9 System configuration controller (SYSCFG)

The devices feature a set of configuration registers. The main purposes of the system configuration controller are the following:

- Enabling/disabling I²C-bus Fast-mode Plus mode on some I/O ports
- Configuring the IR modulation signal and its output polarity
- Remapping of some I/O ports
- Remapping the memory located at the beginning of the code area
- Flag pending interrupts from each interrupt line
- Managing robustness feature

9.1 SYSCFG registers

9.1.1 SYSCFG configuration register 1 (SYSCFG_CFGR1)

This register is used for specific configurations of memory remap and to control special I/O features.

Two bits are used to configure the type of memory accessible at address 0x0000 0000. These bits are used to select the physical remap by software and so, bypass the hardware BOOT selection. After reset these bits take the value selected by the actual boot mode configuration.

If the Fm+ mode is desired on the I2C pins, first assign GPIOs to I2Cx through the GPIOx_AFRH or GPIOx_AFRL alternate function registers and then only activate the Fm+ mode.

The Fm+ mode on a GPIO *y* used as I2Cx can individually be activated by setting its corresponding I2C_*y*_FMP bit. It can also collectively be activated for GPIOs used as I2C*x*, by setting the I2C*x*_FMP bit. If the Fm+ mode is not desired on a GPIO *y* used as I2C*x*, both I2C_*y*_FMP and I2C*x*_FMP bits must be cleared.

When the Fm+ mode is activated, the speed configuration of the I/O (GPIOx OSPEEDR) is ignored.

Address offset: 0x00

Reset value: 0x0000 000X (X is the memory mode selected by the actual boot mode configuration)

31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16
Res.	I2C_ PC14_ FMP	I2C_ PA10_ FMP	I2C_ PA9_ FMP	I2C2_ FMP	I2C1_ FMP	I2C_ PB9_ FMP	I2C_ PB8_ FMP	I2C_ PB7_ FMP	I2C_ PB6_ FMP						
							rw	rw	rw	rw	rw	rw	rw	rw	rw
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
Res.	IR_N [1:	/OD :0]	IR_ POL	PA12_ RMP	PA11_ RMP	Res.		MODE :0]							
								rw	rw	rw	rw	rw		rw	rw



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Bit 24 I2C PC14 FMP: Fast-mode Plus (Fm+) enable for PC14

This bit is set and cleared by software. It enables I2C Fm+ driving capability on PC14 I/O

- 0: Disable if not enabled through I2Cx FMP
- 1: Enable

Note: Not available on STM32C011xx.

Bit 23 I2C PA10 FMP: Fast-mode Plus (Fm+) enable for PA10

This bit is set and cleared by software. It enables I2C Fm+ driving capability on PA10 I/O

- 0: Disable disabled if not enabled through I2Cx_FMP
- 1: Enable

Bit 22 I2C PA9 FMP: Fast-mode Plus (Fm+) enable for PA9

This bit is set and cleared by software. It enables I2C Fm+ driving capability on PA9 I/O port.

- 0: Disable disabled if not enabled through I2Cx FMP
- 1: Enable

Bit 21 I2C2_FMP: Fast-mode Plus (Fm+) enable for I2C2

This bit is set and cleared by software. It enables I2C Fm+ driving capability on I/O ports configured as I2C2 through GPIOx AFR registers.

- 0: Disable disabled if not enabled through I2C_y_FMP
- 1: Enable

Note: Only applicable to STM32C051xx, STM32C071xx, and STM32C091xx/92xx. Reserved on the other products.

Bit 20 I2C1 FMP: Fast-mode Plus (Fm+) enable for I2C1

This bit is set and cleared by software. It enables I2C Fm+ driving capability on I/O ports configured as I2C1 through GPIOx_AFR registers.

- 0: Disable disabled if not enabled through I2C y FMP
- 1: Enable

Bit 19 I2C PB9 FMP: Fast-mode Plus (Fm+) enable for PB9

This bit is set and cleared by software. It enables I2C Fm+ driving capability on PB9 I/O port.

- 0: Disable disabled if not enabled through I2Cx FMP
- 1: Enable

Note: Not available on STM32C011xx.

Bit 18 I2C_PB8_FMP: Fast-mode Plus (Fm+) enable for PB8

This bit is set and cleared by software. It enables I2C Fm+ driving capability on PB8 I/O port.

- 0: Disable disabled if not enabled through I2Cx FMP
- 1: Enable

Note: Not available on STM32C011xx.

Bit 17 I2C PB7 FMP: Fast-mode Plus (Fm+) enable for PB7

This bit is set and cleared by software. It enables I2C Fm+ driving capability on PB7 I/O port.

- 0: Disable disabled if not enabled through I2Cx_FMP
- 1: Enable

Bit 16 I2C PB6 FMP: Fast-mode Plus (Fm+) enable for PB6

This bit is set and cleared by software. It enables I2C Fm+ driving capability on PB6 I/O port.

- 0: Disable disabled if not enabled through I2Cx FMP
- 1: Enable

Bits 15:8 Reserved, must be kept at reset value.



Bits 7:6 IR_MOD[1:0]: IR Modulation Envelope signal selection

This bitfield selects the signal for IR modulation envelope:

00: TIM16 01: USART1 10: USART2 11: Reserved

Bit 5 IR_POL: IR output polarity selection

0: Output of IRTIM (IR_OUT) is not inverted 1: Output of IRTIM (IR_OUT) is inverted

Bit 4 PA12_RMP: PA12 pin remapping

This bit is set and cleared by software. When set, it remaps the PA12 pin to operate as PA10 GPIO port, instead as PA12 GPIO port. In this case, the original PA10 pin (if available) is forced to analog mode.

0: No remap (PA12) 1: Remap (PA10)

Note: If the PINMUX4[1:0] bitfield of the SYSCFG_CFGR3 register is at 00, PA12_RMP must be kept at 0 to prevent conflict due to two GPIO outputs with different output levels connected to the same pin.

Bit 3 PA11_RMP: PA11 pin remapping

This bit is set and cleared by software. When set, it remaps the PA11 pin to operate as PA9 GPIO port, instead as PA11 GPIO port. In this case, the original PA9 pin (if available) is forced to analog mode.

0: No remap (PA11)

1: Remap (PA9)

Note: If the PINMUX2[1:0] bitfield of the SYSCFG_CFGR3 register is at 00, PA11_RMP must be kept at 0 to prevent conflict due to two GPIO outputs with different output levels connected to the same pin.

Bit 2 Reserved, must be kept at reset value.

Bits 1:0 MEM_MODE[1:0]: Memory mapping selection bits

This bitfield controlled by software selects the memory internally mapped at the address 0x0000 0000. Its reset value is determined by the boot mode configuration. Refer to *Section 3: Boot modes* for more details.

x0: Main flash memory 01: System flash memory 11: Embedded SRAM

9.1.2 SYSCFG configuration register 2 (SYSCFG CFGR2)

Address offset: 0x18

Reset value: 0x0000 0000

31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16
Res.															
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
Res.	LOCKU P_LOC K														
															rw



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Bit 0 LOCKUP_LOCK: Cortex®-M0+ LOCKUP enable

This bit is set by software and cleared by system reset. When set, it enables the connection of $Cortex^{\textcircled{\$}}$ -M0+ LOCKUP (HardFault) output to the TIM1/16/17 Break input.

0: Disable 1: Enable

9.1.3 SYSCFG configuration register 3 (SYSCFG CFGR3)

In some products/packages with low pin count, several GPIOs may be internally connected to the same pin. This register allows selecting the active GPIO that keeps the setting specified by its corresponding GPIOx_MODER register. For STM32C011xx, STM32C031xx, and STM32C071xx, the other GPIOs connected to the same pin are forced into digital input (passive) mode regardless of their corresponding GPIOx_MODER register settings. For STM32C051xx and STM32C091xx/92xx, the output buffer of the other GPIOs connected to the same pin are disabled regardless of their corresponding GPIOx_MODER register settings.

This is only effective when the SECURE_MUXING_EN bit of the *FLASH option register* (*FLASH OPTR*) is set (default).

When SECURE_MUXING_EN is cleared, SYSCFG_CFGR3 has no effect. All GPIOs connected to the same pin keep the configuration set in their corresponding GPIOx_MODER register. The user software must then ensure that there is no conflict between the GPIOs.

In the following bitfield descriptions, for products/packages not listed in the "condition" preceding the bitfield values, consider the bitfield as reserved and keep it at its reset value.

Address offset: 0x3C Reset value: 0x0000 0000

31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16
Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.
15	4.4	40	4.0									•	•		
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
	IX7[1:0]		12 IX6[1:0]	11 PINMU	10 X5[1:0]		8 X4[1:0]	7 PINMU	6 X3[1:0]	5 PINMU	4 X2[1:0]	3 PINMU	2 X1[1:0]	1 PINMU	0 X0[1:0]

Bits 31:16 Reserved, must be kept at reset value.

Bits 15:14 PINMUX7[1:0]: Pin GPIO multiplexer 7

This bitfield is set and cleared by software. It selects an active GPIO on a pin. Condition: STM32C051x - GPIO assigned to WLCSP15 ball A2 or TSSOP20 pin 1

00: PB7 01: PB8

Other: Reserved

Bits 13:12 PINMUX6[1:0]: Pin GPIO multiplexer 6

This bitfield is set and cleared by software. It selects an active $\ensuremath{\mathsf{GPIO}}$ on a pin.

Condition: STM32C051x - GPIO assigned to WLCSP15 ball B1 or TSSOP20 pin 20

00: PB6 01: PB3 10: PB4 11: PB5

Bits 11:10 PINMUX5[1:0]: Pin GPIO multiplexer 5

This bitfield is set and cleared by software. It selects an active GPIO on a pin.

Condition: STM32C011x - GPIO assigned to WLCSP12 ball F1

00: PA3 01: PA4 10: PA5 11: PA6

Condition: STM32C051xx - GPIO assigned to WLCSP15 ball E2 or TSSOP20 pin 19

00: PA14-BOOT0 01: PA15 Other: Reserved

Bits 9:8 PINMUX4[1:0]: Pin GPIO multiplexer 4

This bitfield is set and cleared by software. It selects an active GPIO on a pin.

Condition: STM32C011x - GPIO assigned to WLCSP12 ball E2

00: PA7 01: PA12 Other: Reserved

Condition: STM32C051xx - GPIO assigned to WLCSP15 ball H1

00: PA7 01: PA12 [PA10] Other: Reserved

Condition: STM32C091/92xx - GPIO assigned to TSSOP20 pin 1 or WLCSP24 ball B4

00: PB7 01: PB8 Other: Reserved

Note: The PA12_RMP bit of the SYSCFG_CFGR1 takes priority over the selection through this bitfield. Refer to the description of the SYSCFG_CFGR1 register for more details.



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```
Bits 7:6 PINMUX3[1:0]: Pin GPIO multiplexer 3
```

This bitfield is set and cleared by software. It selects an active GPIO on a pin.

Condition: STM32C011x - GPIO assigned to SO8 pin 8

00: PA14 01: PB6 10: PC15 11: Reserved

Condition: STM32C051xx - GPIO assigned to WLCSP15 ball J2

00: PA5 01: PA6

Other: Reserved

Condition: STM32C071xx - GPIO assigned to WLCSP19 ball B3 or TSSOP20 pin 1

00: PB7 01: PB8

Other: Reserved

Condition: STM32C091/92xx - GPIO assigned WLCSP24 ball A3

00: PB5 01: PB3 Other: Reserved

Bits 5:4 PINMUX2[1:0]: Pin GPIO multiplexer 2

This bitfield is set and cleared by software. It selects an active GPIO on a pin.

Condition: STM32C011x - GPIO assigned to SO8 pin 5

00: PA8 01: PA11 Other: Reserved

Condition: STM32C051xx - GPIO assigned to WLCSP15 ball K3

00: PA3 01: PA4

Other: Reserved

Condition: STM32C071xx - GPIO assigned to TSSOP20 pin 20

00: PB6 01: PB3 10: PB4 11: PB5

Condition: STM32C091/92xx - GPIO assigned to TSSOP20 pin 20

00: PB6 01: PB3 10: PB4 11: PB5

Condition: STM32C091/92xx - GPIO assigned to WLCSP24 ball A5

00: PB6 01: PB4 Other: Reserved

Note: The PA11_RMP bit of the SYSCFG_CFGR1 takes priority over the selection through this bitfield. Refer to the description of the SYSCFG_CFGR1 register for more details.



Bits 3:2 PINMUX1[1:0]: Pin GPIO multiplexer 1

This bitfield is set and cleared by software. It selects an active GPIO on a pin.

Condition: STM32C011x - GPIO assigned to SO8 pin 4

00: PF2-NRST 01: PA0 10: PA1 11: PA2

Condition: STM32C051xx - GPIO assigned to WLCSP15 ball G2

00: PA1 01: PA2

Other: Reserved

Condition: STM32C071xx - GPIO assigned to WLCSP19 ball B1 or TSSOP20 pin 19

00: PA14 01: PA15 Other: Reserved

Condition: STM32C091/92xx - GPIO assigned to TSSOP20 pin 15

00: PA8 01: PB0 10: PB1 11: PB2

Condition: STM32C091/92xx - GPIO assigned to WLCSP24 pin G1

00: PA8 01: PB2 Other: Reserved

Bits 1:0 PINMUX0[1:0]: Pin GPIO multiplexer 0

This bitfield is set and cleared by software. It selects an active GPIO on a pin.

Condition: STM32C011x - GPIO assigned to SO8 pin 1

00: PB7 01: PC14 Other: Reserved

Condition: STM32C051xx - GPIO assigned to WLCSP15 ball H3

00: PF2-NRST 01: PA0 Other: Reserved

Condition: STM32C071xx - GPIO assigned to WLCSP19 ball H3

00: PF2-NRST 01: PA0 Other: Reserved

Condition: STM32C091/92xx - GPIO assigned to TSSOP20 pin 19

00: PA14 01: PA15 Other: Reserved

9.1.4 SYSCFG interrupt line 0 status register (SYSCFG_ITLINE0)

A dedicated set of registers is implemented on the device to collect all pending interrupt sources associated with each interrupt line into a single register. This allows users to check by single read which peripheral requires service in case more than one source is associated to the interrupt line.

All bits in those registers are read only, set by hardware when there is corresponding



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interrupt request pending and cleared by resetting the interrupt source flags in the peripheral registers.

Address offset: 0x80

Reset value: 0x0000 0000

31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16
Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.
			•									•			
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
15 Res.	14 Res.	13 Res.	12 Res.	11 Res.	10 Res.	9 Res.	Res.	Res.	6 Res.	5 Res.	Res.	Res.	Res.	1 Res.	0 WWDG

Bits 31:1 Reserved, must be kept at reset value.

Bit 0 WWDG: Window watchdog interrupt pending flag

9.1.5 SYSCFG interrupt line 1 status register (SYSCFG_ITLINE1)

This register is only available on STM32C071xx. On the other devices, it is reserved.

Address offset: 0x84

Reset value: 0x0000 0000

31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16
Res.	Res.														
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
Res.	PVM_ VDDIO2 _OUT	Res.													
														r	

Bits 31:2 Reserved, must be kept at reset value.

Bit 1 PVM_VDDIO2_OUT: V_{DDIO2} supply monitoring interrupt request pending (EXTI line 34)

Bit 0 Reserved, must be kept at reset value.

9.1.6 SYSCFG interrupt line 2 status register (SYSCFG_ITLINE2)

Address offset: 0x88

Reset value: 0x0000 0000

31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16
Res.															
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
Res.	RTC	Res.													
														r	

Bit 1 RTC: RTC interrupt request pending (EXTI line 19)

Bit 0 Reserved, must be kept at reset value.

9.1.7 SYSCFG interrupt line 3 status register (SYSCFG_ITLINE3)

Address offset: 0x8C

Reset value: 0x0000 0000

31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16
Res.	Res.	Res.	Res.	Res.	Res.										
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
Res.	Res.	Res.	Res.	FLASH	Res.										
ixes.	1.05.	1.05.	1.05.	1.65.	1.65.	1.03.	1.03.	1.65.	1.65.	1.65.	NGS.	1.03.	1.65.	ITF	NG5.
														r	

Bits 31:2 Reserved, must be kept at reset value.

Bit 1 FLASH_ITF: Flash interface interrupt request pending

Bit 0 Reserved, must be kept at reset value.

9.1.8 SYSCFG interrupt line 4 status register (SYSCFG_ITLINE4)

Address offset: 0x90

Reset value: 0x0000 0000

31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16
Res.															
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
Res.	CRS	RCC													
														r	r

Bits 31:2 Reserved, must be kept at reset value.

Bit 1 CRS: CRS interrupt request pending

Note: Only applicable on STM32C071xx, reserved on other products.

Bit 0 RCC: Reset and clock control interrupt request pending

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9.1.9 SYSCFG interrupt line 5 status register (SYSCFG_ITLINE5)

Address offset: 0x94

Reset value: 0x0000 0000

31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16
Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
15 Res.	14 Res.	13 Res.	12 Res.	11 Res.	10 Res.	9 Res.	8 Res.	7 Res.	6 Res.	5 Res.	4 Res.	3 Res.	2 Res.	1 EXTI1	0 EXTI0

Bits 31:2 Reserved, must be kept at reset value.

Bit 1 **EXTI1**: EXTI line 1 interrupt request pending Bit 0 **EXTI0**: EXTI line 0 interrupt request pending

9.1.10 SYSCFG interrupt line 6 status register (SYSCFG_ITLINE6)

Address offset: 0x98

Reset value: 0x0000 0000

31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16
Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
15 Res.	14 Res.	13 Res.	12 Res.	11 Res.	10 Res.	9 Res.	8 Res.	7 Res.	6 Res.	5 Res.	4 Res.	Res.	2 Res.	1 EXTI3	0 EXTI2

Bits 31:2 Reserved, must be kept at reset value.

Bit 1 **EXTI3**: EXTI line 3 interrupt request pending Bit 0 **EXTI2**: EXTI line 2 interrupt request pending

9.1.11 SYSCFG interrupt line 7 status register (SYSCFG_ITLINE7)

Address offset: 0x9C

Reset value: 0x0000 0000

31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16
Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
15 Res.	14 Res.	13 Res.		11 EXTI15	· -			7 EXTI11			4 EXTI8	3 EXTI7	2 EXTI6	1 EXTI5	0 EXTI4

Bit 11 EXTI15: EXTI line 15 interrupt request pending

Bit 10 EXTI14: EXTI line 14 interrupt request pending

Bit 9 EXTI13: EXTI line 13 interrupt request pending

Bit 8 EXTI12: EXTI line 12 interrupt request pending

Bit 7 EXTI11: EXTI line 11 interrupt request pending

Bit 6 EXTI10: EXTI line 10 interrupt request pending

Bit 5 EXTI9: EXTI line 9 interrupt request pending

Bit 4 EXTI8: EXTI line 8 interrupt request pending

Bit 3 EXTI7: EXTI line 7 interrupt request pending

Bit 2 EXTI6: EXTI line 6 interrupt request pending

Bit 1 EXTI5: EXTI line 5 interrupt request pending

Bit 0 EXTI4: EXTI line 4 interrupt request pending

9.1.12 SYSCFG interrupt line 8 status register (SYSCFG_ITLINE8)

This register is only available on STM32C071xx. On the other devices, it is reserved.

Address offset: 0xA0

Reset value: 0x0000 0000

31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16
Res.															
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
				1											1
Res.	USB														

Bits 31:1 Reserved, must be kept at reset value.

Bit 0 USB: USB interrupt request pending

9.1.13 SYSCFG interrupt line 9 status register (SYSCFG_ITLINE9)

Address offset: 0xA4

Reset value: 0x0000 0000

31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16
Res.															
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
Res.	DMA1 _CH1														
															r



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Bit 0 DMA1_CH1: DMA1 channel 1interrupt request pending

9.1.14 SYSCFG interrupt line 10 status register (SYSCFG_ITLINE10)

Address offset: 0xA8

Reset value: 0x0000 0000

31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16
Res.	Res.														
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
Res.	DMA1 _CH3	DMA1 _CH2													
														r	r

Bits 31:2 Reserved, must be kept at reset value.

Bit 1 DMA1_CH3: DMA1 channel 3 interrupt request pending

Bit 0 DMA1_CH2: DMA1 channel 2 interrupt request pending

9.1.15 SYSCFG interrupt line 11 status register (SYSCFG_ITLINE11)

Address offset: 0xAC

Reset value: 0x0000 0000

31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16
Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.
15	14	13	12	11	10	9	. 8	7	6	5	4	3	2	1	0
Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Doo	0)	DMA	DMA	DMA_	DMA	DMAM
	NGS.	1103.	1103.	Nes.	NGS.	Res.	Res.	Res.	Res.	Res.	DMA_ CH7	DMA_ CH6	CH5	CH4	UX

Bits 31:5 Reserved, must be kept at reset value.

Bit 4 DMA_CH7: DMA channel 7 interrupt request pending

Note: Only applicable to STM32C091xx/92xx, reserved on the other products.

Bit 3 DMA_CH6: DMA channel 6 interrupt request pending

Note: Only applicable to STM32C091xx/92xx, reserved on the other products.

Bit 2 DMA_CH5: DMA channel 5 interrupt request pending

Note: Only applicable to STM32C051xx, STM32C071xx, and STM32C091xx/92xx, reserved on the other products.

Bit 1 DMA_CH4: DMA channel 4 interrupt request pending

Note: Only applicable to STM32C051xx, STM32C071xx, and STM32C091xx/92xx, reserved on the other products.

Bit 0 DMAMUX: DMAMUX interrupt request pending

9.1.16 SYSCFG interrupt line 12 status register (SYSCFG_ITLINE12)

Address offset: 0xB0

Reset value: 0x0000 0000

31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16
Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
15 Res.	14 Res.	13 Res.	12 Res.	11 Res.	10 Res.	9 Res.	8 Res.	7 Res.	6 Res.	5 Res.	4 Res.	3 Res.	2 Res.	1 Res.	0 ADC

Bits 31:1 Reserved, must be kept at reset value.

Bit 0 ADC: ADC interrupt request pending

9.1.17 SYSCFG interrupt line 13 status register (SYSCFG_ITLINE13)

Address offset: 0xB4

Reset value: 0x0000 0000

31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16
Res.	Res.	Res.	Res.												
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
Res.	TIM1_B RK	TIM1_ UPD	TIM1_ TRG	TIM1_ CCU											
												r	r	r	r

Bits 31:4 Reserved, must be kept at reset value.

Bit 3 TIM1_BRK: Timer 1 break interrupt request pending

Bit 2 TIM1_UPD: Timer 1 update interrupt request pending

Bit 1 TIM1_TRG: Timer 1 trigger interrupt request pending

Bit 0 TIM1_CCU: Timer 1 commutation interrupt request pending

9.1.18 SYSCFG interrupt line 14 status register (SYSCFG_ITLINE14)

Address offset: 0xB8

Reset value: 0x0000 0000

31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16
Res.															
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
Res.	TIM1_ CC														
															r

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Bit 0 TIM1_CC: Timer 1 capture compare interrupt request pending

9.1.19 SYSCFG interrupt line 15 status register (SYSCFG_ITLINE15)

This register is only available on STM32C051xx, STM32C071xx, and STM32C091xx/92xx. On the other devices, it is reserved.

Address offset: 0xBC

Reset value: 0x0000 0000

31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16
Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
15 Res.	14 Res.	13 Res.	12 Res.	11 Res.	10 Res.	9 Res.	8 Res.	7 Res.	6 Res.	5 Res.	4 Res.	3 Res.	2 Res.	1 Res.	0 TIM2

Bits 31:1 Reserved, must be kept at reset value.

Bit 0 TIM2: TIM2 interrupt request pending

9.1.20 SYSCFG interrupt line 16 status register (SYSCFG_ITLINE16)

Address offset: 0xC0

Reset value: 0x0000 0000

31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16
Res.															
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
Res.	TIM3														
															r

Bits 31:1 Reserved, must be kept at reset value.

Bit 0 TIM3: Timer 3 interrupt request pending

9.1.21 SYSCFG interrupt line 19 status register (SYSCFG_ITLINE19)

Address offset: 0xCC

Reset value: 0x0000 0000

31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16
Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
15 Res.	14 Res.		12 Res.	11 Res.	10 Res.		8 Res.	7 Res.	_	5 Res.		3 Res.	2 Res.	1 Res.	0 TIM14

Bit 0 TIM14: Timer 14 interrupt request pending

9.1.22 SYSCFG interrupt line 20 status register (SYSCFG_ITLINE20)

This register is only available on STM32C091xx/92xx. On the other devices, it is reserved.

Address offset: 0xD0

Reset value: 0x0000 0000

31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16
Res.															
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
						•	•	,	U	J	7	3	_	1	U
Res.	TIM15														

Bits 31:1 Reserved, must be kept at reset value.

Bit 0 TIM15: Timer 15 interrupt request pending

9.1.23 SYSCFG interrupt line 21 status register (SYSCFG_ITLINE21)

Address offset: 0xD4

Reset value: 0x0000 0000

31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16
Res.															
15	14	13	12	11	10	9	8	7	6	5	4	3	2	- 1	0
					10	9	U	,	U	J	•	J	_		U
Res.	TIM16														

Bits 31:1 Reserved, must be kept at reset value.

Bit 0 TIM16: Timer 16 interrupt request pending

9.1.24 SYSCFG interrupt line 22 status register (SYSCFG_ITLINE22)

Address offset: 0xD8

Reset value: 0x0000 0000

31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16
Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
15 Res.	14 Res.	13 Res.	12 Res.	11 Res.	10 Res.	9 Res.	8 Res.	7 Res.	6 Res.	5 Res.	4 Res.	Res.	2 Res.	1 Res.	0 TIM17

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Bit 0 TIM17: Timer 17 interrupt request pending

9.1.25 SYSCFG interrupt line 23 status register (SYSCFG_ITLINE23)

Address offset: 0xDC

Reset value: 0x0000 0000

31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16
Res.															
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
Res.	I2C1														

Bits 31:1 Reserved, must be kept at reset value.

Bit 0 I2C1: I2C1 interrupt request pending, combined with EXTI line 23

9.1.26 SYSCFG interrupt line 24 status register (SYSCFG_ITLINE24)

This register is only available on STM32C051xx, STM32C071xx, and STM32C091xx/92xx. On the other devices, it is reserved.

Address offset: 0xE0

Reset value: 0x0000 0000

31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16
Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
15 Res.	14 Res.	13 Res.	12 Res.	11 Res.	10 Res.	9 Res.	8 Res.	7 Res.	6 Res.	5 Res.	4 Res.	3 Res.	2 Res.	1 Res.	0 I2C2

Bits 31:1 Reserved, must be kept at reset value.

Bit 0 I2C2: I2C2 interrupt request pending

9.1.27 SYSCFG interrupt line 25 status register (SYSCFG_ITLINE25)

Address offset: 0xE4

Reset value: 0x0000 0000

31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16
Res.															
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
Res.	SPI1														
		ĺ						ĺ	ĺ					ĺ	_

Bit 0 SPI1: SPI1 interrupt request pending

9.1.28 SYSCFG interrupt line 26 status register (SYSCFG_ITLINE26)

This register is only available on STM32C051xx, STM32C071xx, and STM32C091xx/92xx. On the other devices, it is reserved.

Address offset: 0xE8

Reset value: 0x0000 0000

31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16
Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
15 Res.	14 Res.	13 Res.	12 Res.	11 Res.	10 Res.	9 Res.	8 Res.	7 Res.	6 Res.	5 Res.	4 Res.	3 Res.	2 Res.	1 Res.	0 SPI2

Bits 31:1 Reserved, must be kept at reset value.

Bit 0 SPI2: SPI2 interrupt request pending

9.1.29 SYSCFG interrupt line 27 status register (SYSCFG_ITLINE27)

Address offset: 0xEC

Reset value: 0x0000 0000

31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16
Res.															
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
Res.	USART 1														
															r

Bits 31:1 Reserved, must be kept at reset value.

Bit 0 USART1: USART1 interrupt request pending, combined with EXTI line 25

9.1.30 SYSCFG interrupt line 28 status register (SYSCFG ITLINE28)

Address offset: 0xF0

Reset value: 0x0000 0000

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31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16
Res.															
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
															LICADT
Res.	USART 2														

Bits 31:1 Reserved, must be kept at reset value.

Bit 0 USART2: USART2 interrupt request pending (EXTI line 26)

9.1.31 SYSCFG interrupt line 29 status register (SYSCFG_ITLINE29)

This register is only available on STM32C091xx/92xx. On the other devices, it is reserved.

Address offset: 0xF4

Reset value: 0x0000 0000

31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16
Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
15 Res.	14 Res.	13 Res.	12 Res.	11 Res.	10 Res.	9 Res.	8 Res.	7 Res.	6 Res.	5 Res.	4 Res.	Res.	2 Res.	1 USART4	0 USART3

Bits 31:2 Reserved, must be kept at reset value.

Bit 1 **USART4**: USART4 interrupt request pending

Bit 0 USART3: USART3 interrupt request pending

9.1.32 SYSCFG interrupt line 30 status register (SYSCFG_ITLINE30)

This register is only available on STM32C092xx. On the other devices, it is reserved.

Address offset: 0xF8

Reset value: 0x0000 0000

31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16
Res.															
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
Res.	FDCAN_ IT0														
															r

Bits 31:1 Reserved, must be kept at reset value.

Bit 0 FDCAN_IT0: FDCAN interrupt request 0 pending

9.1.33 SYSCFG interrupt line 31 status register (SYSCFG_ITLINE31)

This register is only available on STM32C092xx. On the other devices, it is reserved.

Address offset: 0xFC Reset value: 0x0000 0000

31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16
Res.															
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
Res.	FDCAN_ IT1														

Bits 31:1 Reserved, must be kept at reset value.

Bit 0 FDCAN_IT1: FDCAN interrupt request 1 pending

9.1.34 SYSCFG register map

The following table gives the SYSCFG register map and the reset values.

16 Offset 4 4 4 13 Register 9 6 9 2 ∞ 4 က MEM_MODE[1:0] I2C_PA10_FMP I2C PC14 FMP FMP PA9_FMP I2C_PB9_FMP PB8_FMP FMP I2C2_FMP I2C1_FMP PA12_RMP PA11_RMF IR MOD IR_POL I2C_PB7_ 12C_PB6 SYSCFG_CFGR1 0x00 12C I2C_ 0 Reset value 0 0 0 0 0 0 0 0 0 0 0 ХХ 0x04 to 0x17 Reserved Reserved LOCUP LOCK SYSCFG_CFGR2 0x18 Reset value 0 0x1C to 0x3B Reserved Reserved **PINMUX6 PINMUX3 PINMUX0** SYSCFG_CFGR3 0x3C Reset value 0 0 0 0 0 0 0 0 0 0 0x40 to 0x7F Reserved

Table 41. SYSCFG register map and reset values

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0x80

SYSCFG_ITLINE0

Reset value

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Table 41. SYSCFG register map and reset values (continued)

Offset	Register	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	6	8		9	2	4	ဗ	7	1	0
0x84	SYSCFG_ITLINE1	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	PVM_VDDIO2_OUT	Res.																				
0x88	Reset value SYSCFG_ITLINE2 Reset value	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	o RTC o	Res.																				
0x8C	SYSCFG_ITLINE3	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	FLASH_ITF	Res.																				
0x90	Reset value SYSCFG_ITLINE4 Reset value	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	0	o RCC																				
0x94	SYSCFG_ITLINE5 Reset value	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	o EXTI1	o EXTIO																				
0x98	SYSCFG_ITLINE6 Reset value	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	o EXTI3	o EXTI2																				
0x9C	SYSCFG_ITLINE7 Reset value	Res.	o EXTI15	o EXTI14	o EXTI13	o EXTI12	o EXTI11	o EXTI10	o EXTI9	o EXTI8	o EXTI7	o EXTI6	o EXTI5	o EXTI4																			
0xA0	SYSCFG_ITLINE8 Reset value	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.		o USB																				
0xA4	SYSCFG_ITLINE9	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	DMA1_CH1																				
	Reset value																																0
0xA8	SYSCFG_ITLINE10	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	DMA1_CH3	DMA1_CH2																				
	Reset value																												2	9	2	0	0
0xAC	SYSCFG_ITLINE11	Res.	Res.	Res.	Res.	Res.	Res.	Res.	DMA1_CH7	DMA1_CH6	DMA1_CH5	DMA1_CH4	DMAMUX																				
	Reset value																												0	0	0	0	0
0xB0	SYSCFG_ITLINE12	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	ADC																				
	Reset value																													3RK	JPD	'RG	o noc
0xB4	SYSCFG_ITLINE13	Res	Res	Res	Res	Res	Res	Res	Res	TIM1_BRK	TIM1_UPD	TIM1_TRG	TIM1_CCU																				
	Reset value																													0	0	0	0

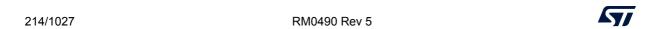


Table 41. SYSCFG register map and reset values (continued)

Offset	Register	<u>.</u>	l			27				Ī						7										Ť	. 9	2	4	က	7	_	0
	1109.0101	က	က	7	7	7	7	7	7	7	7	2	7	_	_	_	_	7	_	7	_	1	1	<u> </u>					_	Ľ,	<u> </u>	Ļ	
0xB8	SYSCFG_ITLINE14	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	TIM1_CC
	Reset value																																0
0xBC	SYSCFG_ITLINE15	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	TIM2
	Reset value																																0
0xC0	SYSCFG_ITLINE16	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	TIM3
	Reset value																																0
0xC4- 0xC8	Reserved															F	Rese	erve	d														
0xCC	SYSCFG_ITLINE19	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	TIM14
	Reset value																																0
0xD0	SYSCFG_ITLINE20	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	TIM15
	Reset value																																0
0xD4	SYSCFG_ITLINE21	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	TIM16
	Reset value																																0
0xD8	SYSCFG_ITLINE22	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	TIM17
	Reset value																																0
0xDC	SYSCFG_ITLINE23	Res	Res	Res	Res	Res	Res	Res	Res	Res	Res	Res	Res	Res	Res	Res	Res	Res	Res	Res	SeX	Res	Res	Res	Res	Res	Res	Res	Res	Res	Res	Res	12C1
	Reset value																																0
0xE0	SYSCFG_ITLINE24	Res	Res	Res	Res	Res	Res	Res	Res	Res	Res	Res	Res	Res	Res	Res	Res	Res	Res	Res	Res	Res	Res	Res	Res	Res	Res	Res	Res	Res	Res	Res	12C2
	Reset value																																0
0xE4	SYSCFG_ITLINE25	Res	Res	Res	Res	Res	Res	Res	Res	Res	Res	Res	Res	Res	Res	Res	Res	Res	Res	Res	Res	Res	Res	Res	Res	Res	Res	Res	Res	Res	Res	Res	o SPI1
	Reset value	S)	S.	S.	S.	S.	S.	Š.	Š	Š.	S.	S.	S)	S.	S.	S.	Ś	Š.	Ś	Š.	S.	S.	S.	S.	Ś	S)	S.	S)	S)	o)	Š.	S)	
0xE8	SYSCFG_ITLINE26	Re	Re	Re	Re	Re	Re	Re	Re	Re	Re	Re	Re	Re	Re	Re	Re	Re	Re	Re	Re	Re	Re	Re	Re	Re	Re	Re	Re	Re	Re	Ne Ne	o SPI2
	Reset value																										-				-	-	_
0xEC	SYSCFG_ITLINE27	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	USART
	Reset value																																0
0xF0	SYSCFG_ITLINE28	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	USART2
	Reset value																									L	\perp		L				0
0xF4	SYSCFG_ITLINE29	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	USART4	o USART3
	Reset value																										+				\vdash	0	0
0xF8	SYSCFG_ITLINE30	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	Res.	FDCAN_IT0
	Reset value																										-	┢			-		о <u>Н</u>



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Table 41. SYSCFG register map and reset values (continued)

Offset	Register	31	30	29	28	27	56	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	6	8	7	9	2	4	ဗ	2	1	0
0xFC	SYSCFG_ITLINE31	Res.	FDCAN_IT1																														
	Reset value																																0

Refer to Section 2.2 on page 45 for the register boundary addresses.