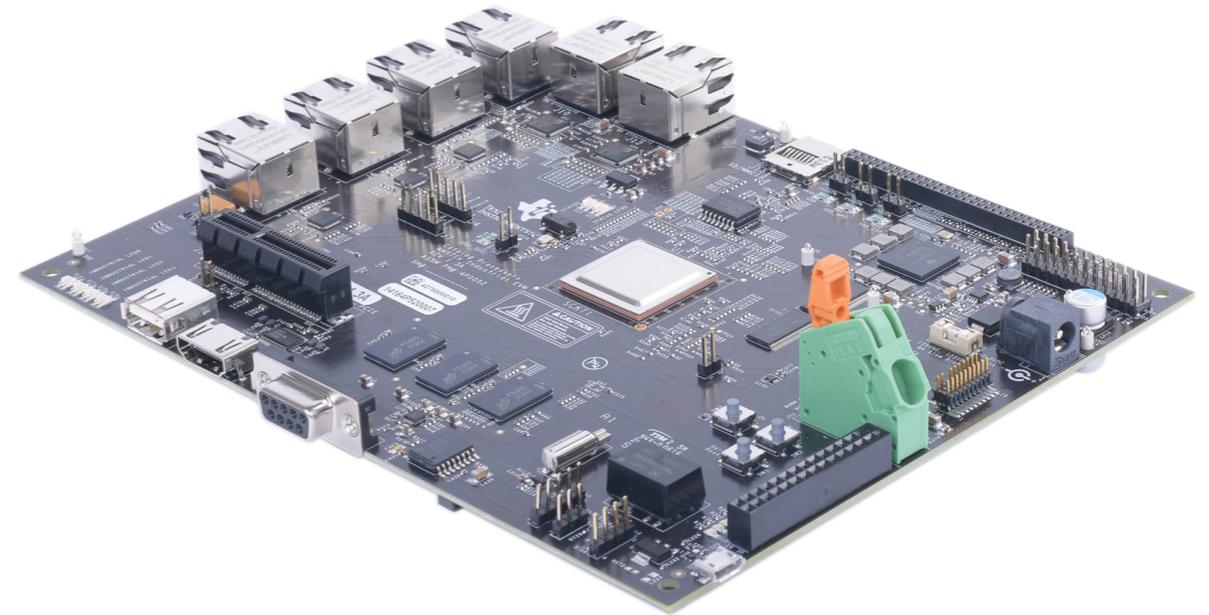


For more information:
www.ti.com/am571xdk



Actual product may vary from images

Additional resources

For more information on AM571x processors, including:

- User Guide
- Software
- How Tos
- Design Files

Please visit www.ti.com/am57x and www.ti.com/am571xdk

For support questions, please contact: support@ti.com or www.ti.com/e2e.

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AM571x Industrial Development Kit Quick Start Guide

Welcome to the AM571x Industrial Development Kit (IDK) Quick Start Guide. This guide is designed to help you through the initial setup of the board. This IDK allows you to experience industrial applications which showcase the AM571x's Cortex®-A15 and C66x processors, PRU-ICSS real-time industrial communications subsystem and more. The AM571x IDK contains the following:

• **Hardware**

- Sitara™ AM571x Cortex-A15 processor
- TPS6590377 power management I/C
- 10" capacitive touch LCD (sold separately as TMDXIDK57X-LCD. A shunt needs to be placed on J51 to enable LCD operation. See PINMUX note.)
- 1GB DDR3 memory with ECC
- HDMI connector
- 256-Mb Quad SPI NOR Flash memory
- 16-GB eMMC memory
- USB1 High-Speed (USB2.0) host port
- USB2 High-Speed (USB2.0) host/device port
- 2 Gigabit Ethernet ports
- 2 10/100 Industrial Ethernet ports enabled by default (All four 10/100 Industrial Ethernet ports can be enabled by disabling the LCD output by removing J51 shunt. See PINMUX note.)
- 1 PROFIBUS® port
- Haptics
- 6 Tricolor industrial and status LEDs
- 1 RS-485 port header
- 1 DCAN port header

- 1 PCIe x2 connector
- On-board XDS100 JTAG emulator
- On board USB serial port
- 20-pin JTAG connector for external JTAG emulator

• **Printed documents**

- AM571x IDK Quick Start Guide (this document)
- Terms and conditions

• **Miscellaneous**

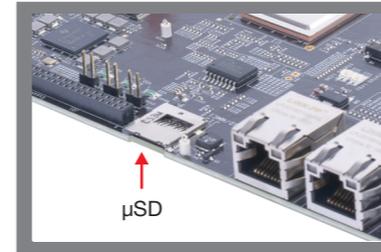
- μSD card with Processor SDK RTOS
- μSD-to-SD card adapter
- 1 micro USB 2.0 cable, 6 ft

PINMUX note for LCD and Ethernet ports:

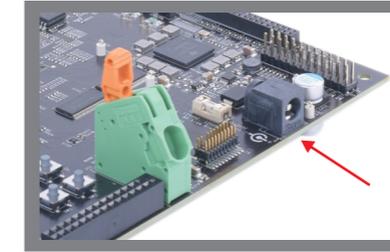
Due to PINMUX, all six Ethernet ports cannot be used at the same time that the LCD is used. The AM571x IDK is designed to operate in two modes. The mode is chosen using a shunt on header J51.

- *J51 shunt installed:* LCD and 4-port mode. LCD is enabled. Ports GIGETH0, GIGETH1, PRU2ETH0, and PRU2ETH1 are enabled. Ports PRU1ETH0 and PRU1ETH1 are disabled.
- *J51 shunt not installed:* 6-port mode. LCD is disabled. Ports GIGETH0, GIGETH1, PRU2ETH0, PRU2ETH1, PRU1ETH0, and PRU1ETH1 are enabled.

Default setup (OS boot from microSD card)



1 Insert the μSD card into the IDK. The μSD card will be loaded with Processor SDK RTOS when the kit is received. The latest version of Processor SDK RTOS and other software compatible with the IDK can be downloaded by visiting www.ti.com/AM571xIDKSW

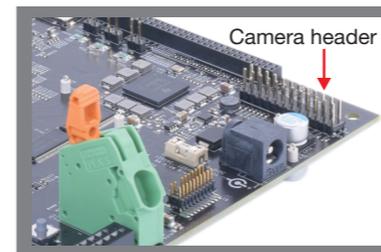
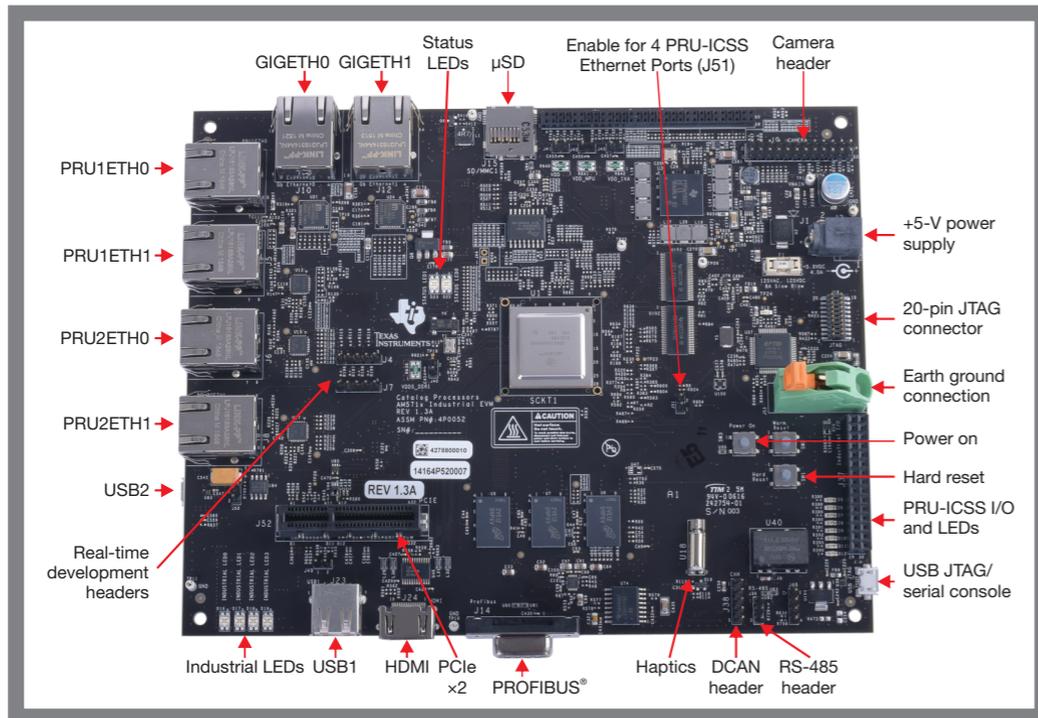


2 Connect the power cable to the power jack on the board and plug into an AC power source.

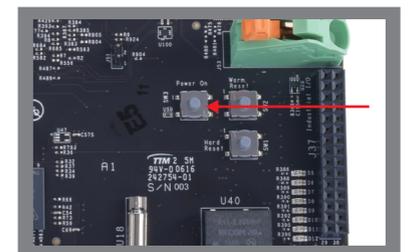
Note: When powering this IDK, always use the supplied power supply (GlobTek Part Number TR9CA6500LCP-N, Model Number GT-43008-3306-1.0-T3) or equivalent model having output voltage of +5VDC and output current max 6.5 Amp as well as the applicable regional product regulatory/safety certification requirements such as (by example) UL, CSA, VDE, CCC, PSE, etc. The power supply can be ordered on eBay <http://www.ebay.com/itm/-/291940638402>



3 Connect the supplied USB Micro-B to Type-A cable to the microUSB JTAG port J19 and plug the other end into your PC/laptop USB port. Then open a serial console on your PC/laptop such as Teraterm. This cable can also be used for Code Composer Studio (CCS) IDE control of the IDK. Please see http://processors.wiki.ti.com/index.php/Processor_SDK_RTOS_Setup_CCS for details on CCS set up.



4 Optional: Connect the camera module to the camera header of the IDK, with the camera sensor facing away from the IDK.



5 Push the power on push button (SW3) to run the IDK. For more on out-of-box diagnostics, please see: www.ti.com/AM571xIDK-OOB

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