LINALG

Release Notes

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Release Notes

LINALG for 1.0.0

Overview

This document provides information on the features, functions, delivery package, compile tools, licensing, and incident report (IR) resolutions incorporated in the following release of software: LINALG 1.0.0. It includes a list of the known issues that are present at the time of this release.

Label and Version Information for the Release

This release supports the following software and hardware versions.

Software Label Information

Table 1 lists the software label and code versions applicable to this release.

Table 1 Labels and Versions Supported by this Release

Release	Label/Version Information
LINALG	1.0.0

Hardware Support

This release is supported on the following hardware platform:

- TI 66AK2H

New and Updated Features

This release provides support for the following new and updated features.

New Features

The following new features are supported in this release.

BLAS

- Based on BLIS 0.1.6
- Optimized for both ARM Cortex-A15 and C66x DSP.
- Can either run on ARM or be accelerated on DSP.

LAPACK

- Based on CLAPACK 3.2.1
- Optimized for ARM Cortex-A15 (invoked BLAS routines can run on DSP)

Known Issues

Table 2 provides information on IRs that are known issues for this release.

Table 2 Known Issue IRs for this Release

IR Parent/ Child Number	Severity Level	IR Description	Notes
SDOCM00116290	Minor	CLAPACK tests have failures	CLAPACK testing results are almost identical to the testing results when running CLAPACK test suite on x86 with Ubuntu.
SDOCM00116397	Minor	BLAS accelerator wrapper C version not tested	In MCSDK-HPC environment, C++ compiler is used to compile the BLAS wrapper code.

Limitations

The following is a list of known limitations for this release.

- In this release, even though there is a DSP version of BLAS, to run BLAS on DSP, it has to go through ARM offloading. BLAS functions cannot be called directly through CBLAS API on DSP.

Licensing

Refer to LINALG Software Manifest document.

Delivery Package

LINALG 1.0.0 from Texas Instruments will be delivered with the MCSDK-HPC distribution.

Source Code Components

The following components are provided as source code.

- BLIS
- CBLAS
- CLAPACK
- BLASBLISACC
- Tuning and examples

Object Code Components

The following components are provided as binary object code.

- BLIS and BLASBLISACC for C66x DSP

Required Compile Tools

Specific tools and patches must be used to compile and/or deploy Texas Instruments software. Texas Instruments cannot guarantee product performance when other tools are used.

Tools Supplied by Texas Instruments

All TI supplied tools for compiling LINALG are installed when MCSDK-HPC is installed.

Customer Documentation List

Table 3 lists the documents that are accessible to users of LINALG.

Table 3 Product Documentation included with this Release

Document #	Document Title	File Name
1	Read Me	readme.txt
2	LINALG Software Manifest	LINALG_1.0.0_manifest.html
3	Release Notes	LINALG_1.0.0_release_notes.pdf