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1. 1. 1

ES32 SDK ES32 ES32
SDK

ES32 SDK MD ALD BSP
USB
SDK

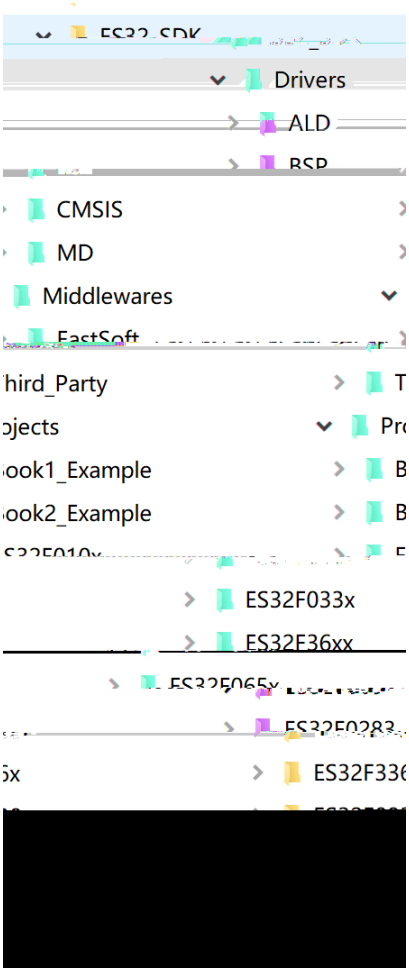
ES32 SDK SDK
ES-Link II USB-Lab ES-Bridge SCONS

ES32 SDK SDK

I/O
read write

©

1. 1. 2



1-2 ES32 SDK

SDK Drivers Middlewares Projects tools Utilities Drivers MD ALD BSP CMSIS Middlewares USB Projects Utilities USB USB PC tools

1. 1. 3

ES32 SDK MDK IAR iDesigner

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2. 1

ES32 SDK MD ALD BSP CMSIS

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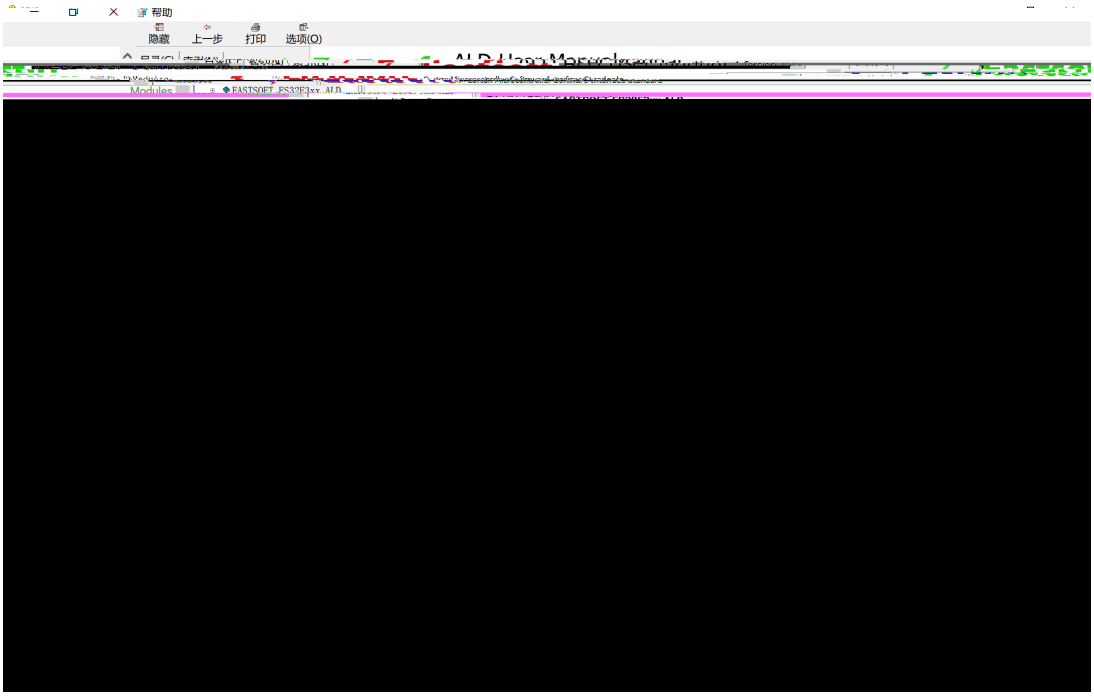
ES32_SDK\Drivers\ALD\ES32Fxxxx ES32_SDK\Drivers\MD\ES32Fxxxx



2-1

2. 2 MD

MD Micro Driver
MD
MD MD

MD

MD MD

MD

MD

MD

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2. 3 ALD

ALD Abstraction Layer Driver

ALD

ALD

ALD NULL

ALD DMA

CPU

CPU CPU

DMA

DMA CPU

DMA

ALD ALD

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DMA DMA DMA

ALD

ALD

2. 4 CMSIS

CMSIS Cortex-M

CMSIS CMSIS

CMSIS ARM

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RTOS( )

ES32 ES32

ES32

DSP

SIMD Cortex-M4

RTOS

RTOS

©

USB USB

USB

USB HID

HID HID

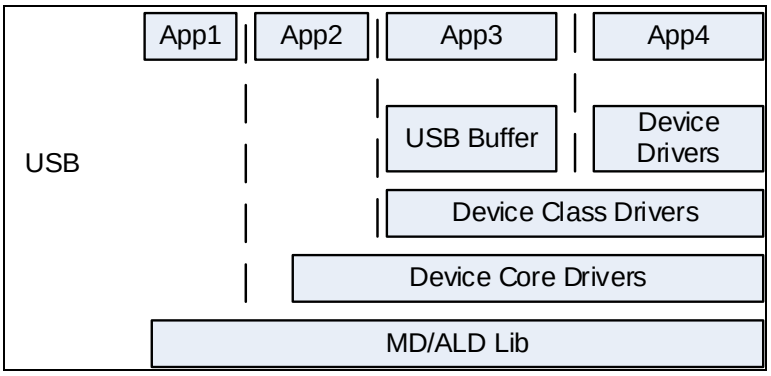
HID HID

API

USB

USB Buffer CDC

API Buffer Buffer



3-3 USB

3. 2. 2

USB MD/ALD

USB USB

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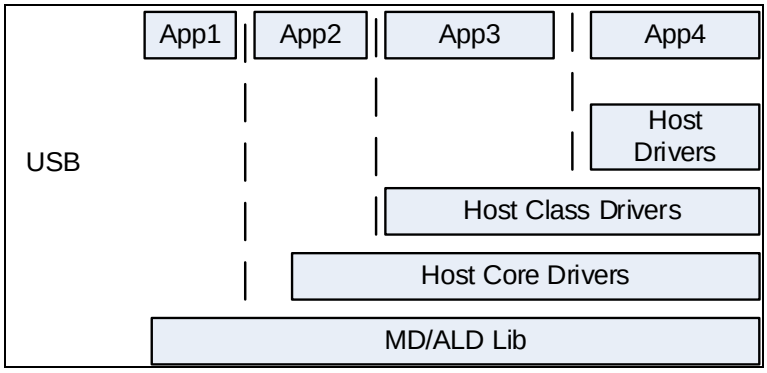

3-4 USB

3. 3 Micro-Kernel

Micro-kernel

RTOS

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Debug

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4. 1

ES32 SDK MD ALD
USB

MD

MD MD MD MD
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USB
USB RT-Thread

LittleVGL
LittleVGL

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