

# PIC32MX5XX/6XX/7XX

**TABLE 7-1: INTERRUPT IRQ, VECTOR AND BIT LOCATION**

Interrupt Source <sup>(1)</sup>	IRQ Number	Vector Number	Interrupt Bit Location			
			Flag	Enable	Priority	Sub-Priority
Highest Natural Order Priority						
CT – Core Timer Interrupt	0	0	IFS0<0>	IEC0<0>	IPC0<4:2>	IPC0<1:0>
CS0 – Core Software Interrupt 0	1	1	IFS0<1>	IEC0<1>	IPC0<12:10>	IPC0<9:8>
CS1 – Core Software Interrupt 1	2	2	IFS0<2>	IEC0<2>	IPC0<20:18>	IPC0<17:16>
INT0 – External Interrupt 0	3	3	IFS0<3>	IEC0<3>	IPC0<28:26>	IPC0<25:24>
T1 – Timer1	4	4	IFS0<4>	IEC0<4>	IPC1<4:2>	IPC1<1:0>
IC1 – Input Capture 1	5	5	IFS0<5>	IEC0<5>	IPC1<12:10>	IPC1<9:8>
OC1 – Output Compare 1	6	6	IFS0<6>	IEC0<6>	IPC1<20:18>	IPC1<17:16>
INT1 – External Interrupt 1	7	7	IFS0<7>	IEC0<7>	IPC1<28:26>	IPC1<25:24>
T2 – Timer2	8	8	IFS0<8>	IEC0<8>	IPC2<4:2>	IPC2<1:0>
IC2 – Input Capture 2	9	9	IFS0<9>	IEC0<9>	IPC2<12:10>	IPC2<9:8>
OC2 – Output Compare 2	10	10	IFS0<10>	IEC0<10>	IPC2<20:18>	IPC2<17:16>
INT2 – External Interrupt 2	11	11	IFS0<11>	IEC0<11>	IPC2<28:26>	IPC2<25:24>
T3 – Timer3	12	12	IFS0<12>	IEC0<12>	IPC3<4:2>	IPC3<1:0>
IC3 – Input Capture 3	13	13	IFS0<13>	IEC0<13>	IPC3<12:10>	IPC3<9:8>
OC3 – Output Compare 3	14	14	IFS0<14>	IEC0<14>	IPC3<20:18>	IPC3<17:16>
INT3 – External Interrupt 3	15	15	IFS0<15>	IEC0<15>	IPC3<28:26>	IPC3<25:24>
T4 – Timer4	16	16	IFS0<16>	IEC0<16>	IPC4<4:2>	IPC4<1:0>
IC4 – Input Capture 4	17	17	IFS0<17>	IEC0<17>	IPC4<12:10>	IPC4<9:8>
OC4 – Output Compare 4	18	18	IFS0<18>	IEC0<18>	IPC4<20:18>	IPC4<17:16>
INT4 – External Interrupt 4	19	19	IFS0<19>	IEC0<19>	IPC4<28:26>	IPC4<25:24>
T5 – Timer5	20	20	IFS0<20>	IEC0<20>	IPC5<4:2>	IPC5<1:0>
IC5 – Input Capture 5	21	21	IFS0<21>	IEC0<21>	IPC5<12:10>	IPC5<9:8>
OC5 – Output Compare 5	22	22	IFS0<22>	IEC0<22>	IPC5<20:18>	IPC5<17:16>
SPI1E – SPI1 Fault	23	23	IFS0<23>	IEC0<23>	IPC5<28:26>	IPC5<25:24>
SPI1RX – SPI1 Receive Done	24	23	IFS0<24>	IEC0<24>	IPC5<28:26>	IPC5<25:24>
SPI1TX – SPI1 Transfer Done	25	23	IFS0<25>	IEC0<25>	IPC5<28:26>	IPC5<25:24>
U1E – UART1 Error	26	24	IFS0<26>	IEC0<26>	IPC6<4:2>	IPC6<1:0>
SPI3E – SPI3 Fault						
I2C3B – I2C3 Bus Collision Event						
U1RX – UART1 Receiver	27	24	IFS0<27>	IEC0<27>	IPC6<4:2>	IPC6<1:0>
SPI3RX – SPI3 Receive Done						
I2C3S – I2C3 Slave Event						
U1TX – UART1 Transmitter	28	24	IFS0<28>	IEC0<28>	IPC6<4:2>	IPC6<1:0>
SPI3TX – SPI3 Transfer Done						
I2C3M – I2C3 Master Event						
I2C1B – I2C1 Bus Collision Event	29	25	IFS0<29>	IEC0<29>	IPC6<12:10>	IPC6<9:8>
I2C1S – I2C1 Slave Event	30	25	IFS0<30>	IEC0<30>	IPC6<12:10>	IPC6<9:8>
I2C1M – I2C1 Master Event	31	25	IFS0<31>	IEC0<31>	IPC6<12:10>	IPC6<9:8>
CN – Input Change Interrupt	32	26	IFS1<0>	IEC1<0>	IPC6<20:18>	IPC6<17:16>

**Note 1:** Not all interrupt sources are available on all devices. See [TABLE 1: “PIC32MX5XX USB and CAN Features”](#), [TABLE 2: “PIC32MX6XX USB and Ethernet Features”](#) and [TABLE 3: “PIC32MX7XX USB, Ethernet, and CAN Features”](#) for the list of available peripherals.

**TABLE 7-1: INTERRUPT IRQ, VECTOR AND BIT LOCATION (CONTINUED)**

Interrupt Source <sup>(1)</sup>	IRQ Number	Vector Number	Interrupt Bit Location			
			Flag	Enable	Priority	Sub-Priority
AD1 – ADC1 Convert Done	33	27	IFS1<1>	IEC1<1>	IPC6<28:26>	IPC6<25:24>
PMP – Parallel Master Port	34	28	IFS1<2>	IEC1<2>	IPC7<4:2>	IPC7<1:0>
CMP1 – Comparator Interrupt	35	29	IFS1<3>	IEC1<3>	IPC7<12:10>	IPC7<9:8>
CMP2 – Comparator Interrupt	36	30	IFS1<4>	IEC1<4>	IPC7<20:18>	IPC7<17:16>
U3E - UART3 Error SPI2E – SPI2 Fault I2C4B – I2C4 Bus Collision Event	37	31	IFS1<5>	IEC1<5>	IPC7<28:26>	IPC7<25:24>
U3RX - UART3 Receiver SPI2RX – SPI2 Receive Done I2C4S – I2C4 Slave Event	38	31	IFS1<6>	IEC1<6>	IPC7<28:26>	IPC7<25:24>
U3TX - UART3 Transmitter SPI2TX – SPI2 Transfer Done IC4M – I2C4 Master Event	39	31	IFS1<7>	IEC1<7>	IPC7<28:26>	IPC7<25:24>
U2E - UART2 Error SPI4E – SPI4 Fault I2C5B – I2C5 Bus Collision Event	40	32	IFS1<8>	IEC1<8>	IPC8<4:2>	IPC8<1:0>
U2RX - UART2 Receiver SPI4RX – SPI4 Receive Done I2C5S – I2C5 Slave Event	41	32	IFS1<9>	IEC1<9>	IPC8<4:2>	IPC8<1:0>
U2TX - UART2 Transmitter SPI4TX – SPI4 Transfer Done IC5M – I2C5 Master Event	42	32	IFS1<10>	IEC1<10>	IPC8<4:2>	IPC8<1:0>
I2C2B – I2C2 Bus Collision Event	43	33	IFS1<11>	IEC1<11>	IPC8<12:10>	IPC8<9:8>
I2C2S – I2C2 Slave Event	44	33	IFS1<12>	IEC1<12>	IPC8<12:10>	IPC8<9:8>
I2C2M – I2C2 Master Event	45	33	IFS1<13>	IEC1<13>	IPC8<12:10>	IPC8<9:8>
FSCM – Fail-Safe Clock Monitor	46	34	IFS1<14>	IEC1<14>	IPC8<20:18>	IPC8<17:16>
RTCC – Real-Time Clock and Calendar	47	35	IFS1<15>	IEC1<15>	IPC8<28:26>	IPC8<25:24>
DMA0 – DMA Channel 0	48	36	IFS1<16>	IEC1<16>	IPC9<4:2>	IPC9<1:0>
DMA1 – DMA Channel 1	49	37	IFS1<17>	IEC1<17>	IPC9<12:10>	IPC9<9:8>
DMA2 – DMA Channel 2	50	38	IFS1<18>	IEC1<18>	IPC9<20:18>	IPC9<17:16>
DMA3 – DMA Channel 3	51	39	IFS1<19>	IEC1<19>	IPC9<28:26>	IPC9<25:24>
DMA4 – DMA Channel 4	52	40	IFS1<20>	IEC1<20>	IPC10<4:2>	IPC10<1:0>
DMA5 – DMA Channel 5	53	41	IFS1<21>	IEC1<21>	IPC10<12:10>	IPC10<9:8>
DMA6 – DMA Channel 6	54	42	IFS1<22>	IEC1<22>	IPC10<20:18>	IPC10<17:16>
DMA7 – DMA Channel 7	55	43	IFS1<23>	IEC1<23>	IPC10<28:26>	IPC10<25:24>
FCE – Flash Control Event	56	44	IFS1<24>	IEC1<24>	IPC11<4:2>	IPC11<1:0>
USB – USB Interrupt	57	45	IFS1<25>	IEC1<25>	IPC11<12:10>	IPC11<9:8>
CAN1 – Control Area Network 1	58	46	IFS1<26>	IEC1<26>	IPC11<20:18>	IPC11<17:16>
CAN2 – Control Area Network 2	59	47	IFS1<27>	IEC1<27>	IPC11<28:26>	IPC11<25:24>
ETH – Ethernet Interrupt	60	48	IFS1<28>	IEC1<28>	IPC12<4:2>	IPC12<1:0>
IC1E – Input Capture 1 Error	61	5	IFS1<29>	IEC1<29>	IPC1<12:10>	IPC1<9:8>
IC2E – Input Capture 2 Error	62	9	IFS1<30>	IEC1<30>	IPC2<12:10>	IPC2<9:8>

**Note 1:** Not all interrupt sources are available on all devices. See [TABLE 1: “PIC32MX5XX USB and CAN Features”](#), [TABLE 2: “PIC32MX6XX USB and Ethernet Features”](#) and [TABLE 3: “PIC32MX7XX USB, Ethernet, and CAN Features”](#) for the list of available peripherals.

# PIC32MX5XX/6XX/7XX

**TABLE 7-1: INTERRUPT IRQ, VECTOR AND BIT LOCATION (CONTINUED)**

Interrupt Source <sup>(1)</sup>	IRQ Number	Vector Number	Interrupt Bit Location			
			Flag	Enable	Priority	Sub-Priority
IC3E – Input Capture 3 Error	63	13	IFS1<31>	IEC1<31>	IPC3<12:10>	IPC3<9:8>
IC4E – Input Capture 4 Error	64	17	IFS2<0>	IEC2<0>	IPC4<12:10>	IPC4<9:8>
IC5E – Input Capture 5 Error	65	21	IFS2<1>	IEC2<1>	IPC5<12:10>	IPC5<9:8>
PMPE – Parallel Master Port Error	66	28	IFS2<2>	IEC2<2>	IPC7<4:2>	IPC7<1:0>
U4E – UART4 Error	67	49	IFS2<3>	IEC2<3>	IPC12<12:10>	IPC12<9:8>
U4RX – UART4 Receiver	68	49	IFS2<4>	IEC2<4>	IPC12<12:10>	IPC12<9:8>
U4TX – UART4 Transmitter	69	49	IFS2<5>	IEC2<5>	IPC12<12:10>	IPC12<9:8>
U6E – UART6 Error	70	50	IFS2<6>	IEC2<6>	IPC12<20:18>	IPC12<17:16>
U6RX – UART6 Receiver	71	50	IFS2<7>	IEC2<7>	IPC12<20:18>	IPC12<17:16>
U6TX – UART6 Transmitter	72	50	IFS2<8>	IEC2<8>	IPC12<20:18>	IPC12<17:16>
U5E – UART5 Error	73	51	IFS2<9>	IEC2<9>	IPC12<28:26>	IPC12<25:24>
U5RX – UART5 Receiver	74	51	IFS2<10>	IEC2<10>	IPC12<28:26>	IPC12<25:24>
U5TX – UART5 Transmitter	75	51	IFS2<11>	IEC2<11>	IPC12<28:26>	IPC12<25:24>
(Reserved)	—	—	—	—	—	—
Lowest Natural Order Priority						

**Note 1:** Not all interrupt sources are available on all devices. See [TABLE 1: “PIC32MX5XX USB and CAN Features”](#), [TABLE 2: “PIC32MX6XX USB and Ethernet Features”](#) and [TABLE 3: “PIC32MX7XX USB, Ethernet, and CAN Features”](#) for the list of available peripherals.

## 7.1 Control Registers

**TABLE 7-2: INTERRUPT REGISTER MAP FOR PIC32MX534F064H, PIC32MX564F064H, PIC32MX564F128H, PIC32MX575F256H AND PIC32MX575F512H DEVICES**

Virtual Address (BF88_#)	Register Name <sup>(1)</sup>	Bit Range	Bits																All Resets	
			31/15	30/14	29/13	28/12	27/11	26/10	25/9	24/8	23/7	22/6	21/5	20/4	19/3	18/2	17/1	16/0		
1000	INTCON	31:16	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	SS0	0000	
		15:0	—	—	—	MVEC	—	TPC<2:0>			—	—	—	INT4EP	INT3EP	INT2EP	INT1EP	INT0EP	0000	
1010	INTSTAT <sup>(3)</sup>	31:16	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0000	
		15:0	—	—	—	—	—	SRIPL<2:0>			—	—	VEC<5:0>						0000	
1020	IPTMR	31:16	IPTMR<31:0>																0000	
		15:0																	0000	
1030	IFS0	31:16	I2C1MIF	I2C1SIF	I2C1BIF	U1TXIF	U1RXIF	U1EIF	—	—	—	OC5IF	IC5IF	T5IF	INT4IF	OC4IF	IC4IF	T4IF	0000	
						SPI3TXIF	SPI3RXIF	SPI3EIF												
						I2C3MIF	I2C3SIF	I2C3BIF												
		15:0	INT3IF	OC3IF	IC3IF	T3IF	INT2IF	OC2IF	IC2IF	T2IF	INT1IF	OC1IF	IC1IF	T1IF	INT0IF	CS1IF	CS0IF	CTIF	0000	
1040	IFS1	31:16	IC3EIF	IC2EIF	IC1EIF	—	—	CAN1IF	USBIF	FCEIF	DMA7IF <sup>(2)</sup>	DMA6IF <sup>(2)</sup>	DMA5IF <sup>(2)</sup>	DMA4IF <sup>(2)</sup>	DMA3IF	DMA2IF	DMA1IF	DMA0IF	0000	
						—	—	U2TXIF	U2RXIF	U2EIF	U3TXIF	U3RXIF	U3EIF							
								SPI4TXIF	SPI4RXIF	SPI4EIF	SPI2TXIF	SPI2RXIF	SPI2EIF							
		15:0	RTCCIF	FSCMIF	—	—	—	I2C5MIF	I2C5SIF	I2C5BIF	I2C4MIF	I2C4SIF	I2C4BIF	CMP2IF	CMP1IF	PMPIF	AD1IF	CNIF	0000	
1050	IFS2	31:16	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0000	
		15:0	—	—	—	—	U5TXIF	U5RXIF	U5EIF	U6TXIF	U6RXIF	U6EIF	U4TXIF	U4RXIF	U4EIF	PMPEIF	IC5EIF	IC4EIF	0000	
1060	IEC0	31:16	I2C1MIE	I2C1SIE	I2C1BIE	U1TXIE	U1RXIE	U1EIE	—	—	—	OC5IE	IC5IE	T5IE	INT4IE	OC4IE	IC4IE	T4IE	0000	
						SPI3TXIE	SPI3RXIE	SPI3EIE												
						I2C3MIE	I2C3SIE	I2C3BIE												
		15:0	INT3IE	OC3IE	IC3IE	T3IE	INT2IE	OC2IE	IC2IE	T2IE	INT1IE	OC1IE	IC1IE	T1IE	INT0IE	CS1IE	CS0IE	CTIE	0000	
1070	IEC1	31:16	IC3EIE	IC2EIE	IC1EIE	—	—	CAN1IE	USBIE	FCEIE	DMA7IE <sup>(2)</sup>	DMA6IE <sup>(2)</sup>	DMA5IE <sup>(2)</sup>	DMA4IE <sup>(2)</sup>	DMA3IE	DMA2IE	DMA1IE	DMA0IE	0000	
						—	—	U2TXIE	U2RXIE	U2EIE	U3TXIE	U3RXIE	U3EIE							
								SPI4TXIE	SPI4RXIE	SPI4EIE	SPI2TXIE	SPI2RXIE	SPI2EIE							
		15:0	RTCCIE	FSCMIE	—	—	—	I2C5MIE	I2C5SIE	I2C5BIE	I2C4MIE	I2C4SIE	I2C4BIE	CMP2IE	CMP1IE	PMPIE	AD1IE	CNIE	0000	
1080	IEC2	31:16	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0000	
		15:0	—	—	—	—	U5TXIE	U5RXIE	U5EIE	U6TXIE	U6RXIE	U6EIE	U4TXIE	U4RXIE	U4EIE	PMPEIE	IC5EIE	IC4EIE	0000	
1090	IPC0	31:16	—	—	—	INT0IP<2:0>			INT0IS<1:0>			—	—	—	CS1IP<2:0>			CS1IS<1:0>		0000
		15:0	—	—	—	CS0IP<2:0>			CS0IS<1:0>			—	—	—	CTIP<2:0>			CTIS<1:0>		0000

**Legend:** x = unknown value on Reset; — = unimplemented, read as '0'. Reset values are shown in hexadecimal.

- Note** 1: Except where noted, all registers in this table have corresponding CLR, SET and INV registers at their virtual addresses, plus offsets of 0x4 0x8 and 0xC, respectively. See [Section 12.1.1 "CLR, SET and INV Registers"](#) for more information.
- 2: These bits are not available on PIC32MX534/564/664/764 devices.
- 3: This register does not have associated CLR, SET, and INV registers.