8	Solid (GREEN)	Registered / On-hook
	Flashing (GREEN)	Active call / Off-hook
	OFF	Not Registered

WHAT IS ON THE BACK OF THE DEVICE?



IMPORTANT: The LED FXS lights of the 90X1 are arranged in a left-to-right sequence. The top row of FXS ports includes numbers 1,3,5, and 7. The bottom row comprises of ports 2,4,6, and 8.

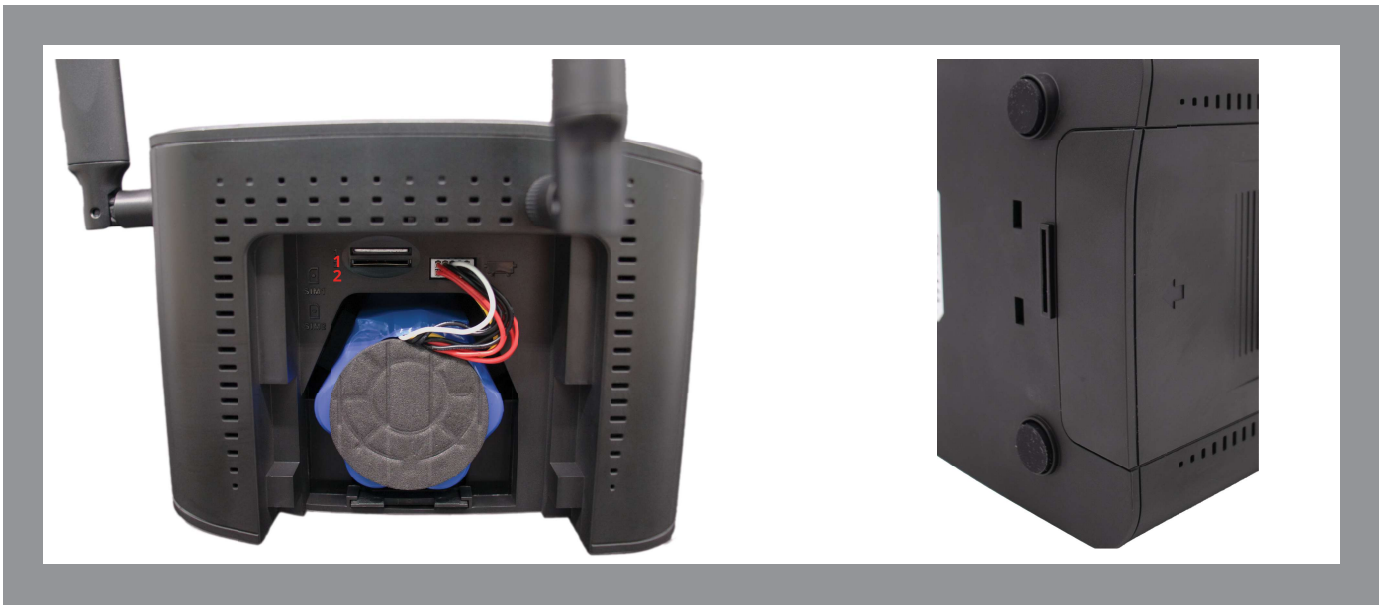
Quick Start Guide

IMPORTANT! Before starting to configure the device, please connect it as shown in these "step-by-step" directions.

STEP 1

Insert a quarter or DRI-approved tool into the slot on the back of the device and pull in the direction pointed by the arrow to open the battery compartment.

Insert the SIM card into the slot marked, “SIM 1” or “SIM 2”, as needed, until seated. Once finished, place the battery cover back on.



STEP 2

Connect the AC Adapter to the back of 90X1 and wall plug to an electrical outlet or surge protector.

WARNING: Ensure the original 19V, 3.4A power adapter supplied with the device is being used to avoid damage.

STEP 3 - If available

Connect an ethernet cable (RJ-45) from the LAN port on modem, switch, or router that is supplying internet connection, into the **RED WAN** port of the 90X1.

NOTE: This is a representation of a network switch. Models and appearance may vary depending on the source of connectivity.

STEP 4

Connect an ethernet cable from either of the two **YELLOW LAN** ports on the 90X1, to the equipment to receive an internet connection from the device.

NOTE: This step may be bypassed if no equipment requires a wired Internet Connection.

STEP 5

Connect the **GREY RJ-11** from the phone or equipment requiring an analog POTS connection to the 90X1 device's FXS port(s).

WARNING: Do not connect an active RJ-11 with voltage directly from the wall into the 90X1's RJ-11 ports. This will damage the device permanently. Each 90X1 RJ-11 FXS port is an active port supplying voltage. The FXS port is only to be connected to an FXO analog phone or another FXO device.

STEP 6 - If using Cellular

Connect the four (4) supplied **Cellular** antennas to the device via the SMA connectors located on the sides and top of the device.

STEP 7

Ensure the necessary accessories are connected to the device depending on your use case. At this point, the device is ready to be installed.

- WAN - RJ-45
- LAN - RJ-45
- RJ-11
- Cellular Antennas

SERVICE TECHNICIAN INSTALLATION

OVERVIEW OF THE DATAREMOTE 90X1 DEVICE

The 90X1 device is an Analog Telephone Adapter (ATA) with battery backup that uses the Internet and the Cellular Data Network to provide wireline or POTS lines, including the capability for transmission of voice, FAX, Telemetry, analog data, automatic meter reading, point of sale terminals, ring-down and emergency lines.

SCOPE OF WORK

The scope of work to be completed on-site includes the following:

- Locate existing analog appliances (ie: Fire Panel(s), Call Boxes, FAXES, Voice lines).
- Using a cable toner, locate FCC SNI/DEMARC for existing POTS lines currently serving analog appliances.
- Unpack, assemble then test 90X1 in "Standalone" Mode with power cable connected.
- Mount the 90X1 and test FXS 1-8 phone jacks (if applicable) by calling in/out using a telephone test set or a simple single-line telephone and cell phone before connecting any analog appliance.
- Mount the biscuit jacks (RJ-11 Surface mount) close to the 90X1 to serve as the new incoming phone line service.
- Connect existing devices to newly installed RJ-11 biscuit jacks.
- Ensure no "Foreign Voltage" is present by measuring the voltage at the tip and ring terminals on the new biscuit jacks connected to the devices. Voltage should read: “zero” volts DC (direct current)

⚠ **IMPORTANT! IF foreign voltage is present, locate and disable it. If no foreign voltage is present, proceed to the next step**

- Connect the 90X1 FXS 1-8 jacks (if applicable) to existing devices.
- If installing a Call Box or Voice Line, test by making inbound/outbound calls.
- If installing a Call Box, also test the “Gate/Door Entry" tone (DTMF/”Press 9") and programming calls inbound to the device. Request client or call vendor technical support to facilitate programming test calls as needed.
- If installing a fire alarm panel, test that Fire Alarm Panel’s primary & secondary lines by originating a call out through the 90X1 device.
- If installing a FAX, test by sending/receiving FAX using customer equipment.

Continued on next page

Materials List Provided by DataRemote

Basic Package Contains (Refer to “What comes in the box” section)

- **One (1)** 90X1 Device
- **Four (4)** Cellular Antennas (SMA-M Connectors)
- **One (1)** AC Power Adapter Output: 19V, 3.4A
- **One (1)** Gray Phone Cord (RJ-11)
- **One (1)** Red Ethernet Cord (RJ-45)
- **One (1)** Yellow Ethernet Cord (RJ-45)
- **One (1)** Set of Mounting Hardware/One (1) Mounting Diagram

TOOLS LIST FOR TECH:

- Sufficient quantity of dual RJ-45 port surface mount boxes (aka biscuit jack)
- Sufficient quantity of RJ-11 or RJ-45 keystone plugs
- CAT5E cable – minimum 150 feet
- Power strip (as precaution in case there are not sufficient outlets in the room)
- Zip Ties / Velcro for wire management
- Extra RJ-11 cable and RJ-11 male adapters, in the event additional or longer runs are required.
- Cat5e patch cables of varying lengths
- Cordless drill/driver with bits to install mounting hardware to wallboard
- All termination tools and line/tone testers
- All hand tools required to make Cat5 cable runs (glow-stick, wire tape, etc.)
- Butt Set (or analog test telephone if Butt Set doesn't have an RJ-11 plug/jack interface)
- Label maker (to label biscuit jacks)
- Camera with 3.0 megapixels or higher photo resolution
- 6" torpedo level
- Voltmeter
- Flashlight
- **NOTE: Photo of Cable Tester results will be required in deliverables**

⚠ ***IMPORTANT! TECHNICIANS MUST FOLLOW THIS MANUAL EXACTLY, AS EACH PHASE & STEP ARE DESIGNED TO ENSURE PROPER MIGRATION. ANY DEVIATION MUST ABSOLUTELY BE APPROVED BY YOUR RESPECTIVE EMPLOYER ONLY!!***

Pre-installation Tasks

Please review these steps before starting and ensure a copy of this guide and installation checklist are at the site to use as a reference during the installation.

On-site Arrival and Initial Equipment Testing:

1. Upon arrival, call the respective Program Manager (PM) on the check-in line to confirm tech is on-site. Be prepared to supply the store number/location ID, City, and State listed on the Work Order.

2. The Tech will ask for the Manager On Duty (MOD), and introduce themselves, stating the purpose of their visit as the installer for the DataRemote 90X1 device.

a. Please report any store access issue to your Project Manager immediately.

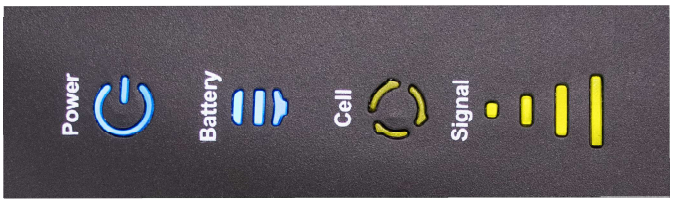
3. The DataRemote device was shipped to the site in advance of the tech dispatch; please obtain this package from the Manager.

a. Please open the package in front of MOD and inspect for a complete kit per the previous page's material list; especially if the package was already opened.

⚠ ***IMPORTANT! ANY DIRECTIVE FROM ON-SITE STORE PERSONNEL DEVIATING FROM THE NORM OR OUTSIDE THE SCOPE OF THIS GUIDE MUST BE RELAYED TO THE PM IMMEDIATELY. (BOTTOM LINE, CONTACT PM FOR APPROVAL PRIOR TO ACCEPTING AND ACTING UPON ANY DIRECTION FROM STORE PERSONNEL ON-SITE).***

WAN CONNECTIVITY VERIFICATION VIA LED LIGHT

- Verify WAN (Wired BroadBand) - WAN link light is on
- Verify all Cellular lights (Cell and Signal) are on.
  - 1-4, 4 being the strongest
- Verify Line Registration with FXS LEDs.
- Verify Power and Battery lights are on.



TESTING VOICE LINE

1. Phone FXS 1-8 indicators should be either solid green (On-Hook) or flashing green (Off-Hook/Busy). Once the lights above have been verified, use a butt-set (or an analog test phone if your model butt-set doesn't have an RJ-11 modular connection) to place a test call from the phone 1 jack to your cell phone.

⚠ ***IMPORTANT: The call MUST be completed by answering it; otherwise, the device will not register the test the call event in the server logs, which are used for install validation.***

NOTE: If there are any issues other than a completed call and calling number identification/verification such as the call not going through or any other condition, STOP and call Installation Support to report the issue and work to resolve it before proceeding. Record the calling phone number in the checklist for this site as phone 1's (primary) new ATA number. Repeat steps 2 - 5 accordingly by performing the steps again using the phone 2-8 line ports of the DataRemote 90X1 device, only if voice lines.

TESTING FIRE PANEL

1. Locate the Fire Alarm Panel. Have the Site Manager escort you to the room/area where the active Fire Panel is located. If not already visible, refer to your Installer Representative Manual for a sample picture of typical Fire Alarm Panels.

-The site's active Fire Alarm Panel will have one or two POTS lines connected to it. These POTS lines may be terminated near the panel in several ways, including:

a. Two (2) surface-mount jacks located just outside of the Fire Panel, generally RJ-31 style
b. Located in a 4x4 electrical box just off to the side of the fire panel.
c. Jacks may be located inside the Fire Alarm Panel on Motherboard and/or a dialer module.

⚠ ***IMPORTANT: Take a "BEFORE" picture of the panel and any status indicators/ displayed messages appearing to represent the condition of the panel upon arrival!***

WARNING: *DO NOT DISCONNECT ANY EXISTING PHONE LINES UNTIL INSTRUCTED TO DO SO LATER IN THIS DOCUMENT. DOING SO EARLIER, MAY RISK A POSSIBLE DISPATCH FROM THE RESPECTIVE ALARM COMPANY.*

PHASE 1

Installation Tasks – Locate Existing POTS Lines

WARNING! DO NOT TOUCH THE EXISTING RJ-31 JACKS NEAR THE FIRE PANEL UNLESS INSTRUCTED TO DO SO!

Once the Fire Panel is located, connect the 90X1 phone ports respectively with the Fire Alarm Panel's primary & secondary phone line ports, preferably utilizing the existing cabling by preparing to disconnect the terminating end from the POTS line and connecting to the appropriate DataRemote FXS port.

As stated earlier in **STEP 1** when trying to find the Fire Alarm Panel, note cabling is typically terminated near the Fire Panel via some method before running inside the panel to connect to it. A common method uses two (2) surface mount jacks, but other methods may be used as well.

Identify the termination points of the two (2) POTS lines serving the Fire Alarm Panel at the Telco Closet/Demarc. To do so, try one or more of the following:

- Look for the two (2) telephone numbers (TN), if identified and labeled at the Fire Panel. Record them in your installation checklist. Then look for labels with those TNs at the Telco Room / Demarc.
- Be sure to also note which TN may be labeled primary or secondary.
- Tone-trace the existing cabling:
- Temporarily unplug the cable from the Fire Alarm Panel leading into one of the RJ-31x surface mount jacks.
- Plug the tone generator into the surface mount jack to tone out the cabling back towards the Demarc to discover its location. Repeat for other RJ-31x jack/cable too if needed.
- Restore connection to RJ-31 jack(s) if removed to conduct tone-test.

PHASE 2

Cut-over Fire Alarm Panel lines to new 90X1 device

WARNING! ONLY PROCEED IF STEPS 1 AND 2 ARE COMPLETE AND ARE FREE OF OPEN ISSUES.

Once those POTS Line terminations are found in the Telco Closet Demarc/SIN, their cable runs to the Fire Alarm Panel need to be isolated from their telco POTS lines and redirected to the 90X1 phone ports using the included 5-foot-long phone cord. The method of termination of those lines coming back from the Fire Alarm Panel will dictate the next steps taken to cut them over to the 90X1.

1. If the cable runs coming from the Fire Panel terminate in the Telco closet demarc/SIN to an RJ-11 or RJ-45 patch-panel or surface-mount (SMT) jack:

a. Determine which jack is associated with the primary or secondary line from the Fire Alarm Panel and mark them respectively with new device's telephone numbers as noted in your checklist during **STEP 1** tasks for 90X1's phone 1-8 ports respectively.

b. Remove what is plugged in the Primary marked jack now. Plug one end of the included phone cord into that jack and the other end into the Phone jack of the 90X1 respective line for the Fire Alarm – Primary Dialer connection.

NOTE: Mark this phone 1 port's phone cord with a "1" or "P" to reflect it connects to the 90X1 device's primary phone alarm port.

c. Repeat with the other included phone cord for the secondary marked jack into the phone 2 jack of the 90X1 for Fire Alarm – secondary dialer connection.

NOTE: Leave the second phone line unmarked or place a "2" or an "S" on its phone cord.

d. If cable runs coming from the Fire Panel terminate in the Telco closet demarc/SIN to a 66 or 110 block, check the following:

- Determine which jack is associated with the Primary or the Secondary line of the Fire Panel and mark them according if not already apparent/visible.

- Isolate the Telco-side connection from those two (2) pairs (i.e. lift bridging clips on 66-block) Punch down the two pairs of the new cable run to a dual SMT jack or two (2) Single-port SMT jacks (a.k.a. biscuit jacks).

- Determine and mark/label each SMT jack cover with its new device telephone number plus some primary or secondary suffix - e.g.:
678.555.1234 678.555.2468 FIRE PNL-Prim FIRE PNL-Sec

2. Mount the SMT Jack(s) somewhat near to the 90X1 depending on the 5-foot-long phone cord's reach and distance between 66-Blk & SMT box(es)

3. Using your cable tester, test both SMT jack terminations and take a PHOTO of the test results to add to deliverables (REQUIRED).

4. Using included phone cords with RJ-11 terminations, connect FXS alarm ports from 90X1 to the "FIRE-Primary & FIRE-Secondary" SMT box respectively

5. Mark Cables:

- Mark the 90X1 alarm line 1 port's phone cord with a "1" or "P" to reflect it connects to the 90X1 alarm line 1 port.

- Mark the 90X1 alarm 2 port's phone cord with a "2" or "S" to reflect it connects to the 90X1 alarm line 2 port.

PHASE 3

Testing Fire Alarm Communication over the 90X1

The 90X1 device will be set in auto-detect alarm mode. It will detect what type of supported protocol the panel communicates in, Contact-ID, SIA, Pulse...Etc.

NOTE: Do not plug in a Butt Set to the 90X1 and make a test call on any of the alarm lines as this will deactivate the auto-detect mode.The first alarm call will fail during the auto-detect sequence. This is normal. If calls continue to fail, contact Installation Support.

From the cut-over steps above, the Fire Alarm Panel may have already communicated it is a Telco trouble fault condition and restoration to the alarm vendor, but it needs to be tested again.

1. Determine if the Fire Alarm Panel has a current "trouble condition". It could be a controller display, message, or LED Indicator. Note or take a picture if so. Then, go back to the 90X1.

2. Invoke a Fire Alarm Panel "trouble condition" by removing all phone cords from alarm line 1-8 jacks of the 90X1 unit and leaving them disconnected for at least 3 minutes. If time permits, walk back to the Fire Alarm Panel to wait for it to go into trouble condition as may be indicated in the Controller Display and/or via certain LED indicators being lit on the motherboard.

NOTE: If this phone line disconnect method doesn't invoke a "trouble condition" on the Fire Alarm Panel to be reported from the panel, please contact the Install Support Team as you may have to temporarily disconnect backup batteries or power-cycle the panel to force an event required to be communicated to monitoring vendor.

Continued on next page

PHASE 3 - continued

3. Test the Fire Alarm Panel trouble resolution process.

IMPORTANT: DO STEPS IN THIS ORDER ONLY, DO NOT CHANGE THE ORDER.

Secondary Line Testing:

ONLY plug the phone cord back into the secondary alarm line of the 90X1.

Wait for the Phone 2 green LED on the 90X1 to start flashing. Once the flashing phone 2 LED goes back to solid green, the system has attempted the call to report the trouble event to the alarm vendor.

Primary Line Testing:

Once the secondary test call is successful, leave the phone 2 port's cord plugged in, and now plug the remaining phone cord into the primary Alarm Line 1 port of the 90X1.

Wait for the Phone 1 green LED on the 90X1 to start flashing green. Once the flashing Phone 1 LED goes back to solid green, the system has attempted the call to report the trouble event to the Alarm Vendor. the

4. Fire Alarm Panel confirmation:

a. Walk back to the Fire Alarm Panel to verify that the panel cleared the trouble condition.
b. If both test calls above are completed successfully and the trouble condition cleared, then proceed to call Alarm Vendor next.
c. If testing was unsuccessful on either line, then:

- Verify the 90X1 device phone ports are still providing dial-tone and allowing outbound calls to be made. If not working, then contact Install Support.
- Verify cabling connections to/from the Fire Alarm Panel/90X1 device.
- Call the Install Support Team to assist in troubleshooting.

Continued on next page

PHASE 4

Verifying Fire Alarm Communication over 90X1

5. Call the Fire Alarm Vendor to confirm they show the "trouble condition" report and that it has been cleared:

- Record the new telephone number from the 90X1 in your checklist to provide to the Alarm Vendor for monitoring and future programming.

- Confirm the Fire Alarm Vendor is receiving the alarm call from the 90X1 phone 1-8 (respectively) telephone numbers recorded in your checklist against the respective primary & secondary line trouble calls they received/logged in their monitoring system.

6. Call Install Verification line to confirm communication through the 90X1 was successful.

7. Clean up the area, dress any cables needed, and take photos of installation as required in the deliverables section below.

8. Confirm the phone 1-8 LEDs (respectively) are all solid green *(if blinking, it may be making a call so just wait for it to go solid again)*. Lights should be as below; capture a picture of their status.

(REQUIRED, SEE AN EXAMPLE BELOW):

PHASE 5

Testing FAX Lines

FAX Mode Details:

- FAX Works in VOIP and FAX modes on the 90X1.
- FAX calls in VOIP mode cannot be assured of full transmission and or quality.
- FAX in FAX mode works in Basic (9600 Baud), Normal (14400 Baud) with ECM *(Error Correction Mode)* ON & OFF depending on the customer's FAX machine.
- ***NOTE: The printing duration per page can range from 25 seconds to 1 minute, contingent upon factors such as the BAUD rate, line quality, and signal quality.***

Here is a breakdown of the average time it takes for a single page FAX to transmit based on the Baud Rate of the sending and receiving FAX lines.

Please keep in mind that these are average times of FAX transmission speeds.

BAUD RATE	INBOUND MINUTES PER PAGE	OUTBOUND MINUTES PER PAGE
2400	2 Minutes 30 seconds	2 Minutes 50 seconds
4800	1 Minute 45 seconds	1 Minute 50 seconds
7200	1 Minute 15 seconds	1 Minute 15 seconds
9600	1 Minute	1 Minute
12000	55 Seconds	55 Seconds
14400	45 Seconds	45 Seconds
28800	35 Seconds	35 Seconds
33600	25 Seconds	25 Seconds

FAX Testing:

1. Connect the respective FXS line that is provisioned for FAX to the "Line" port of the customer FAX machine.

2. Make a test outbound FAX call to a number provided by your Project Manager.

3. Contact the Project Manager to return the FAX for inbound FAX testing.

4. Repeat test (Steps 1-3) on both WAN and LTE.

NOTE: If at any point FAX is not working, please contact Installation Support Team.

PHASE 6

Testing Analog Data Lines

1. Connect the respective FXS line that is provisioned for analog data with RJ-11 cable to the modem device.

2. Initiate an outbound data call to the receiving station/monitoring company. If you do not have a number, please contact your Program Manager or the site MOD.

3. Request the receiving station/monitoring company call the modem device for a programming call. If you do not have an external station/company number, please contact the site MOD.

4. Repeat test **(STEPS 1- 3)** on both WAN and LTE.

NOTE: If at any point the 90X1 is not working, please contact the Support Team.

Post-Installation Tasks.

- Present installation checklist to MOD to sign.
- Call the Tech Check-in/Check-Out line to be released from the site.
- Upload all taken & required pictures to your Work Order.

Advanced Programming Information.

- For advanced programming information, please go to **Support.Dataremote.com.** The support desk site for submitting Tier 3 trouble tickets.
- Please set up an account by requesting access to "Advanced Programming Information Guides" and entering your email contact details.
- An email will be sent asking you to log in and set up an account.
- Then, a second email will be sent with a link to the login to your support desk.
- The support desk contains documentation for advance programming of the 90X1 as well as a means to submit and check on support request tickets
- Tickets improperly escalated will be rejected and closed.

Deliverables

1. Signed Work Order.

2. Signed Tech Installation Checklist.

3. Required photos.

4. View of the DataRemote 90X1 device with Battery and Power LED "On".

5. View of Signal LED of the DataRemote 90X1 device for signal strength indication.

6. Wide angle view of the room where the Fire Alarm Panel resides.

7. View of Fire Alarm Panel outside cover.

8. View of Fire Alarm Panel status upon arrival – Controller display / any fault LED's.

9. Inside door view of Fire Alarm Panel – any labels or block diagrams.

10. View of the inside of the Fire Alarm Panel – Motherboard.

11. View of old POTS lines surface mount jacks at the Fire Alarm Panel.

12. View of old POTS line terminations at telco closet/demarc/SNI.

13. View of cable test results of newly installed SMT boxes (as applicable).

14. View of SMT boxes labeled with new Telephone numbers and Prim/Sec Suffixes.

15. View of marked phone cords plugged into the DataRemote 90X1 device 1-8 ports.

16. View of Fire Panel's controller display before cut-over to the DataRemote 90X1 device Ports.

17. Photo of all cable management.

18. Wide views of the entire wall and the DataRemote 90X1 device closeup to show the completed installation job.

19. Picture/scan of both pages of Tech Checklist.

20. Picture/scan of signed Work Order.

Equipment Installation Tasks:
For all other Device installations not covered above, follow the same steps using industry best practices for wiring, lay-downs, cable restraints, cable routing, hardware, and device cable management necessary to complete installation including any special testing. Refer any technical questions to MOD.

Regulatory & Safety Certifications

FCC (AJLF-90X1)

PTCRB

IEEE-1625

UL 62368-1

UL 864

UL 2054

Carrier Certifications

AT&T

T-Mobile

Verizon

US Cellular

Industry Standards

CA Energy Commission

Dept. of Energy

TAA

NDAA

Appendix A

Lithium-Ion Battery Best Practice Guidelines

DataRemote devices utilize Lithium-Ion rechargeable batteries for backup power purposes. All Lithium-Ion batteries require routine maintenance and care in their use and handling. The following guidelines should be referenced to safely use these Lithium-Ion batteries and achieve the maximum battery life.

Overview

At initial delivery from manufacturing, the batteries are charged between 25% and 50% as it is not safe to transport Lithium-Ion batteries at full charge. The typical estimated life of a Lithium-Ion battery is three to five years under normal use.

Batteries should never be left unused for extended periods of time, whether in the product or in storage as they will self-discharge when not in use. After 6-10 months of inactivity, it is important to check the charge status and recharge the battery as appropriate.

All rechargeable Lithium-Ion batteries will gradually lose their capacity to hold a charge and are considered to have a limited lifetime. This capacity loss (aging) is irreversible. The length of time the battery will power the product (run time) decreases as it loses capacity.

The user manual for each product includes information on checking battery status, battery charging, and disposal instructions. Use only DataRemote-approved batteries in your Data-Remote products; failure to do so may result in significant risk to you, to the product, and void any warranty.

Battery Maintenance

- The run time of a new fully charged battery in your product will vary depending on the product's configuration.
- A check of the battery's charge status should be performed routinely. For products in regular use, the battery should receive one complete charge and discharge annually.
- Batteries approaching their estimated end of life should be carefully monitored.
- Consider replacing the battery under either of the following conditions:
  - The battery run time drops considerably, 30% or less than typical.
  - The time to charge the battery increases significantly.
- Replacement and proper disposal are required under ANY of the following conditions:
  - The battery shows signs of physical damage, including swelling or leaking fluid.
  - The battery leads are damaged.
- A battery which has been unused or stored for an extended period against the storage instructions in this document should have the battery charge checked. If the battery has no charge remaining when checked, follow instructions in the product user manual to charge the battery.

NOTE: If a battery which has been unused for an extended period will not accept a charge, it should be considered damaged and replaced, due to improper storage.

Charging

Refer to the product user manual for battery charging instructions.

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Storage

- During storage, charge the battery at least once per 6-12 months to approximately 50% of capacity to prevent discharge to less than 20% capacity during storage.
- Charging time of 2 hours minimum is recommended for long term storage.
- Charge or discharge the battery to approximately 50% of capacity before storage or transport.
- For batteries installed in stored product, it is recommended to disconnect the battery leads.
- Store the battery at temperatures between 5 °C and 20 °C (41 °F and 68 °F).

NOTE. The battery self-discharges during storage. Extreme high or low temperatures as well as significant temperature swings (below 5 °C or 41 °F or above 20 °C or 68 °F) reduce the battery storage life.

Handling Precautions

- Do not puncture, disassemble, or crush a battery.
- Do not short the battery contacts.
- Do not expose the battery to fire or water.
- Do not attempt to dispose of a battery in fire or water.
- Do not expose a battery to temperatures below 0 °C (32 °F) or above 50 °C (122 °F).
- Keep batteries away from children.
- Avoid exposing the battery to excessive shock or vibration.
- Do not use a damaged battery.
- If a battery has leaking fluids, do not touch any fluids. See Disposal and Recycling in this document for proper disposal instructions.
- Should battery fluid enter the eyes, do not rub eyes. Immediately flush eyes thoroughly, lifting upper and lower lids, for at least 15 minutes or until no evidence of the fluid remains. Seek medical attention.

Transportation

- Before transporting a Lithium-Ion battery, always check all applicable local, national, and international regulations.
- Transporting a recalled, damaged, or end-of-life battery may, in certain cases, be prohibited or specifically limited.

Disposal and Recycling

- Lithium-Ion batteries are subject to disposal and recycling regulations which vary by location. Always check and follow applicable regulations before disposing of any battery. The Rechargeable Battery Recycling Corporation (www.rbrc.org) for U.S.A. and Canada, or your local battery recycling organization are suggested contacts.
- Disposal of waste electronic equipment in standard waste receptacles is prohibited in many countries.
- Only place discharged batteries in a battery collection container. To prevent short circuits, use electrical tape or other approved covering over any exposed battery connection points.