MPC8306KIT Quick Start Guide

The MPC8306KIT is a two board system, one is processor board called as SOM featuring the PowerQUICC™ processor, MPC8306 and Memory interfaces. Other Board is called Carrier card which consist of external world interfaces terminated on connector/Header.

This document will help user in quickly getting familiar with external connections and making the MPC8306KIT setup.

1 MPC8306 SOM – Major Connectors' Details

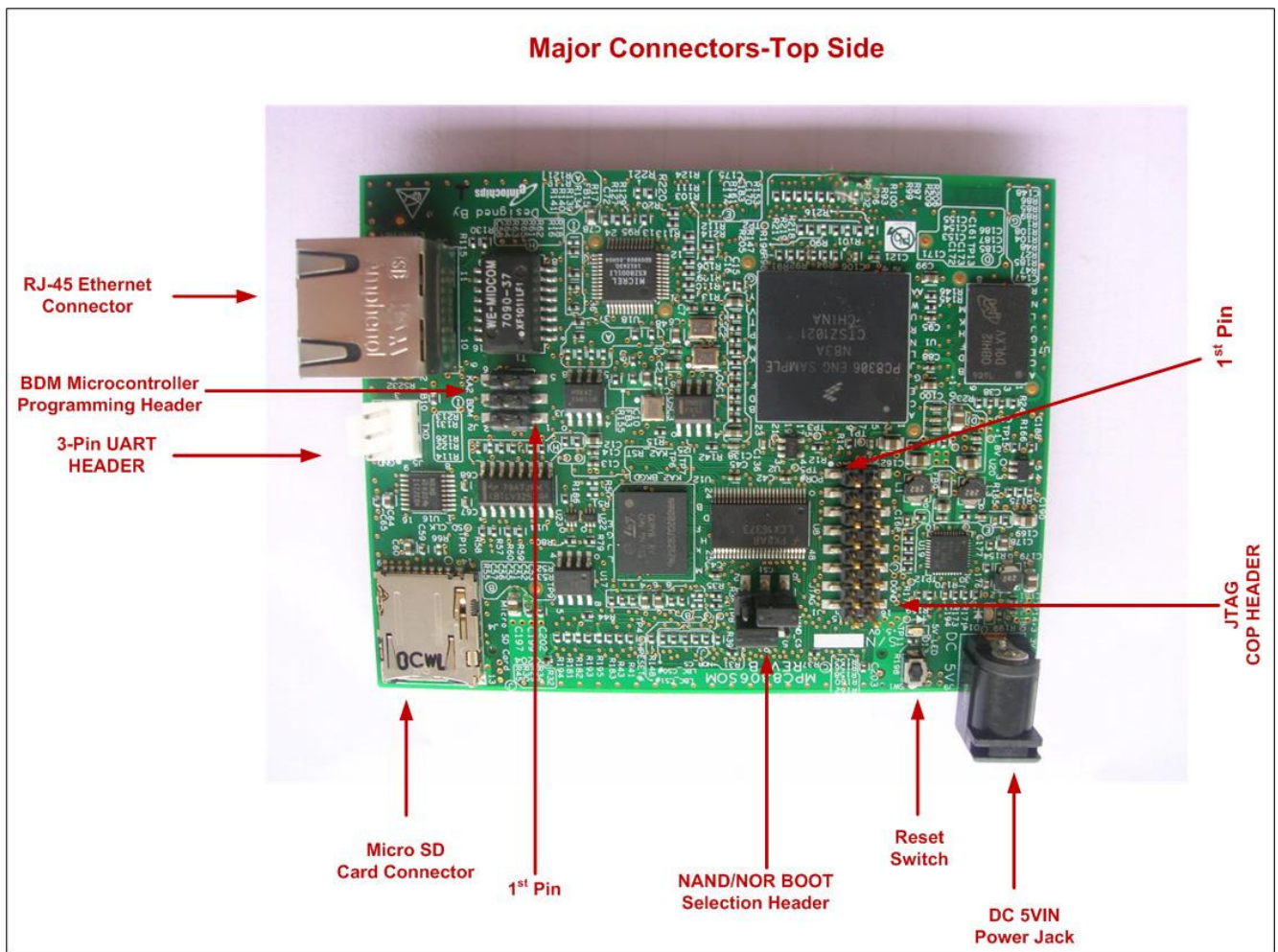Following **Figure 1** and **Figure 2** shows the Major Connector of the MPC8306 SOM card.

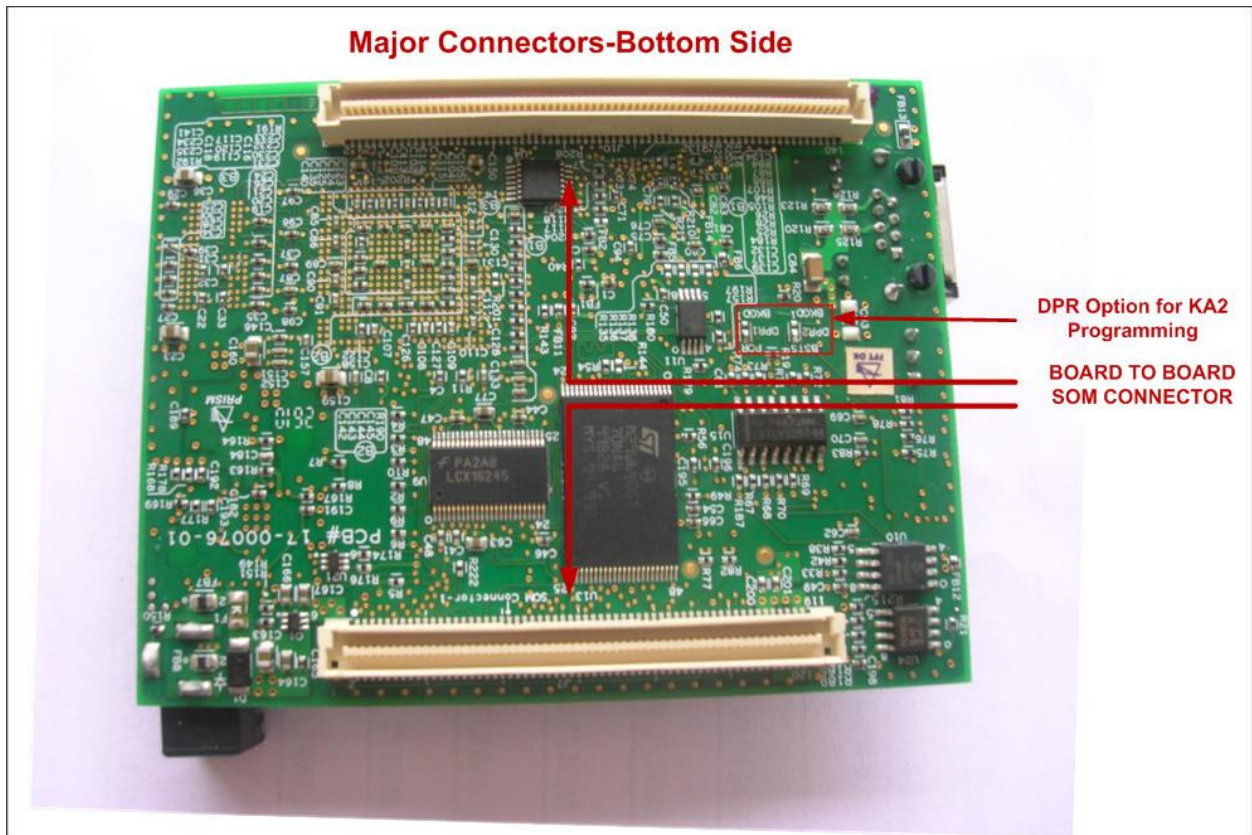**Figure 1 : Major connectors on TOP side of the MPC8306 SOM Card**

Figure 2: Major connectors on Bottom side of the MPC8306 SOM Card

Following **Figure 3** show the Jumper settings on Header J3 for either NOR Boot Mode or NAND Boot Mode.
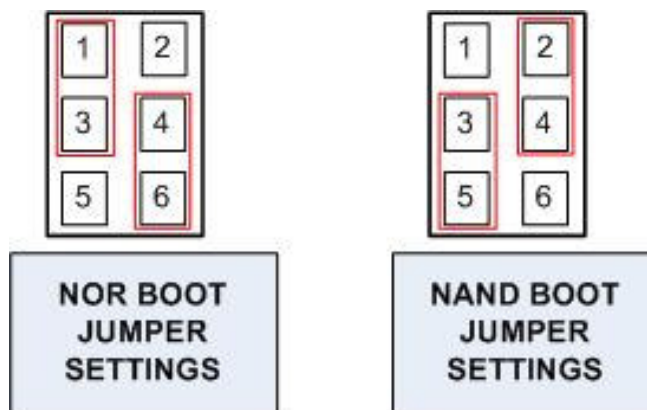

Figure 3: NOR & NAND Boot Mode Jumper Settings

Following **Figure 4** shows the options for configuring KA2 into RUN mode and PROGRAM mode.

Figure 4: KA2 Run and Program mode mounting options

DPR – This is 3-pad component footprint to provide options to mount/short link jumper on 2 adjacent pads. By connecting two pads, one of the two options can be selected. The care should be taken that both the DPRs are configured for same option.

Before power on the board; please note following thing:

1. The on-board KA2 Microcontroller is already flashed with the microcontroller reset program, thus the microcontroller DPR1 and DPR2 pads should be shorted for "KA2 RUN MODE" option.

2 External Cable Connection for SOM Standalone

To start using the SOM card in stand alone mode following external cable connection to make.

1. 5V DC power adapter
2. CAT5 cable for the network connectivity
3. UART connection for the debug console with the PC

Following **Figure 5** shows the external cable connectivity with MPC8306 SOM card.
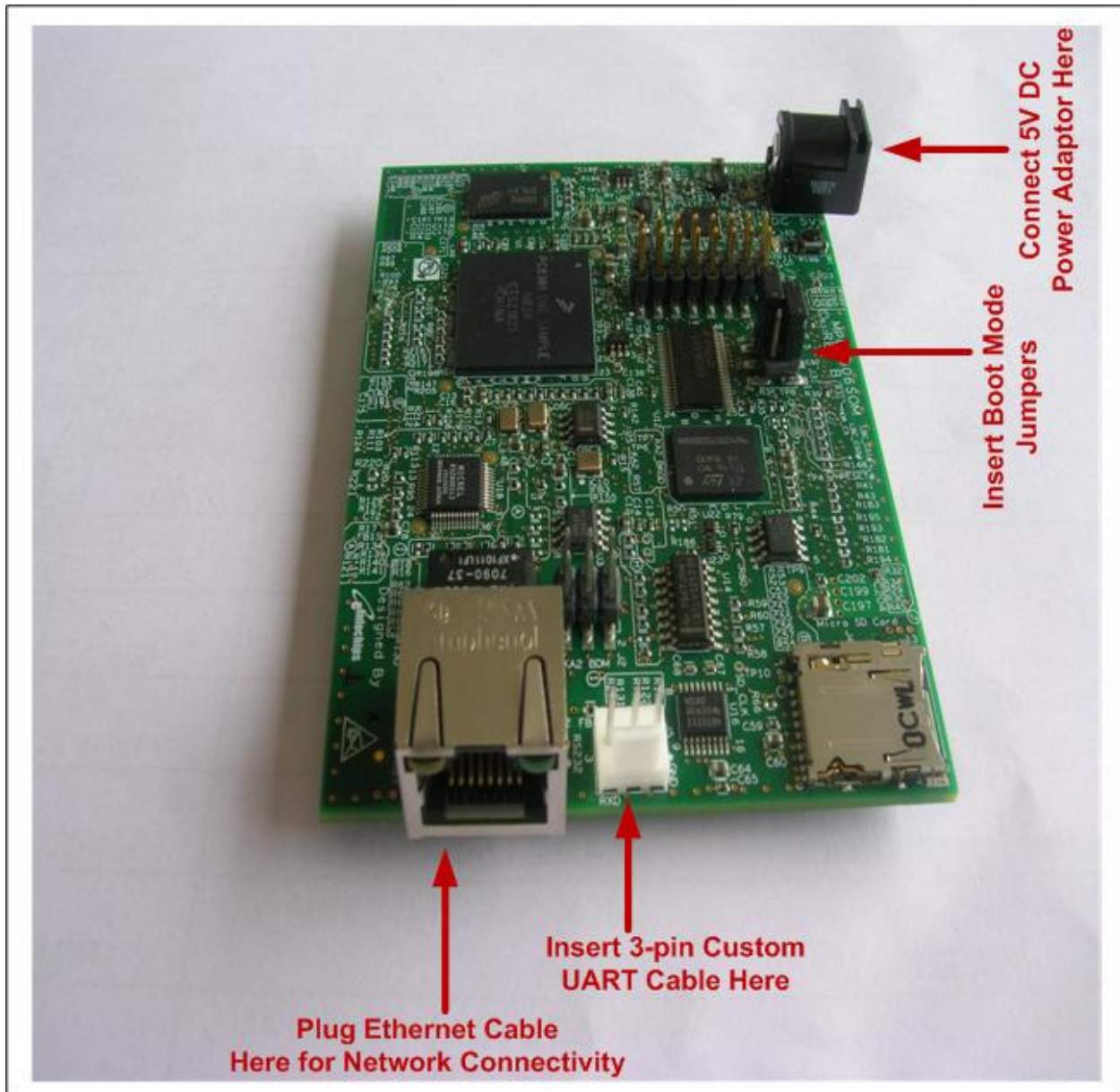

Figure 5 : External Cable Connection for the Stand alone SOM Boot Mode

All necessary cable requires are sent along with the MPC8306KIT.

Please note that, no need to connect External 5V Power Supply & UART cable when the SOM card is being used with the Carrier card. Refer to section 4 for the external cable connection for MPC8306KIT (SOM + Carrier) Card combination.

Note: Below sections 3- 4 are applicable only for Carrier card.

3 Major Connectors of the Carrier Card

Following Picture shows the Major Connector on carrier card applicable for MPC830X SOM.
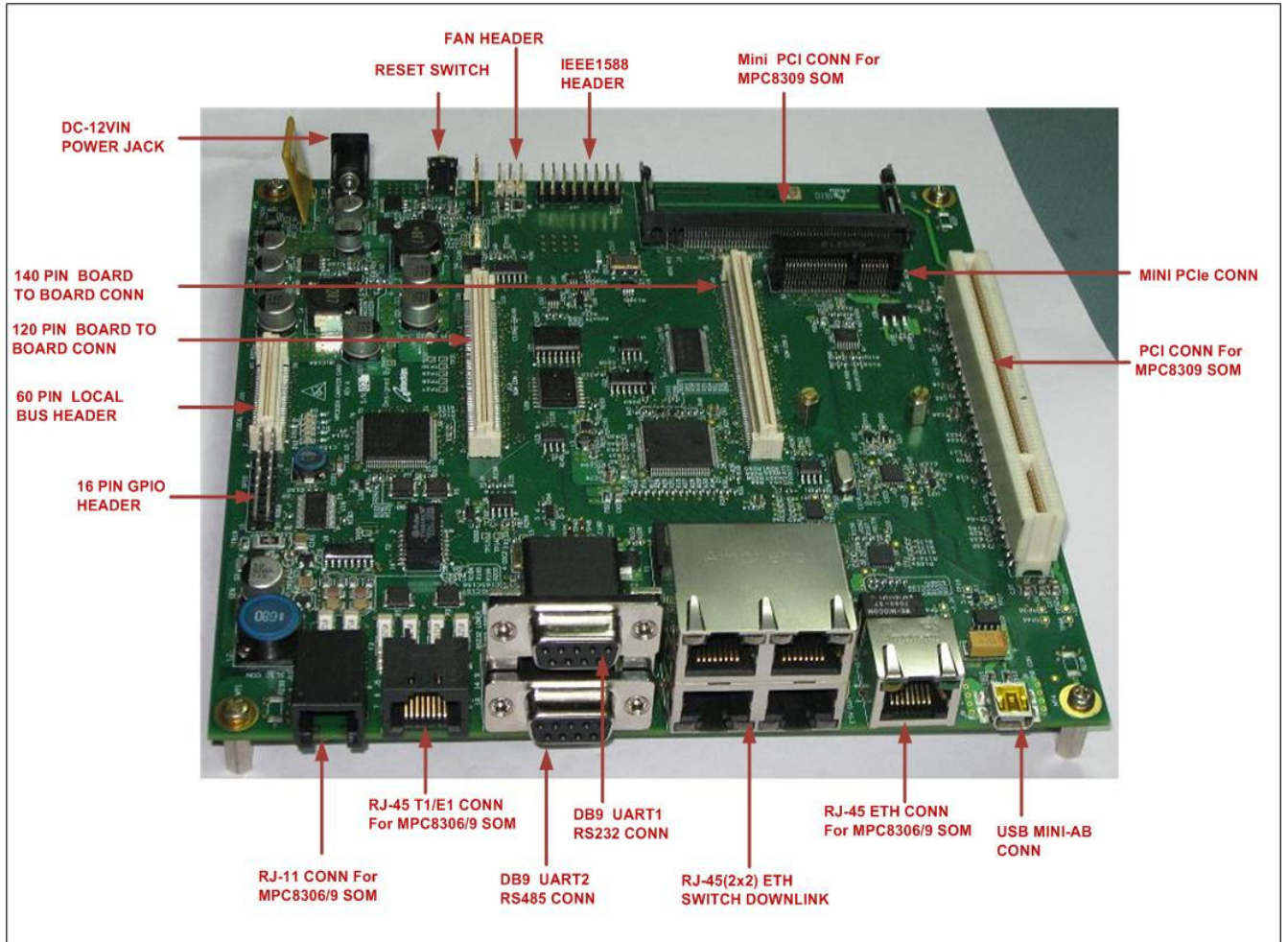

Figure 6 : Major connectors of carrier card for MPC830X SOM

Before power on the board please note following things

1. Plug MPC8306 SOM on carrier card.
2. Connect 12V Power adaptor to power jack.

Note: DC-5Vin power adaptor should be disconnected from SOM before plugging SOM on carrier card.

4 External Cable Connection for MPC8306KIT

To start using the MPC8306KIT, following external cable connections to make

1. 12V DC power adapter
2. Ethernet cable on Carrier/SOM card for Ethernet connectivity
3. UART connection for the debug console with the PC
4. USB device can be connected to mentioned connector(Optional)
5. RJ-11 and T1/E1 connectivity to be given through mentioned connector(Optional)

Following **Figure 7** shows the external cable connectivity with MPC8306KIT (SOM + Carrier) card
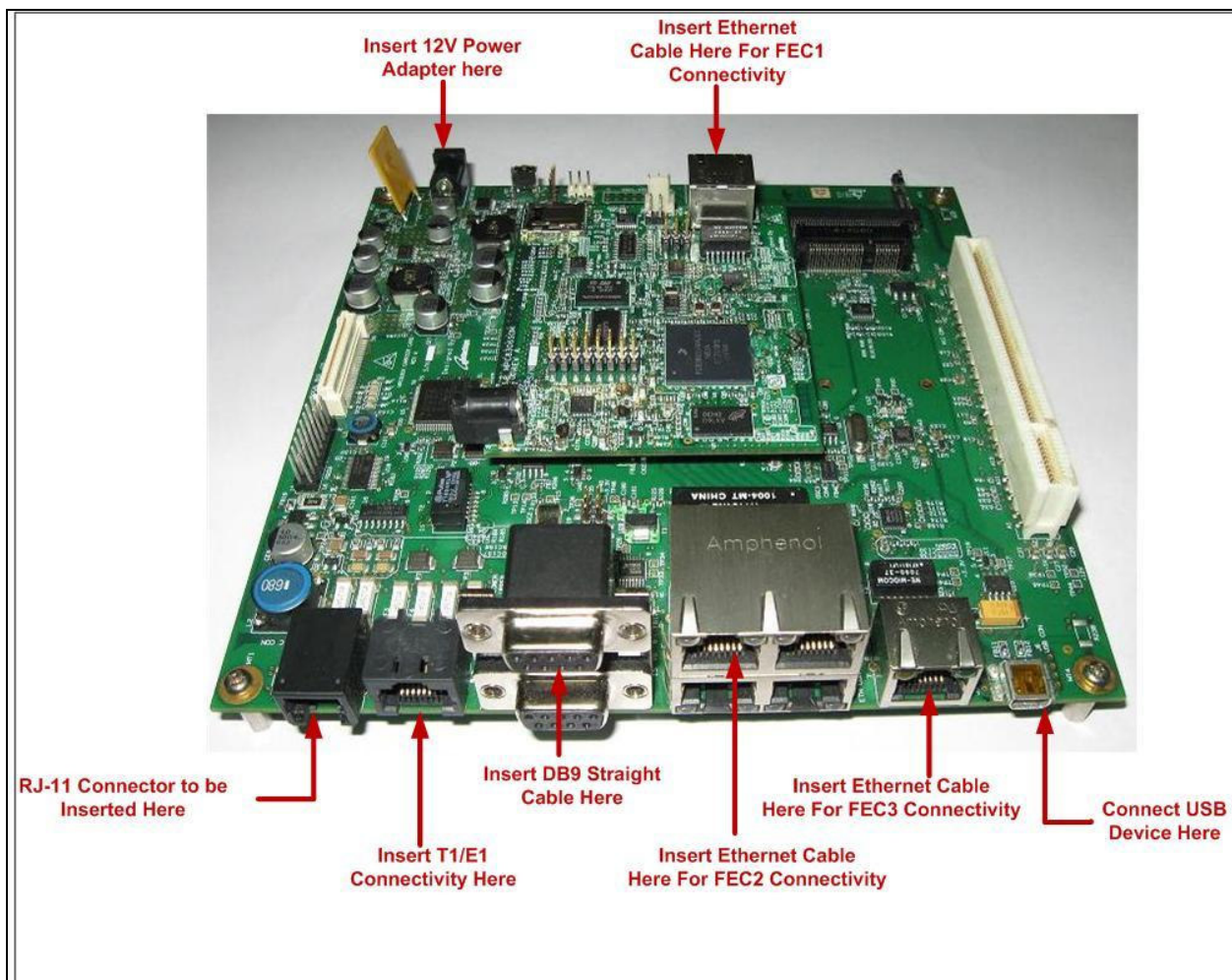

Figure 7: External connection for MPC8306KIT

Note: Ethernet connection on either SOM or Carrier will be enough for MPC8306 Ethernet connectivity to external world

Ethernet connection on SOM is through FEC1 and on Carrier is through FEC2 and FEC3 of MPC8306. Other ports of switch downlink can be used for connecting more than one system/Network to MPC8306 SOM.

Insert SOM card properly on Carrier card. Improper insertion of SOM card can result in Ethernet connectivity issue on FEC2 & FEC3.

USB device, T1/E1 connection, RJ11 and Ethernet cable connection to carrier card is optional one. These external connections can be done on need basis.