M853xx Known Issues

Products Affected: M85373G-13/M85374G-13/M85375G-13/M85376G-13

This document describes the known issues with the M853xx devices.

Sync Mode Issue

Background

• The Sync mode bootstrap is EXP_A_3 on the M853xx parts. Sync mode is enabled when this bootstrap is pulled high at boot. Async mode is enabled when the bootstrap is low.

• Sync mode controls the timing of the ARM interface to the internal bus and peripherals. In Sync mode, the bus and peripherals are clocked on a multiple of the system clock. In Async mode, the timing is controlled by handshake.

Issue description

The internal System Watchdog and Global and Functional Software Resets will no longer be supported for all M853xx devices when operating in Sync mode.

Workaround

An external Watchdog/Master Reset device (controlled via GPIOs, driving the Hardware Reset pin) is recommended.

GPIO Unknown Initial State After Device Power-Up

Description

The general purpose input output (GPIO) signals may not be in tri-state mode following power-up if the system clock does not toggle before the VCore power supply comes up.

GPIOs are expected to be pulled high by an internal pull-up resistor after reset is released, but if the system clock does not toggle before VCore rises, they may be driven low until they are initialized by software. If a GPIO is used to drive an external master reset device, the board may not come out of reset.

Workaround

Either design the board's power-up sequence so that the system clock toggles before VCore rises, or insert a DC-blocking capacitor followed by a pull-up resistor in series with a GPIO that is used to drive an external master reset part.

Once software has initialized the GPIO control registers, they will behave normally.
Product Bulletin
DC-0012128

M85373/M85374/M85375/M85376 Next Generation Network Media Processor

Known Issues

MACOM Technology Solutions Inc. All rights reserved.

Information in this document is provided in connection with MACOM Technology Solutions Inc ("MACOM") products. These materials are provided by MACOM as a service to its customers and may be used for informational purposes only. Except as provided in MACOM's Terms and Conditions of Sale for such products or in any separate agreement related to this document, MACOM assumes no liability whatsoever. MACOM assumes no responsibility for errors or omissions in these materials. MACOM may make changes to specifications and product descriptions at any time, without notice. MACOM makes no commitment to update the information and shall have no responsibility whatsoever for conflicts or incompatibilities arising from future changes to its specifications and product descriptions. No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document.

THESE MATERIALS ARE PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, RELATING TO SALE AND/OR USE OF MACOM PRODUCTS INCLUDING LIABILITY OR WARRANTIES RELATING TO FITNESS FOR A PARTICULAR PURPOSE, CONSEQUENTIAL OR INCIDENTAL DAMAGES, MERCHANTABILITY, OR INFRINGEMENT OF ANY PATENT, COPYRIGHT OR OTHER INTELLECTUAL PROPERTY RIGHT. MACOM FURTHER DOES NOT WARRANT THE ACCURACY OR COMPLETENESS OF THE INFORMATION, TEXT, GRAPHICS OR OTHER ITEMS CONTAINED WITHIN THESE MATERIALS. MACOM SHALL NOT BE LIABLE FOR ANY SPECIAL, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, INCLUDING WITHOUT LIMITATION, LOST REVENUES OR LOST PROFITS, WHICH MAY RESULT FROM THE USE OF THESE MATERIALS.

MACOM products are not intended for use in medical, lifesaving or life sustaining applications. MACOM customers using or selling MACOM products for use in such applications do so at their own risk and agree to fully indemnify MACOM for any damages resulting from such improper use or sale.

For further information and support please visit:
http://www.macom.com/support