



## Android Debugging for Elo Android 7.x devices (I-Series 2.0/PayPoint Plus for Android/PayPoint for Android Rev B)

### Introduction

This document covers the following:

- How to use ADB over IP (Wi-Fi and Ethernet)
- How to use USB debugging and its limitations
- Cables required

This note assumes that you have access to a host computer with ADB tools installed.

### ADB debugging over IP

Elo recommends debugging over IP (Ethernet or Wi-Fi) for Android 7.x units as no additional hardware is needed and there are no limitations. Following steps describe access to ADB over IP:

1. Plug Ethernet cable into the Elo device or connect device to Wi-Fi (Must be the same network as developer machine)
2. Open Android Settings
  - Open the Elo Control Panel (by pressing Home + Power and entering your password). Go to "Apps" page and click on "Settings"
  - If in Android Home mode, then open "Settings" application from the desktop
3. Go to Settings > About Phone > Tap Build Number **SEVEN** times. A message will appear stating "You are now a developer"
4. Go to Settings > Developer Options. Turn ON the "USB debugging" option.
5. Go to Settings > About Phone > Status
6. Note the IP address field
7. Connect to this IP address over ADB by doing the following on the dev machine:
  - o \$ adb connect <ip.address.of.elo>
8. A security message will pop-up on the Elo device asking for permission for the debug computer to connect. Tap "Allow" on the dialog
9. ADB access is now enabled, on the debug computer you can now use commands such as:
  - o \$ adb devices
  - o \$ adb shell

### ADB debugging over USB

While ADB over USB is possible, this is not recommended if you are debugging peripheral ports. For software-only debugging, this method may be sufficient. Developers should keep in mind two things about using a USB cable and enabling ADB:

1. USB connected devices/ peripherals will not work.
2. Ethernet port will also become non-functional as it part of the USB subsystem

Reason for the limitation on peripheral connectivity lies in the system architecture of the Qualcomm 625 CPU, which supports only one upstream USB port. When ADB is enabled and in use via a physical USB cable, no other USB devices are able to use the USB bus.



To connect via the Type A USB port on I-Series 2.0 devices, or the mini-USB port on PayPoint devices, perform the following steps:

1. Ensure that no USB cable is connected to the device.
2. Open Android Settings
  - Open the Elo Control Panel (by pressing Home + Power and entering your password). Go to "Apps" page and click on "Settings"
  - If in Android Home mode, then open "Settings" application from the desktop
3. Go to Settings > About Phone > Tap Build Number **SEVEN** times. A message will appear stating "You are now a developer"
4. Go to Settings > Developer Options. Turn ON the "USB debugging" option.
5. Turn on "Switch USB to device mode" option. *Note: enabling this option will cease communication between the USB peripheral ports.*
6. Plug the USB cable into the Type A USB port (for I-Series 2.0) with a Type A to Type A USB cable and connect the other end of the cable to your host PC.
7. On the host PC, type "adb devices" – if the connection is successful, the I-Series 2.0 serial number will be displayed.

### **Cables Requirements**

#### **For I-Series 2.0:**

- Cable required for ADB: Type A to Type A USB cable.
- Cable required for Fastboot: Type A to Type A USB cable.
- Physical port location for ADB: Type A port
- Physical port location for Fastboot: Type A port

#### **For PayPoint Plus for Android and PayPoint for Android Rev B:**

- Cable required for ADB: Mini-USB (same as earlier PayPoint for Android "Rev A" units)
- Cable required for Fastboot: Mini-USB (same as earlier PayPoint for Android "Rev A" units)
- Physical port location for ADB: Mini-USB. Bottom of the unit. Near AC power plug
- Physical port location for Fastboot: Mini-USB. Bottom of the unit. Near AC power plug