Pathfinder P1600-DK Quick Start Guide

The Blaize® Pathfinder P1600-DK Embedded Development Kit is a fully integrated embedded development platform built around the Blaize Pathfinder P1600 Embedded System-on-Module. The kit ships pre-loaded with the Blaize Picasso Embedded Software Development Kit, a Linux-based operating system and several application examples to help developers quickly develop complete AI applications that run efficiently on Blaize Pathfinder Platforms.

> **WARNING** *This equipment contains ESD-sensitive parts. Always use appropriate anti-static equipment when handling or operating the equipment. Failure to do so can result in ESD discharge to sensitive pins and irreparable damage to the system.*

1. Kit Contents

The following components are included as part of the evaluation kit:

- Pathfinder P1600 System on Module
- Carrier Board
- x2 MIPI CSI-2 FHD Cameras
- 4" LCD Display
- Ethernet Cable

- 16GB Micro SD Card
- Micro-USB Cable
- Power Supply
- Carrier Board Jumpers and assembly hardware
- Quick Start & Safety Guide

2. Getting Started

The P1600-DK Embedded Development kit is pre-configured to run the provided examples with minimum effort. The following sections describe the steps to bring-up the board and test the included examples. Refer to the Blaize Embedded Development User Guide for detailed information on how to develop applications using the Blaize Picasso Embedded SDK.

3. Optional Installs

The kit ships with MIPI CSI Cameras ready to attach to the board. For the provided examples, attach one MIPI CSI Camera to the board "CSI0" connector and make sure the J12 jumper (3-pin) is fitted between pins 1-2. Attach the included 4" LCD display to the DSI0 connector on the board and secure it using one of the provided screws.

4. Power Up

Before powering up the board, follow these instructions:

1. Apply the optional installs above as needed.

2. Insert the provided micro SD Card in the card slot on the board (connector J1).

3. Connect the included Micro-USB Cable to the "USB1" port on the carrier board.

4. Connect the included power adaptor to an AC mains power outlet and the Power Connector on the board. The power adapter is suitable for your region. Only use the provided Blaize power adapter.

The board will power up. Make sure the four green LEDs are lit. On the Host Computer, start a terminal session and connect to the Blaize System. The following example shows how to connect from a typical Linux Host system, using the program "picocom". The connection speed should be set to 115,200 baud. Other host systems may require a different application to connect to a serial port, and the serial port name may also be different depending on the host.

```
picocom -b 115200 /dev/ttyUSB0
```

Press the "RESET" button on the Carrier Board. The serial console terminal will show boot messages after a 5 second delay.

5. Login

At the login prompt, enter "root" with no password to access the system.

6. Examples

The Kit includes several pre-compiled examples. Refer to the eSDK User Manual for information on how to run them. Before running the demos, ensure that both the CSI cameras and DSI display are correctly attached to the board. Refer to the "Optional Installs" section for details on how to connect them.

7. Safety Information

To reduce the risk of electrical shock, personal injury, or damage to the equipment, observe the following precautions:

- Do not eat, drink, or smoke while working with P1600-DK.

- Do not bend, drop, crush, puncture, incinerate, or push objects into the P1600-DK.

- Do not connect or disconnect any cables or perform maintenance or reconfiguration of this product during an electrical storm or when device is powered on.

- Do not use the P1600-DK in rain or near a sink, or other wet locations.

- Never turn on any equipment when there is evidence of fire, water, or structural damage.

- Place the product away from radiators, heat registers, stoves, amplifiers, or other appliances that produce heat.

- Only use the provided Blaize power adapter for powering the Development Kit.

- Do not connect or disconnect the AC power adapter with wet hands. The power adapter is intended for indoor use only.

- The board should be powered down and the power removed before plugging or unplugging devices or add-on modules into the headers.

- Operate the AC adapter in a ventilated area.

- Do not use conductive tools that could bridge live parts.

- Do not make mechanical or electrical modifications to the equipment.

- The heatsink and thermal assembly may get hot. Do not touch with bare hands.

- Operate and store the P1600-DK in a place where the temperature is always between 32 to 80°F.

- Never force a connector into a port. Check for obstructions on the port. If the connector and port don't join with reasonable ease, then probably don't match. Make sure that the connector matches the port and that you have positioned the connector correctly in relation to the port.

8. Further Information

8.1. Technical Support

Go to Blaize Support Website for support resources including documentation, downloads, and forums.

8.2. Legal Disclaimer

Your use of the Blaize Pathfinder P1600-DK is subject to the Blaize, Inc. terms and conditions located at Blaize Support Website under the Legal menu ("Agreement"). If you do not agree to the Agreement, you must immediately return the kit to Blaize.

8.3. ESD Warning

The Blaize Embedded Development Kit contains ESD-sensitive parts. Always use appropriate anti-static equipment when handling the card. Failure to do so can result in ESD discharge to sensitive pins, and irreparable damage to the system.