AM335x Industrial Communications Engine (ICE) (Revision A2)

Errata

Literature Number: SPRUHF6
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1 Introduction

This document describes the known exceptions to the functional specifications for the AM335x industrial communications engine (ICE).

2 Revision A2 Known Design Exceptions to Functional Specifications

Table 1 lists known design exceptions to functional specifications for industrial communications engine revision A2. Advisories are numbered in the order in which they were added to this document. If the design exceptions are still applicable, the advisories move up to the latest ICE revision section. If the design exceptions are no longer applicable or if the information has been documented elsewhere, those advisories are removed. Therefore, advisory numbering in this section may not be sequential.

Table 1. Revision A2 Advisory List

Advisory A2.1 *GPMC Connectivity*

Revisions Affected: A2

Details: On the AM3359 ICE board (rev. A2), a 16-bit NOR Flash device (M29W160EB70ZA6E) is used for code storage. The NOR Flash has separate address (A[19:0]) and data (D[15:0]) lines and is connected through a latch to GPMC on the AM335x device. The GPMC is used in multiplexed address and data mode on the ICE board. The address and data buses from the AM335x device are de-multiplexed using a latch (SN74ALVCH16374DGV). The lower 16-bits of address are available from the multiplexed address/data bus and are provided to the A[15:0] lines on the NOR Flash.

For higher bits on the address bus, the expected signals to be connected from the AM335x device are the GPMC_A[4:1], but these signals are not available when the MII interface signals are used. The alternative method is to connect the AM335x device GPMC address lines [9:6]. This results in non-contiguous addressing on the AM335x device, but it still enables more than 128 kilobytes of address space on an external NOR Flash.

The incorrect mapping used on the ICE board (rev. A2) is shown in Table 2. This incorrect mapping causes the accessible space on the 16-bit NOR Flash device to be limited to 128KB.

Table 2. Incorrect GPMC Mapping

AM335x DEVICE	NOR FLASH
GPMC_A20	A16
GPMC_A21	A17
GPMC_A22	A18
GPMC_A23	A19

The correct mapping for GPMC address/data multiplex mode is shown in Table 3.

Table 3. Correct GPMC Mapping

AM335x DEVICE	NOR FLASH
GPMC_A6	A16
GPMC_A7	A17
GPMC_A8	A18
GPMC_A9	A19

Advisory A2.2 *Part Number Label*

Revisions Affected: A2

Details: The U29 device is incorrectly labeled as SN74CBQ3306APW in the schematic and in the Bill of Materials document.

The correct part name is SN74CB3Q3306APW.

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- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

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This Class A or B digital apparatus complies with Canadian ICES-003.

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Concerning EVMs including radio transmitters

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Concerning EVMs including detachable antennas

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication.

This radio transmitter has been approved by Industry Canada to operate with the antenna types listed in the user guide with the maximum permissible gain and required antenna impedance for each antenna type indicated. Antenna types not included in this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

Cet appareil numérique de la classe A ou B est conforme à la norme NMB-003 du Canada.

Les changements ou les modifications pas expressément approuvés par la partie responsable de la conformité ont pu vider l'autorité de l'utilisateur pour actionner l'équipement.

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Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

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2. Use this product only after you obtained the license of Test Radio Station as provided in Radio Law of Japan with respect to this product, or
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