![HISILICON logo]

Differences Between Hi3516C V500, Hi3516A V300, and Hi3516D V300

Issue   00B02

Date   2019-02-15

HiSilicon (Shanghai) Technologies Co., Ltd.

Address: New R&D Center, 49 Wuhe Road, Bantian,

Longgang District,

Shenzhen 518129 P. R. China

Website: http://www.hisilicon.com/en/

Email: support@hisilicon.com

About This Document

Purpose

Hi3516C V500, Hi3516A V300, and Hi3516D V300 are IP Camera system-on-chips (SoCs) launched by HiSilicon. The software development kit (SDK) of Hi3516C V500 is similar to that of Hi3516D V300/Hi3516A V300 developed by HiSilicon, but some specifications and APIs are modified. This document describes the differences between Hi3516C V500, Hi3516A V300, and Hi3516D V300 in specifications, and the changes in the SDK components and MPIs.

Related Versions

The following table lists the product version related to this document.

Product Name	Version
Hi3516C	V500
Hi3516D	V300
Hi3516A	V300

Intended Audience

This document is intended for:

- Technical support engineers
- Software development engineers

Change History

Changes between document issues are cumulative. Therefore, the latest document issue contains all changes made in previous issues.

Issue 01 (2019-09-15)

This issue is the first official release, which incorporates the following changes:

Chapter 1, Table 1-1 is modified.

Issue 00B02 (2019-02-15)

This issue is the second draft release, which incorporates the following changes:

The description of Hi3516A V300 is added.

Issue 00B01 (2018-07-15)

This issue is the first draft release.

Contents

Tables

1 Differences in Specifications

Table 1-1 lists the specification differences between Hi3516C V500, Hi3516A V300, and Hi3516D V300. For details about the specifications, see the *Hi35xx Vx00 Professional Smart IP Camera SoC User Guide*.

Table 1-1 Differences in the specifications

Major Specifications	Hi3516C V500	Hi3516D V300	Hi3516A V300
Processor	-	-	-
VI	• 1920 x 1080@30 fps (DOL WDR) • 2304 x 1296@20 fps (DOL WDR) • 1-channel VI	• 2688 x 1536@30 fps (DOL WDR) • 2688 x 1944@20 fps (DOL WDR) • 2-channel VI	• 3840 x 2160@20 fps (DOL WDR) • 2688 x 1944@30 fps (DOL WDR) • 2-channel VI
GDC	Maximum input: 2304 x 2304	Maximum input: 2688 x 2688	Maximum input: 3840 x 3840
VPSS	Maximum input: 2304 x 2304	Maximum input: 2688 x 2688	Maximum input: 3840 x 3840
VGS	Maximum input: 2304 x 2304	Maximum input: 2688 x 2688	Maximum input: 3840 x 3840
Video encoding	-	-	-
Video decoding	Not supported	H.264, H.265, and jpeg decoding	H.264, H.265, and jpeg decoding
Video encoding performance	• Up to 2304-pixel wide and 2304 x 1296 resolution for H.265/H.264 encoding • H.265/H.264 encoding performance: 　－ 1920 x 1080@30	• Up to 3072-pixel wide and 3072 x 1728 resolution for H.265/H.264 encoding • H.265/H.264 encoding performance: 　－ 2688 x 1536@30 fps +720 x 480@30 fps + 360 x 240@30 fps 　－ 2688 x 1944@20 fps	• Up to 3840-pixel wide and 3840 x 2160 resolution for H.265/H.264 encoding • H.265/H.264 encoding performance: 　－ 2688 x 1944@30 fps +1280 x 720@30 fps +720 x 480@30 fps 　－ 3840 x 2160@20 fps

Major Specifications	Hi3516C V500	Hi3516D V300	Hi3516A V300
	fps + 720 x 480@30 fps + 360 x 240@30 fps – 2304 x 1296@20 fps + 720 x 480@20 fps + 360 x 240@20 fps • Maximum resolution for JPEG encoding: 8192 x 8192	+720 x 480@20 fps + 360 x 240@20 fps • Maximum resolution for JPEG encoding: 8192 x 8192	+1280 x 720@20 fps +720 x 480@20 fps – 2688 x 1520@25 fps +1920 x 1080@25 fps +720 x 480@25 fps • Maximum resolution for JPEG encoding: 8192 x 8192
Intelligent engine	1 x NNIE, with the total performance of 0.5 Tops	1 x NNIE, with the total performance of 1.0 Tops	1 x NNIE, with the total performance of 1.0 Tops
IVE	-	Supports the PSP, HOG, and KCF operators.	Supports the PSP, HOG, and KCF operators.
Security module	-	-	-
ISP	-	-	-
Audio	HDMI output not supported	HDMI 1.4 output supported	HDMI 1.4 output supported
VO	HDMI output not supported	HDMI 1.4 output supported	HDMI 1.4 output supported
Memory interface	• 16-bit DDR3(L)/DDR4 SDRAM, supporting the maximum capacity of 8 Gbit/s • Up to 1800 Mbit/s rate	• 32-bit DDR3(L)/DDR4 SDRAM, supporting the maximum capacity of 16 Gbit/s • Up to 1800 Mbit/s rate	• 32-bit DDR3/DDR4 SDRAM, supporting the maximum capacity of 16 Gbit/s • Up to 2133 Mbit/s rate
Peripheral interface	• Four UART interfaces • Seven I^2C interfaces	• Five UART interfaces • Eight I^2C interfaces	• Five UART interfaces • Eight I^2C interfaces

2 Differences in the MPIs

Table 2-1 describes the differences between Hi3516C V500 and Hi3516D V300 in the MPIs. For details, see the *HiMPP V4.0 Media Processing Software Development Reference*.

📖 **NOTE**

Unless otherwise specified, the contents of the Hi3516D V300 also apply to Hi3516A V300.

Table 2-1 Differences in the MPIs between Hi3516C V500 and Hi3516D V300

Module Name	Difference Extent of Hi3516C V500 Compared with Hi3516D V300	Description
VO	Partially different	Hi3516C V500 does not support HDMI output interfaces.
IVE	Partially different	Hi3516C V500 does not support the interfaces related to the PSP, HOG, and KCF operators.
VDEC	VDEC is not supported	-
Other modules	Same	-