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HiSilicon Technologies Co., Ltd.

Address: Huawei Industrial Base
Bantian, Longgang
Shenzhen 518129
People's Republic of China

Website: <http://www.hisilicon.com>

Email: support@hisilicon.com



About This Document

Purpose

The adaptation module can adjust the parameters related to the encoding and picture according to the light variance in the current environment and configured bit rate to optimize the picture display effect.

Related Version

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

Product Name	Version
Hi3519	V101

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 00B01 (2015-11-15)

This issue is the first draft release.



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1 Functions

1.1 Start and Stop Control

The adaptation function can be enabled and disabled by calling `HI_SCENEAUTO_Start` and `HI_SCENEAUTO_Stop` respectively. When the adaptation function is enabled, a real-time detection thread is created to cyclically calculate the ISO, shutter, and bit rate in the current environment. The defect pixel correction (DPC), G channel equalization, demosaic, sharpening, Gamma, automatic exposure (AE), automatic white balance (AWB), macroblock-level encoding, and 3DNR parameters are configured as required according to the calculated exposure value. For details about these parameters, see chapter 4 "[Configuration File Description](#)." When the adaptation function is disabled, the detection thread is stopped and the thread resources are released.

1.2 Configuration of Special Scenarios

Special scenarios can be configured as required, including the infrared (IR) scenario, highlight scenario, wide dynamic range (WDR) scenario, long frame scenario, and outdoor traffic scenario. When the parameter values for the special scenarios conflict with those configured by the real-time detection thread, the parameter values for the special scenarios prevail. For details about the parameters for special scenarios, see chapter 4 "[Configuration File Description](#)."



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API Reference

Table 2-1 describes the APIs for the adaptation module.

Table 2-1 APIs for the adaptation module

API	Description	Parameter	Parameter Description
HI_SCENEAUTO_Init(const HI_CHAR *pszFileName)	Initializes the adaptation module and loads the parameters in the configuration file.	pszFileName	Name of the configuration file for the adaptation module
HI_SCENEAUTO_DeInit()	Deinitializes the adaptation module.	None	None
HI_SCENEAUTO_Start()	Enables the adaptation function and creates a real-time detection thread.	None	None
HI_SCENEAUTO_Stop()	Disables the adaptation function and stops the detection thread.	None	None
HI_SCENEAUTO_SetSpecialMode	Sets a special scenario.	None	None
HI_SCENEAUTO_GetSpecialMode	Obtains the special scenario.	None	None

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