Release Note

SPC1185 SDK Release Note

版本历史

本节记录发布说明文档自身的修改情况,以保证版本元数据的可审计性与受控性。

版本	日期	作者	状态	变更
V8.0.0	2026-08-07	xuqinghe	已发布	1. 增加 V8.0.0 版本

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1 全局系统环境与前提条件

以下要求定义了正确重新构建并运行标准外设库所需的、经过验证的开发工具、编译器及硬件目标。

- 支持的芯片：SPC1185 MCU 系列
- Keil MDK IDE：v5.23
- IAR Embedded Workbench：EWARM v8.32.4

2 版本 8.0.0 / 2026-08-07

2.1 BUG 修复

模块	条目	描述
POWER	POWER_VDD33OVEnum	修改 VDD33 和 VDD12 的过压和欠压的值
	POWER_VDD33UVEnum	
	POWER_VDD12OVEnum	
	POWER_VDD12UVEnum	

2.2 API 变更

模块	类型	旧 API	新 API	描述
CAN	删除	CAN_EnableMailboxResponseRemoteFrame CAN_DisableMailboxResponseRemoteFrame CAN_IsEnableMailboxResponseRemoteFrame	NONE	CANMBOXMCTL 寄存器的 RMTEN 位段不支持
	修改	CAN_SetMessage	CAN_SetMessage	删除远程帧自动响应功能
		CAN_GetMessage	CAN_GetMessage	删除远程帧自动响应功能

2.3 杂项

条目	类型	描述
SPC1185.svd	[SDK LIB]	修改 VDD33 和 VDD12 的过压和欠压的值和删除 RMTEN 位段
CAN_MailboxControlEnum		删除 CAN_MBOX_ENABLE_RESPONSE_REMOTE/ CAN_MBOX_IS_ENABLE_RESPONSE_REMOTE 枚举成员
CAN_MessageTypeDef		删除 eRmtRspEn 变量成员
PGA_PositiveInputEnum		增加 PGA1_CH_P_ANA_IN2 枚举成员

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条目	类型	描述
PGA_NegativeInputEnum		增加 PGA0_CH_N_ANA_IN1/ PGA1_CH_N_ANA_IN3/ PGA1_CH_N_ANA_IN15 枚举成员
Spc1185_bitfield.h		修改 VDD33 和 VDD12 的过压和欠压的值和删除 RMTEN 位段
BOD_UVOV_Int	[DEMO]	修改 VDD33 的过压和欠压值
BOD_UVOV_Reset		修改 VDD33 的过压和欠压值
EQEP_Bidirectional_Counting_Mode		修改 EQEP 使用的引脚
EQEP_CW_CCW_Counting_Mode		修改 EQEP 使用的引脚
EQEP_Quadrature_Counting_Mode_M		修改 EQEP 使用的引脚
EQEP_Quadrature_Counting_Mode_MT		修改 EQEP 使用的引脚
EQEP_Quadrature_Counting_Mode_T		修改 EQEP 使用的引脚
EQEP_Unidirectional_Counting_Mode		修改 EQEP 使用的引脚
SPC1185.svd	[IED SUPPORT]	修改 VDD33 和 VDD12 的过压和欠压的值和删除 RMTEN 位段
SPC1185.SFR		修改 VDD33 和 VDD12 的过压和欠压的值和删除 RMTEN 位段

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3 版本 7.0.0/2025-12-18

1. Bug Fix

- Add EQEP IP Driver

2. Other Change

- SPC1185.svd
  - Modify SPC1185.svd
- SPC1185.SFR
  - Modify SPC1185.SFR
- Startup_spc2188.s
  - Modify Startup_spc2188.s
- Example Code
  - Add EQEP demo

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4 版本 6.0.0/2025-09-12

1. Bug Fix

- Adc.h
  - Modify ADC_SH_PositiveInputEnum, ADC_SH_NegativeInputEnum
- Comp.h
  - Modify COMP_InputChannelEnum, COMP_ReferenceChannelEnum
- IAR/startup_spc1185.s
  - Modify IAR/startup_spc1185.s
- Pin.h
  - Add GPIO1,GPIO2,GPIO3,GPIO15
- Spc1185_reg.h
  - Modify PINMUX_REGS
- Spc1185.h
  - Modify PIN_NameEnum
- Adc.c
  - Modify ADC_Init
- Pin.c
  - Modify PIN_ResetAllPin, PIN_SetPinAsAnalog
- Time.c
  - Modify TIMER_Init

2. Other Change

- SPC1185.svd
  - Modify SPC1185.svd
- SPC1185.SFR
  - Modify SPC1185.SFR
- Delay.c
  - Modify Delay_Init
- Example Code
  - Modify 21_DMA_SPI_to_Memory
  - Modify 21_DMA_Memory_to_SPI
  - Modify 21_DMA_Memory_to_UART
  - Modify 21_DMA_SPI_to_Memory
  - Modify 22_Flash_Operation
  - Modify 4_GPIO_Edge_Detect

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5 版本 5.0.0/2024-12-23

1. Bug Fix

- uart.c
  - Modify UART_Init

2. Other Change

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6 版本 4.0.0/2024-11-14

1. Bug Fix

- Can.h
  - Modify CAN_EnableTestMode, CAN_DisableTestMode, CAN_IsEnableTestMode
- I2c.h
  - Modify I2C_MasterReadCmd, I2C_WriteByte, I2C_ReadByte
- Pga.h
  - Modify PGA_GainEnum
- Pga.c
  - Delete PGA_OnlyPositiveEndedInit,PGA_OnlyNegativeEndedInit,PGA_SingleEndedInit,PGA_DifferentialInit
  - Add PGA_InitSingleModePositiveEnded,PGA_InitSingleModeNegativeEnded, PGA_InitSingleModeBothEnded, PGA_InitDifferentialMotorMode, PGA_InitDifferentialSensorMode
- Clock.c
  - Modify CLOCK_ConfigurePLL
- Power.h
  - Modify POWER_VDD33OVEnum,POWER_VDD33UVEnum,POWER_VDD12OVEnum,POWER_VDD12UVEnum
- Spc1185_bitfield.h
  - Modify Spc1185_bitfield.h
- Spc1185_reg.h
  - Modify Spc1185_reg.h

2. Other Change

- Example Code
  - Modify 21_DMA_SPI_to_Memory
  - Modify 21_DMA_Memory_to_SPI
  - Modify 21_DMA_ADC_to_SPI
  - Modify 14_Differential_PGA_To_ADC
  - Modify 14_PGA_Calibration
  - Modify 14_Single_Ended_PGA_To_ADC
  - Modify 2_BOD_UVOV_Int
  - Modify 2_BOD_UVOV_Reset

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7 版本 3.0.0/2024-09-26

1. Bug Fix

- SPC1185.SFR
  - Modify SPC1185.SFR
- SPC1185.svd
  - Modify SPC1185.svd

2. Other Change

- Crc.c
  - Modify CRC_Init, CRC_Calculate
  - Delete CRC_FeedStream
- Crc.h
  - Add CRC_GetMode
- Uart.h
  - Add UART_SetRxTimeoutThreshold, UART_GetRxTimeoutThreshold
- Clock.c
  - Modify CLOCK_InitWithXO, CLOCK_InitWithRCO, CLOCK_ConfigurePLL
- Uart.c
  - Modify UART_Init, LIN_Init
- Gpio.c
  - Add GPIO_SetOpenDrainOutputHigh, GPIO_SetOpenDrainOutputLow
- SPC1185_256K.FLM
  - Add SPC1185_256K.FLM
- SPC1185_512K.FLM
  - Add SPC1185_512K.FLM
- SPC1185.FLM
  - Delete SPC1185.FLM
- DebugCtrl.mac
  - Delete DebugCtrl.mac
- FlashSPC1185.board
- Modify FlashSPC1185.board
- FlashSPC1185.flash
  - Modify FlashSPC1185.flash
- Example Code
  - Modify 17_PWM_GPIO_SYNC
  - Modify 17_PWM_Software_Global_SYNC
  - Modify 17_PWM_Software_Group_SYNC
  - Modify 17_PWM_TBCNT_0_SYNC_and_Signal_Observe
  - Modify 17_PWM_Timer_SYNC
  - Modify 22_Flash_With_ISR_In_RAM
  - Delete 19_CRC_16_CCITT
  - Add 19_CRC
- Example Code
  - 1_Application
  - Modify IAP_CAN
  - Modify IAP_UART
  - Modify Math_Lib

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8 版本 2.0.0/2024-03-22

1. Bug Fix

- comp.h
  - modify COMP_SetDACCode, COMP_SetDACVoltage, COMP_ReferenceChannelEnum
- clock.c
  - modify CLOCK_ConfigurePLL, CLOCK_InitWithXO, CLOCK_InitWithRCO
- pga.h
  a) modify PGA_NegativeInputEnum
- pwm.h
  - modify PWM_LoadTimingEnum
- spc2188.h
  - Delete SET_BIT, READ_BIT
  - Add XOR_BITS
- crc.c
  - modify uint32_t CRC_Calculate(CRC_REGS *CRCx, const uint8_t *pu8DataStr, uint32_t u32DataLen) -→ ErrorStatus CRC_Calculate(CRC_REGS *CRCx, const uint8_t *pu8DataStr, uint32_t u32DataLen, uint32_t *u32Result)
- pin.c
  - modify PIN_SetPinAsEC, PIN_SetPinAsAnalog
- adc.h
  - modify ADC_GetSHRawResult, ADC_GetChannelRawResult, ADC_GetPPURawResult,

2. Other Change

- adc.c
  - modify ADC_IsEnable, ADC_IsEnablePPU, ADC_IsEnableTSensor, ADC_IsEnableMultiChannelInt, ADC_IsEnableChannelInt, ADC_IsEnableMultiChannelDMA, ADC_IsEnableChannelDMA, ADC_IsEnableMultiChannelIntTriggerSOC, ADC_IsEnableChannelIntTriggerSOC, ADC_IsEnableChannelFractionalResult, ADC_IsEnablePPUCycleClear, ADC_IsEnablePPUInt, ADC_IsEnablePPUTripEvent
- clock.h
  - modify CLOCK_IsEnableRCO, CLOCK_IsEnableXO, CLOCK_IsEnablePLL,
- dma.h
  - modify DMA_IsEnableTransferCompleteInt, DMA_IsEnableTransferErrorInt, DMA_IsEnable, DMA_IsEnableChannelTransfer
- spi.h
  - modify SPI_IsEnable, SPI_IsEnableLoopback, SPI_IsEnablePinSwap, SPI_IsEnableSFRMHold, SPI_IsEnableRxDMA, SPI_IsEnableTxDMA, SPI_IsEnableFIFOPack, SPI_IsEnableInt
- system.h
  - modify SYSTEM_IsEnableNonMaskableInt, SYSTEM_IsEnableResetEvent
- timer.h
  - modify TIMER_IsEnable, TIMER_IsRun
- uart.h
  - modify UART_IsEnableRx, UART_IsEnableTx, UART_IsEnableRxDMA, UART_IsEnableTxDMA, UART_IsEnableAutoBaud, LIN_IsEnable, UART_IsEnableRxSIR, UART_IsEnableTxSIR, UART_IsEnableInt

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- wdt.h
  - modify WDT_IsEnable, WDT_IsRun,
- aes.c
  - modify AES_EncryptData, AES_DecryptData
- can.c
  - modify CAN_Reset
- i2c.c
  - modify I2C_MasterWrite, I2C_MasterRead, I2C_MasterBulkWrite, I2C_MasterBulkRead,
- pwm.c
  - modify PWM_InitComplementaryPairChannel, PWM_InitSingleChannel
- pin.h
  - modify PIN_EnableInputChannel, PIN_DisableInputChannel
- Example Code
  - Modify CAN IAP demo
  - Modify IAPLoader.exe
  - Add 22_Flash_With_ISR_In_RAM
  - Modify 21_DMA_ADC_to_Memory
  - Modify 21_DMA_ADC_to_SPI
  - Modify 21_DMA_Memory_to_Memory
  - Modify 21_DMA_Memory_to_SPI
  - Modify 21_DMA_Memory_to_UART
  - Modify 21_DMA_SPI_to_Memory
  - Modify 21_DMA_UART_to_Memory
  - Add 23_Flash_ECC_Verify
  - Add 23_ROM_RAM_ECC_Verify

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9 版本 1.4.0/2023-12-16

Main Changes

1. Bug Fix

- Pwm.h
  - Modify PWM_GetClockDiv()
- Clock.h
  - Modify CLOCK_InitWithXO()
  - Modify CLOCK_InitWithRCO()
  - Modify CLOCK_ConfigurePLL()
- Pwm.c
  - Modify PWM_InitComplementaryPairChannel()
  - Modify PWM_InitSingleChannel()
- Modify SPC1185.svd
- Modify SPC1185.SFR
- Pin.h
  - Add PIN_GPIO52~ PIN_GPIO55 channel function define
- Spc1185_bitfield.h
  - Add GPIO52~GPIO55 PINMUX register bitfield
- Spc1185_reg.h
  - Modify PINMUX_REGS
- Spc1185.h
  - Modify PIN_NameEnum

2. Other Change

- Spc1185.h
  - Delete SET_BIT()
  - Delete READ_BIT()
  - Delete CLEAR_BIT()
  - Add XOR_BITS()
- Hwlib.h
  - Delete flash function declarations
- Flash.h
  - Add flash function declarations
- Pin.h
  - Modify PIN_EnableInputChannel()
  - Modify PIN_DisableInputChannel()
- Pwm.h
  - Modify PWM_LoadTimingEnum
  - Modify PWM_EnableSYNCOToGPIO()
  - Modify PWM_EnableSYNCOToGPIO()
  - Modify PWM_DisableSYNCOToGPIO()
  - Modify PWM_EnableSOCAToGPIO()
  - Modify PWM_DisableSOCAToGPIO()
  - Modify PWM_EnableSOCBToGPIO()
  - Modify PWM_DisableSOCBToGPIO()
  - Modify PWM_EnableSOCCToGPIO()

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- Modify PWM_DisableSOCCToGPIO()

■ Example Code
- Modify 12_CAN_Extended_Frame_RX
- Modify 12_CAN_INT_RX
- Modify 12_CAN_INT_TX
- Modify 12_CAN_Standard_And_Extended_Frame_TX
- Modify 12_CAN_Standard_Frame_RX
- Modify 12_CANFD_Extended_Frame_RX
- Modify 12_CANFD_Standard_And_Extended_Frame_TX
- Modify 12_CANFD_Standard_Frame_RX
- Modify IAP_CAN
- Modify IAPLoader.exe

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10 版本 1.3.0.a/2023-12-16

Main Changes

1. Bug Fix

- SPC1185.svd
- adc.h
  - Modify ADC_SH_NegativeInputEnum
- comp.h
  - Modify COMP_ReferenceChannelEnum
  - Modify PGA_NegativeInputEnum
- pga.h
  - Modify PGA_PositiveInputEnum
- pin.h
  - Delete PIN_GPIO15_GPIO15
  - Delete PIN_GPIO15_ANA_IN15
- spc1185_bitfield.h
  - Delete GPIO15 register
  - Delete COMP4CTL_REFSEL_ANA_IN15_OR_DAC4_DAC5
  - Delete COMP7CTL_REFSEL_ANA_IN15_OR_DAC4_DAC5
  - Delete PGA1CTL_INSELN_ANA_IN15
- spc1185_reg.h
  - Modify PINMUX_REGS
- spc1185.h
  - Modify PIN_NameEnum
- adc.c
  - Modify ADC_Init

2. Other Change

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11 版本 1.3.0/2023-11-16

Main Changes

1. Bug Fix

- Comp.h
  - Modify COMP_InputChannelEnum、COMP_ReferenceChannelEnum
- Pga.h
  - Modify PGA_PositiveInputEnum、PGA_NegativeInputEnum
- Qspi.h
  - Add QSPI_IsEnableCache()
- Clock.c
  - Modify CLOCK_InitWithRCO()
- Comp.c
  - Modify COMP_Init()、COMP_SetFilterWindowTimeNs()
- Flash.c
  - Modify FLASH_Init()、FLASH_SetTiming()、FLASH_DisableXIP()、FLASH_ReadStatus()、FLASH_WriteStatus()、FLASH_ReadUID()、FLASH_ReadID()、FLASH_ReadOTP()、FLASH_EraseOTP()、FLASH_ProgramOTP()、FLASH_Read()、FLASH_EraseSector()、FLASH_EraseBlock()、FLASH_EraseChip()、FLASH_Program()、FLASH_EnableCache()、FLASH_DisableCache()

2. Other Change

- SPC1185.svd
  - Modify SPC2188.svd
- SPC1185.SFR
  - Modify SPC2188.svd
- Startup_spc1185.s
  - Modify Startup_spc2188.s
- Adc.h
  - Delete ADC_InputSelectEnum
- Clock.h
  - Delete CLOCK_CPUFreqEnum、CLOCK_XORefSelEnum
- Spi.c
  - Delete SPI_MasterTransceive()
  - Delete SPI_MasterB2BTransceive()
  - Delete SPI_MasterB2BTransceiveWithSFRMHold()
  - Delete SPI_MasterTransmitHalfDuplex()
  - Delete SPI_MasterB2BTransmitHalfDuplex()
  - Delete SPI_SlaveTransceive()
  - Delete SPI_SlaveReceiveHalfDuplex()
  - Add SPI_HalfDuplexTx()
  - Add SPI_HalfDuplexRx()
  - Add SPI_FullDuplexTransceive()
- Spc1185_bitfield.h
  - Delete the description of the DMAEOC and MODEM bit fields
- Example Code
  - Modify the demo name based on the TRM section

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- Modify 13_ADC_Differential_Result
- Modify 13_ADC_Triggered_by_Timer
- Modify 16_Comparator
- Modify 14_PGA_Calibration
- Modify 14_Single_Ended_PGA_To_ADC
- Modify 14_Differential_PGA_To_ADC
- Modify 14_DAC_to_ADC
- Add Math_Lib application
- Add RTT_Printf application
- Modify 12_CAN_Extended_Frame_RX
- Modify 12_CAN_INT_RX
- Modify 12_CAN_INT_TX
- Modify 12_CAN_Standard_And_Extended_Frame_TX
- Modify 12_CAN_Standard_Frame_RX
- Modify 12_CANFD_Extended_Frame_RX
- Modify 12_CANFD_Standard_And_Extended_Frame_TX
- Modify 12_CANFD_Standard_Frame_RX
- Delete 9_SPI_Master_B2B_TxRx_Polling
- Delete 9_SPI_Slave_B2B_TxRx_Polling
- Add IAP_CAN
- Modify IAPLoader.exe

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12 版本 1.3.0/2023-08-25

Main Changes

1. Bug Fix

- Flash.c
  - Add flash.c file
- Clock.c
  - Modify CLOCK_InitWithXO()、CLOCK_InitWithRCO()、 CLOCK_ConfigurePLL()
- Modify IAR KEIL config

2. Other Change

- Hwlib.h
  - Add FLASH_Init 、 FLASH_SetTiming 、 FLASH_DisableXIP 、 FLASH_ReadStatus 、 FLASH_WriteStatus 、 FLASH_ReadUID 、 FLASH_ReadID 、 FLASH_ReadOTP 、 FLASH_EraseOTP 、 FLASH_ProgramOTP 、 FLASH_Read 、 FLASH_EraseSector 、 FLASH_EraseBlock 、 FLASH_EraseChip 、 FLASH_Program 、 FLASH_EnableCache 、 FLASH_DisableCache Function declarations
- System.c
  - Rename FLASH_EraseOTP -> FLASH_EraseOTPData
  - Rename FLASH_ProgramOTP -> FLASH_ProgramOTPData
  - Rename FLASH_ReadOTP -> FLASH_ReadOTPData

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13 版本 1.1.0/2023-08-04

Main Changes

1. Bug Fix

- Clock.c
  - Modify CLOCK_InitWithXO()
  - Modify CLOCK_ConfigurePLL() to fix XO bug

2. Other Change

- SPC1185.svd
  - Modify SPC1185.svd
- Can.h
  - Add CAN_EnableAutoBusOffRecovery() function
  - Add CAN_DisabeAutoBusOffRecovery() function
- I2c.h
  - Modify I2C_IntEnum variable I2C_INT_RX_DONE to I2C_INT_READ_DONE
  - Rename I2C_AckDeviceId() to I2C_EnableAckUponDeviceId()
  - Rename I2C_NotAckDeviceId () to I2C_DisableAckUponDeviceId()
  - Rename I2C_IsAckDeviceId () to I2C_IsEnableAckUponDeviceId()
  - Rename I2C_AckGeneralCall () to I2C_EnableAckUponGeneralCall ()
  - Rename I2C_NotAckGeneralCall () to I2C_DisableAckUponGeneralCall ()
  - Rename I2C_IsAckGeneralCall () to I2C_IsEnableAckUponGeneralCall ()
  - Rename I2C_SetUltraFastSpikeCount () to I2C_SetUltraFastSpeedSpikeCount ()
  - Rename I2C_GetUltraFastSpikeCount () to I2C_GetUltraFastSpeedSpikeCount ()
  - Modify I2C_SetSDASetupCount() function
  - Modify I2C_GetSDASetupCount () function
  - Modify I2C_SetSDAHoldCount () function
  - Modify I2C_GetSDAHoldCount () function
- Pwm.h
  - Add PWM_CounterDebugActionEnum
  - Delate PWM_StopCounterInDebug() function
  - Add PWM_SetCounterActionUponDebug () function
  - Add PWM_GetCounterActionUponDebug () function
- Spc1185.h
  - Delete NUM_OF_GPIO_PIN
- I2c.c
  - Delete I2C_InitSpeed() function
  - Add I2C_InitStandardSpeed() function
  - Add I2C_InitFastSpeed() function
  - Add I2C_InitHighSpeed() function
  - Add I2C_InitUltrafastSpeed() function
  - Modify I2C_MasterInit() function
  - Modify I2C_SlaveInit() function
  - Modify I2C_MasterRead() function
  - Modify I2C_SlaveWrite() function
  - Modify I2C_MasterBulkRead() function
  - Modify I2C_SlaveBulkWrite() function

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- Examples code
  - Modify 15_1_I2C_Master_Bulk_Polling_TxRx
  - Modify 15_1_I2C_Slave_Bulk_Polling_TxRx
  - Modify 15_2_I2C_Master_Polling_TxRx
  - Modify 15_2_I2C_Slave_Polling_TxRx
  - Modify 15_3_I2C_Master_INT_TxRx
  - Modify 15_3_I2C_Slave_INT_TxRx
  - Modify 16_1_CAN_Extended_Frame_RX
  - Modify 16_1_CAN_Standard_And_Extended_Frame_TX
  - Modify 16_1_CAN_Standard_Frame_RX
  - Modify 16_2_CANFD_Extended_Frame_RX
  - Modify 16_2_CANFD_Standard_And_Extended_Frame_TX
  - Modify 16_2_CANFD_Standard_Frame_RX
  - Add 16_3_CAN_INT_RX
  - Add 16_3_CAN_INT_TX
- Application code
  - Modify AT24C02_EEPROM

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14 版本 1.0.0/2023-06-07

- **Created.**

15 限制

模块	描述

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