GPIO LLD

Release Notes

Applies to Product Release: 01.00.00.16
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TEXAS INSTRUMENTS

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Contents

GPIO LLD version 01.00.00.16

Overview

This document provides the release information for the latest GPIO Low Level Driver which should be used by drivers and application that interface with GPIO IP.

GPIO LLD module includes:
- Compiled library of GPIO LLD.
- Source code.
- API reference guide
- User Guide

LLD Dependencies

LLD is dependent on following external components delivered in PDK package:
- CSL

New/Updated Features and Quality

Release 1.0.0.15

- Bug fixes for J7.

Release 1.0.0.12

REQ #	Description
PRSDK-3572	RTOS: K3: GPIO LLD requirements: interrupt mode

Release 1.0.0.11

- Updated make file to include RULES_MAKE macro to allow configuring the Rules.make file path.

Release 1.0.0.9

- Added support for AM574x
- Migration to gcc 6.3.1

Release 1.0.0.7

REQ #	Description
PRSDK-2131	PDK support for DRA72x

Release 1.0.0.6

REQ #	Description
PRSDK-1901	OSAL C66x lib in processor SDK to be enhanced to have Event Combiner APIs
PRSDK-2063	Disabled profiling utils library references
PRSDK-1446	Removing inclusion of board_cfg.h
PRSDK-1518	PDK: Control Driver Support for OMAPL137/OMAPL138 and C6748
PRSDK-1463	GPIO support on DRA75x platform

Release 1.0.0.5

REQ #	Description
PRSDK-44	Add iceK2G support

Release 1.0.0.4

Release 1.0.0.3

o DAL implementation corresponding to Keystone devices is relocated to CSL directory.

o DAL implementation corresponding to AM devices is reused from the CSL-FL.

o All the examples/test project bios config files are updated to include CSL library.

Release 1.0.0.2

o Added LLD support for K2G

o Added A15 test/example support for K2L/K2E

- o Moved SoC specific configurations from IP v0 driver to SoC specific driver for K1/K2 devices
- o Cleaned up config files for AM571x/AM572x/AM437x/AM335x
- o Fixed Klocwork/Misra-C compilation warnings

Release 1.0.0.1
- o Added C66 lib and test/example support for Keystone II
- o Added A15 lib and test/example support for K2HK
- o Added lib and test/example support for Keystone I
- o Added M4 support for AM571x and AM572x
- o Added test/example for skAM437x and skAM335x
- o Fixed Klocwork/Misra-C compilation warnings
- o Added benchmarking support

This is an **engineering release**, tested by the development team for early integration effort

Release 1.0.0.0
- o Initial release of low level driver
- o Following IRs have been raised

Resolved Incident Reports (IR)

Release 1.0.0.16:

IR #	Description
PRSDK-6211	add support to build DSP core independent lib and led blink example
PRSDK-6233	Making j7 baremetal examples ARM based only
PRSDK-6373	GPIO Led example doesn't perform the expected operation of toggling the pins
PRSDK-6350	fix Misra-C issues

Release 1.0.0.15:

IR #	Description
PRSDK-4085	Add j721e_evm build support
PRSDK-3867	Migrated to SYSFW p2019.15

Release 1.0.0.14:

IR #	Description
PRSDK-5025	fix led blink issue for am437x/am572x evms
PRSDK-5273	RTSC depdencies added
PRSDK-3586	J7 to J721E

Release 1.0.0.13:

IR #	Description
PRSDK-4704	R5 examples: Setting MPU region size 1 to 32K
CATREQ-2518	Using sciclient to register GPIO interrupt path (GPIO_RTR, MAIN2MCU_RTR)
PRSDK-4916	am65xx: fix LED blink example issue

Release 1.0.0.12:

IR #	Description
PRSDK-4512	Compilation failure while building GPIO_LedBlink_TestProject

Release 1.0.0.11:

IR #	Description
PRSDK-2194	Add RTOS Installer script to autoset SDK_INSTALL_PATH
PRSDK-4010	GPIO_LedBlink example not functional on AMIC110 ICE

Release 1.0.0.10:

IR #	Description
PRSDK-2819	Networking API header files are not compatible with C++
PRSDK-3471	PDK: unresolved symbols Compilation failure on AM5 platforms
PRSDK-3023	LDRA code coverage support is needed in unit test projects to print statistics to UART

Release 1.0.0.8:

IR #	Description
PRSDK-2808	Clean-up AM335x RTOS example source having references to AM571x
PRSDK-2809	ICEv2 GPIO example pin configuration bug
PRSDK-2996	Added memory alignment for OMAPL138 DSP entry point

Release 1.0.0.7:

IR #	Description
PRSDK-2071	Fix Misra-C/KlocWork errors in i2c/gpio/uart/spi LLD
PRSDK-2213	GPIO/McSPI/I2C LLD PDK idkAM571x test/examples use wrong board name in the bios config file
PRSDK-2459	OMAPL13x Board library update for Ethernet PHY specific configurations

Release 1.0.0.6:

IR #	Description
PRSDK-1849	fix GPIO_read returns incorrect value issue.
PRSDK-1916	Renaming DRA7xx board names
PRSDK-1795	fix issue in GPIO_board.h that includes K2L board header for K2G platform
PRSDK-1523	fix GPIO driver invalid instance index issue for IP V1
PRSDK-1829	GPIO LLD won't allow high initialization of output pin
PRSDK-1805	Interface Files should be C++ build compliant

Release 1.0.0.5:

IR #	Description
PRSDK-1128	GPIO test output text is different on k2l, c6657 and c6678 than on other platforms
PRSDK-1230	AM572x-EVM: M4 GPIO LedBlink Example/Test unit tests the LED comes on but does not blink
PRSDK-1605	gpio led blink example need to be removed
PRSDK-1644	GPIO LED blink test print test result twice

Release 1.0.0.4:

IR Parent/ Child Number	Severity Level	IR Description
PRSDK-803	Major	Move common makefile rules to infrastructure
PRSDK-839	Major	klocwork bug introduced due to version update from 10.2.1 to 11.1.0

Known Issues/Limitations

IR Parent/ Child Number	Severity Level	IR Description

Licensing

Please refer to the software Manifest document for the details.

Delivery Package

There is no separate delivery package. The GPIO LLD is being delivered as part of PDK.

Installation Instructions

The LLD is currently bundled as part of Platform Development Kit (PDK). Refer installation instruction to the release notes provided for PDK.

Directory structure

The following is the directory structure after the GPIO LLD package has been installed:
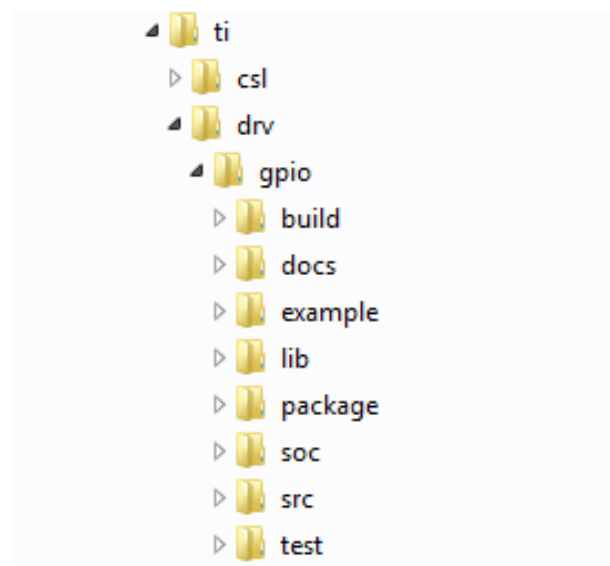
The following table explains each individual directory:

Directory Name	Description
ti/drv/gpio	The top level directory contains the following:- 1. *XDC Build and Package files* These files (`config.bld`, `package.xdc` etc) are the XDC build files which are used to create the GPIO package. 2. *Exported Driver header file*

	Header files which are provided by the GPIO low level driver and should be used by the application developers for driver customization and usage.
`ti/drv/gpio/build`	The directory contains internal XDC build related files which are used to create the GPIO low level driver package.
`ti/drv/gpio/docs`	The directory contains the GPIO low level driver documentation.
`ti/drv/gpio/example`	The "`example`" directory in the GPIO low level driver has the examples demonstrating the usage of GPIO driver.
`ti/drv/gpio/lib`	The "`lib`" folder has pre-built Big and Little Endian libraries for the GPIO low level driver along with their *code/data size information*.
`ti/drv/gpio/package`	Internal GPIO low level driver package files.
`ti/drv/gpio/soc`	This directory contains SoC specific files.
`ti/drv/gpio/src`	Source code for the GPIO low level driver.
`ti/drv/gpio/test`	The "`test`" directory in the GPIO low level driver has test application which is used by the development team to test the GPIO low level driver.

Customer Documentation List

Table 1 lists the documents that are accessible through the **/docs** folder on the product installation CD or in the delivery package.

Table 1   Product Documentation included with this Release

Document #	Document Title	File Name
1	API documentation (generated by Doxygen)	docs/gpiolldDocs.chm
2	Software Manifest	docs/GPIO_LLD_SoftwareManifest.html