

## Am335x Pru IcSS Reference Guide Rev A

### AM335x PRU-ICSS Debug

Introduction to the Programmable Real-Time Unit (PRU) Training Series ~~Embedded Linux course Part 2~~ → ~~AM335x Functional Overview~~ Demonstrating Simple Open Real-Time Ethernet Protocol (SORTE) Master and Slave on PRU-ICSS using Pro ~~How to start development on the Sitara AM335x Starter Kit~~ How to Use the PRU to Control a Peripheral: PRU\_ADC\_onChip on Sitara 335x using Beaglebone Black MYD-AM335x Development Board based on TI AM335x processor ~~Programmable Real-time Unit for Gigabit Industrial Communication Subsystem (PRU-ICSSG): Accelerators~~ Rebuilding PRU Firmwares on Target Using Sitara Processors Demonstrating DDR-less EtherCAT Slave on AMIC110 Programmable Real-time Unit for Gigabit Industrial Communication Subsystem (PRU-ICSSG): Overview ~~Unboxing MYD-C335X-GW Development Kit Based on TI AM335x ARM Cortex A8 processor~~ How to Build an SD Card with Processor SDK Linux ~~Getting Started with the Beagle Bone Black Quick Start Guide - ZCU104 Evaluation Kit~~ What is EtherCAT? How to use GPIO pins on the Beaglebone Black Nuvoton NuMaker NUC980 IIoT (1) - Install Development Environment Porting U-Boot and Linux on New ARM Boards: A Step-by-Step Guide - Quentin Schulz, Free Electrons ~~Lecture 15: Booting Process~~ Special Guest: Jason Kridner — BeagleBone \u0026 PRU — TechTalk #038 ~~How Ethernet TCP/IP is Used by Industrial Protocols~~ Linux Development on the Sitara AM335x and the MitySOM-335x Made Easy Start development with the Sitara™ AM335x EVM Demonstrating EtherCAT Master on Sitara AM57x Gb Ethernet and PRU-ICSS ~~Demonstrating TI ESC SPI Mode DDR-less AMIC110 with C2000 EtherCAT Slave~~ Controlling and Synchronizing Industrial Machines Using Real Time Ethernet Programming BeagleBone Black PRUs Chipsee Embedded Industrial Computer - Opening the Box Embedded Linux course Part 1 : AM335x Functional Overview Am335x Pru IcSS Reference Guide List of Figures. 1 Block Diagram. . . . 14 2 PRU-ICSS Integration

### AM335x PRU-ICSS Reference Guide (Rev. A)

As of Processor SDK Linux v6.1, AM335x supports up to 6 additional UARTs through PRU-ICSS GPIO pins. The UART function is implemented in PRU firmware. The firmware is self-contained in the same PRU, which means the firmware does not use shared resources within an ICSS including IEP timer and Scratchpad.

### 3.5. PRU-ICSS / PRU\_ICSSG – Processor SDK Linux Documentation

Simple PID Control Reference Design With PRU®-ICSS Through Web Interface Thermal Printing with the PRU-ICSS on the BeagleBone Black Reference Design Simple Open Real-Time Ethernet (SORTE) Device With PRU-ICSS Reference Design EnDat 2.2 System Reference Design. Evaluation Hardware . can be ordered from ti.com. PRU Cape; Getting Started Guide

### PRU-ICSS – Texas Instruments Wiki

AM335x PRU-ICSS Reference Guide The documentation on the subsystem is here. TI does not support this subsystem and all questions/inquires/problems should be directed to the community. Example for the first PRU version (Ti AM18XX and other DSP) <http://www.ti.com/tool/sprc940>

### Ti AM33XX PRUSSv2 – eLinux.org

----- The AM335x PRU Package includes: Documentation: AM335x PRU-ICSS overview slides AM18x to AM335x PRU software migration guide AM335x PRU Linux Application Driver documentation CCS AM335x PRU Debugger training slides AM335x\_PRU\_ICSS gel file for use with CCS AM335x PRU Debugger PRU software (pru\_sw): Utils: PASM (PRU assembler) binary PASM ...

### GitHub – beagleboard/am335x\_pru\_package

As you have already discovered, the PRU GPI/Os are uni-directional (not bi-directional) and while some of the PRU GPIs and GPOs are muxed on the same pin, the PRU does not have privileges to write to the AM335x Control Registers to change the pinmuxing. However, you could use the PRU Digital I/Os to achieve a high impedance output.

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### 3.1. PRU ICSS EthernetIP User Guide – PRU-ICSS Industrial ...

As seen from the screenshot the interrupt number for PRU\_ICSS\_EVTOUT\_0 on AM335x is 20, so the interrupt number that must be configured for this in application should be 20 if the platform is AM335x. This is done in the following line (defined in main.c )

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Parameters Arm MHz (Max.) 800 Serial I/O CAN, I2C, SPI, UART, USB Co-processor(s) PRU-ICSS Graphics acceleration 1 3D Ethernet MAC 2-Port 10/100 PRU EMAC, 2-Port 1Gb Switch Security enabler Cryptographic acceleration, Debug security, Initial secure programming, Secure boot, Software IP protection Operating temperature range (C)-40 to 105 Display type 1 LCD DRAM DDR2, DDR3, DDR3L, LPDDR Arm CPU ...

### AM3359 data sheet, product information and support | TI.com

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The description of the HIEISR register (AM335x PRU-ICSS Reference Guide chapter 6.4.9) is a bit unclear for me: The Host Interrupt Enable Indexed Set Register allows enabling a host interrupt output. The host interrupt. to enable is the index value written.

### PRUSSV2 timer interrupt handling example for AM335x

Refer to the AM335x PRU ICSS Reference Guide about these register values. Each register is directly addressable as a memory segment, given by the Local Data Memory Map in the Reference Manual. This shows the IEP timer starts at address 0x0002\_E000. The memory offset of the GLOBAL\_CFG register is 0h (so no offset).

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Table 1. Line-by-line for shared.pru0.c; Line Explanation; 7. PRU\_SRAM is defined here. It will be used later to declare variables in the Shared RAM location of memory. Section 5.5.2 on page 75 of the PRU Optimizing C/C++ Compiler, v2.2, User's Guide gives details of the command. The PRU\_SHAREDMEM refers to the memory section defined in am335x\_pru.cmd on line 26.

### Building Blocks – Applications

Host to PRU (ARM CortexA8 to PRU) Interrupts Each PRU has access to host interrupt channels Host0 and Host1 through register R31 bit 30 and bit 31 respectively.

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Information on the PRU is inconveniently split between the TRM and the AM335x PRU-ICSS Reference Guide. For specifics on the AM3358 chip used in the BeagleBone, see the 253 page datasheet. Texas Instruments' has the PRU wiki with more information.

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