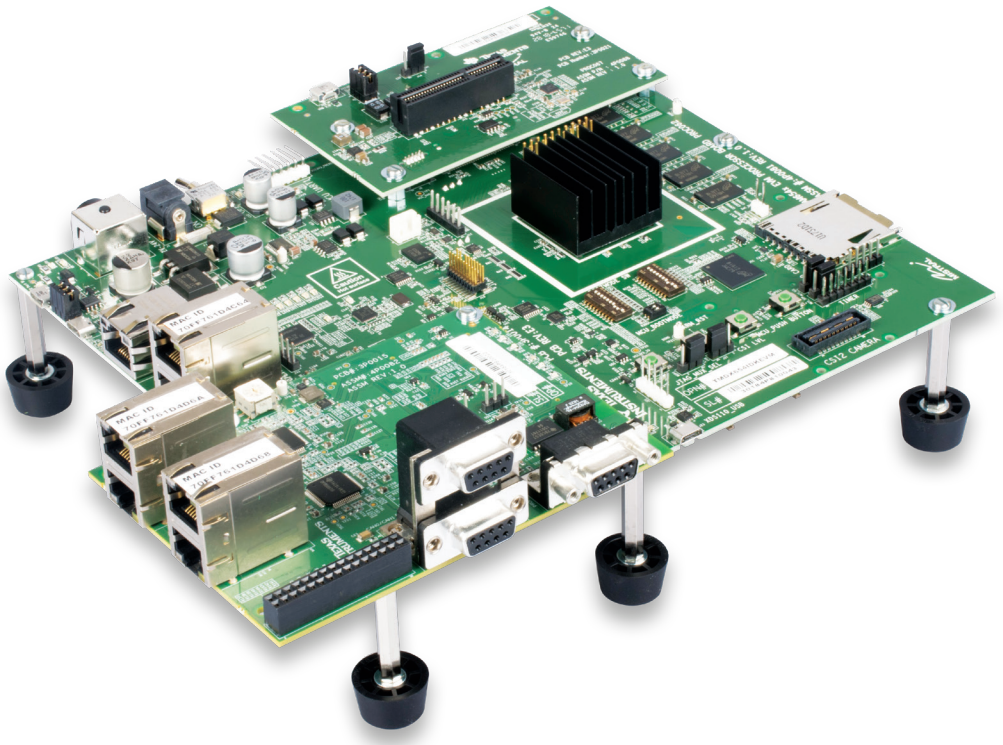


Texas Instruments

# AM65x/DRA80xM Industrial Development Kit

Manufactured by Mistral Solutions Pvt. LTD. • www.mistralsolutions.com

| | | |
|---|---|---|
| | **Caution** | Caution Hot surface.<br>Contact may cause burns.<br>Do not touch. |

Welcome to the AM65x/DRA80xM 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 AM65x/DRA80xM Quad-Core Cortex®–A53, Dual-Core Cortex-R5F, gigabit PRU-ICSS (real-time industrial communications subsystem), and more. The IDK contains the following:

### Hardware

- AM6548/DRA804M Quad Core Cortex®-A53 function equivalent processor
- IDK Application card
- 2-lane PCIe SerDes card
- 4GB DDR4 with ECC
- On board 16 GB eMMC
- On board 512Mb OSPI Flash

### Printed Documents

- AM65x/DRA80xM IDK Quick Start Guide (this document)

### Miscellaneous

- 1 SD card
- 1 USB 2.0 cable
- 1 Ethernet cable

### Not included in box

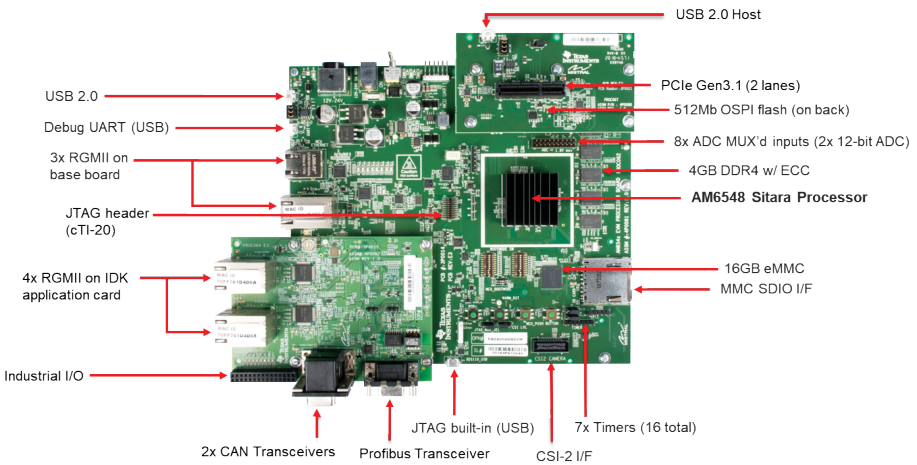
The following hardware is not included in the box and must be procured separately:

1. Power supply. Use one of the following power supply options for powering up the IDK. Pick a power supply with all the applicable regional product regulatory/safety certification requirements such as UL, CSA, VDE, CCC, PSE, etc.

| Connector | Specifications | Examples |
|---|---|---|
| Power DIN, 4 Pin | +24VDC, 5A Output (Max) | CUI Inc. SDI120-24-U-P51 |
| Barrel Plug, 2.5mm I.D. x 5.5mm O.D. x 9.5mm | +24VDC, positive center, 2.71A Output (Max) | CUI Inc. SDI65-24-UD-P6 |

*The DIN connector power supply is recommended to provide enough power for applications that make use of the PCIe interface.*

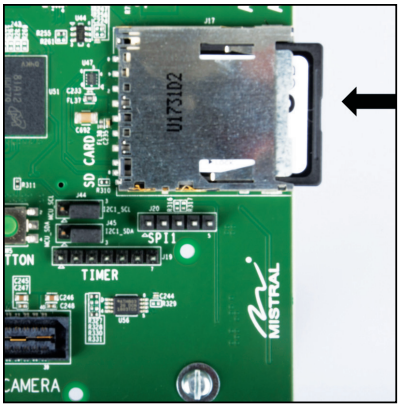
2. 1280 x 800 LCD Display Accessory Kit. The LCD is optional and can be purchased separately using TI part number TMDSLCD1EVM.



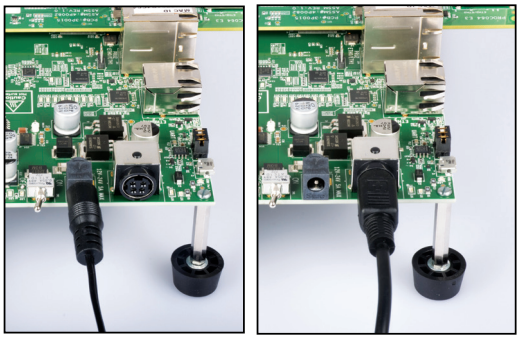
# Default setup (TI-RTOS boot from SD card)

**1** Optional: If you have purchased the LCD Accessory Kit, assemble the LCD onto the IDK following the instructions included with the LCD Accessory Kit.

**2** Insert the SD card into the IDK. Alternatively, download and install the latest Processor SDK-RTOS from http://www.ti.com/tool/processor-sdk-am65x, create a bootable SD card and insert it into the IDK.



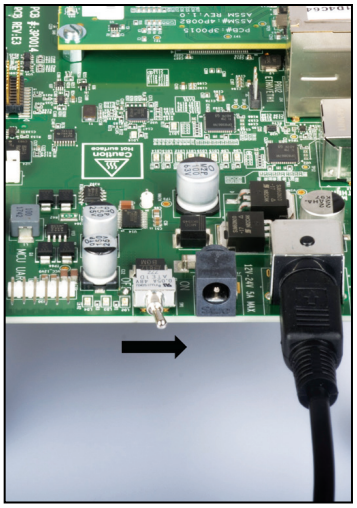

**3** Connect a power supply (not included) to the DIN connector or power jack on the IDK and plug it in to an AC power source. Do not connect both, only one power supply must be connected.



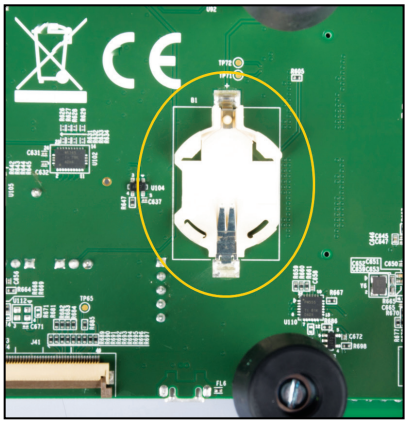
**4** Connect the supplied USB debug cable to the USB connector labeled “UART” on the board. Connect the other end to your PC. Then open a serial console on your PC such as Teraterm. Please note that you may need to download and install an FTDI driver from http://www.ftdichip.com/FTDrivers.htm.

**5** Optional: If you plan to use Code Composer Studio (CCS) IDE to control the IDK, you must use another USB cable connected to the USB connector labeled "XDS110_USB" on the board. Refer to http://software-dl.ti.com/processor-sdk-rtos/esd/docs/latest/rtos/How_to_Guides.html#host for details about CCS setup.

**6** Turn on the IDK by sliding the toggle switch to the right. To turn off, slide the toggle switch the left.



**7** Note that this IDK comes with a coin battery holder. A coin battery is not necessary for normal operation of the IDK.



***Note:*** *This IDK is designed for optional use with a removable CR2032 UL recognized lithium battery (not supplied). Always use the CR2032VP Energizer 3V Lithium coin cell battery or similar CR2032 UL recognized battery with Nominal Voltage 3.0 Volts, Capacity 235mAh*

TI Processor SDK software development guides are available at:

Linux: www.ti.com/processor_sdk_linux

TI-RTOS: www.ti.com/processor_sdk_rtos

Android: www.ti.com/processor_sdk_android

For more information on AM65x processors, including:

- User Guide
- Software
- How To
- Design Files

Please visit **www.ti.com/am65x**

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

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