

Port Map Worksheet: PIC32MX795F512L, MX7 V1.0

Port A	5VT	HDR1	HDR2	Usage	Description
RA0	Y		26	LED-0	LED-0
RA1	Y		27	LED-1	LED-1
RA2/SCL2	Y		16	SCL2	Codec & 24AA01 I2C Connection
RA3/SDA2	Y		17	SDA2	Codec & 24AA01 I2C Connection
RA4	Y		12		
RA5	Y		13		
RA6	Y		6		
RA7	Y		10		
RA8	-			No pin	
RA9/Vref-/Cvref-/PMA7	N	26		SD-CS#	
RA10/Vref+/Cvref+/PMA6	N	25		Joy-CP	
RA11 ... RA13	-			No pin	
RA14/SCL1/INT3	Y		14		
RA15/SDA1/INT4	Y			AETXEN	Ethernet Alternate Transmit Enable (LAN8720A)

Port B	5VT	HDR1	HDR2	Usage	Description
RB0/PGED1/AN0/CN2	N	24		Joy-A	Joystick Up
RB1/PGEC1/AN1/CN3	N	23		Joy-B	Joystick Right
RB2/AN2/C2IN-/CN4	N	22		Joy-C	Joystick Down
RB3/AN3/C2IN+/CN5	N	21		Joy-D	Joystick Left
RB4/AN4/C1IN-/CN6	N	27		CDC-CS#	Codec Chip Select
RB5/AN5/C1IN+/VBusOn/CN7	N	28			
RB6/PGEC2/AN6/OCFA	N			Pgm/Debug	Debugger
RB7/PGED2/AN7	N			Pgm/Debug	Debugger
RB8/AN8/C1OUT	N			Temp Sensor	MCP9700A
RB9/AN9/C2OUT	N		3	USB-PSW	USB Power Ctrl
RB10/AN10/VRefOut/PMA13	N			LCD-YD	Resistive Touch Screen, Y Lower
RB11/AN11/PMA12	N			LCD-XR	Resistive Touch Screen, X Right
RB12/AN12/PMA11	N			LCD-YU	Resistive Touch Screen, Y Upper
RB13/AN13/PMA10	N			LCD-XL	Resistive Touch Screen, X Left
RB14/AN14/PMALH/PMA1	N		4	LCD-CS#	LCD Chip Select (Active Low)
RB15/AN15/OCFB/PMALL/PMA0/CN12	N			LCD-RS	LCD Register Select

Port C	5VT	HDR1	HDR2	Usage	Description
RC0	-			No pin	
RC1/T2CK	Y			LCD-RST	LCD Reset Line
RC2/T3CK	Y			EE-CS#	Serial Flash Chip Select (Active Low)
RC3/T4CK	Y			ACL-CS#	Accelerometer Chip Select
RC4/T5CK/SDI1	Y		22	SDI1	M25P80 & ADXL345
RC5 ... RC11	-			No pin	
RC12/OSC1	N			CLKI	8 MHz Crystal
RC13/SOSCI/CN1	N			SOSCI	32,768 Hz Crystal
RC14/SOSCO/T1CK/CN0	N			SOSCO	32,768 Hz Crystal
RC15/OSC2	N			CLKO	8 MHz Crystal

Port D	5VT	HDR1	HDR2	Usage	Description
RD0/SDO1/OC1/INT0	Y		23	SDO1	M25P80 & ADXL345
RD1/OC2	Y		11		
RD2/OC3	Y			LCD-BLED	LCD Backlight LED control. (Open Drain)
RD3/OC4	Y		5		
RD4/OC5/PMWR/CN13	Y	20		PMWR	PM Bus Write Signal (Active Low)
RD5/PMRD/CN14	Y	19		PMRD	PM Bus Read Signal (Active Low)
RD6/PMD14/CN15	Y	4		PMD14	PM Data Bus
RD7/PMD15/CN16	Y	3		PMD15	PM Data Bus
RD8/RTCC/IC1	Y			AEMDIO	Alternate Ethernet Management Data (LAN8720A)
RD9/SS1/IC2	Y		28	LED-2	LED-2
RD10/SCK1/IC3/PMCS2/PMA15	Y		24	SCK1	M25P80 & ADXL345
RD11/IC4/PMCS1/PMA14	Y			AEMDC	Alternate Ethernet Management Clock (LAN8720A)
RD12/IC5/PMD12	Y	6		PMD12	PM Data Bus
RD13/PMD13/CN19	Y	5		PMD13	PM Data Bus
RD14/U1CTS/CN20	Y			AETXD0	Alternate Ethernet Transmit Data 0 (LAN8720A)
RD15/U1RTS/CN21	Y			AETXD1	Alternate Ethernet Transmit Data 1 (LAN8720A)

Port E	5VT	HDR1	HDR2	Usage	Description
RE0/PMD0	Y	18		PMD0	PM Data Bus
RE1/PMD1	Y	17		PMD1	PM Data Bus
RE2/PMD2	Y	16		PMD2	PM Data Bus
RE3/PMD3	Y	15		PMD3	PM Data Bus
RE4/PMD4	Y	14		PMD4	PM Data Bus
RE5/PMD5	Y	13		PMD5	PM Data Bus
RE6/PMD6	Y	12		PMD6	PM Data Bus
RE7/PMD7	Y	11		PMD7	PM Data Bus
RE8/INT1	Y			AERXD0	Alternate Ethernet Receive Data 0 (LAN8720A)
RE9/INT2	Y			AERXD1	Alternate Ethernet Receive Data 1 (LAN8720A)

Port F	5VT	HDR1	HDR2	Usage	Description
RF0/PMD11	Y	7		PMD11	PM Data Bus
RF1/PMD10	Y	8		PMD10	PM Data Bus
RF2/U1RX	Y			U1ARX	Via DB-9 Serial Port Pin 2
RF3/USBID	Y			USB-ID	
RF4/U2RX/PMA9/CN17	Y		19	SDI3	Codec
RF5/U2TX/PMA8/CN18	Y		20	SDO3A	Codec
RF6 ... RF7	-			No pin	
RF8/U1TX	Y			UA1ATX	Via DB-9 Serial Port Pin 3
RF9 ... RF11	-			No pin	
RF12/U2CTS	Y			LRC	Codec LRC
RF13/U2RTS	Y		21	SCK3A	Codec

Port G	5VT	HDR1	HDR2	Usage	Description
RG0/PMD8	Y	10		PMD8	PM Data Bus
RG1/PMD9	Y	9		PMD9	PM Data Bus
RG2/D+	N			D+	USB Data Bus
RG3/D-	N			D-	USB Data Bus
RG4 ... RG5	-			No pin	
RG6/SCK2/PMA5/CN8	Y			SD-WP	Secure Digital Write Protect
RG7/SDI2/PMA4/CN9	Y			SD-CD#	Secure Digital Card Detect (active Low)
RG8/SDO2/PMA3/CN10	Y			AECRSDV	Alternate Ethernet Data Valid (LAN8720A)
RG9/SS2/PMA2/CN11	Y			AEREFCLK	Alternate Ethernet Reference Clock (LAN8720A)
RG10 ... RG11	-			No pin	
RG12	Y		8		
RG13	Y		7		
RG14	Y		9		
RG15	Y			AERXERR	Alternate Ethernet Receive Error (LAN8720A)

Other	5VT	HDR1	HDR2	Usage	Description
Vcc 3.3v	-	1	1 30	Vcc 3.3v	Power from internal regulator
Vbus 5.0v	-	30		Vbus 5.0v	External power or Vbus from USB
			2 15		
Vss	-	2 29	18 25	Vss	Ground
			29		
MCLR# on CN5 pin 6 & CN10 pin 4	Y			MCLR	The PIC32 reset line (Active Low)

Legend

Pin available or sharable

Pin used internally

Pin invalid or unavailable

5VT: Y means this pin can tolerate up to 5V in input mode. N means the input must never exceed Vdd.
HDR1 and HDR2 refer to the two 30-pin single-in-line header connections.
CN5 and CN10 refer to the debug/programming ports.

Notes:

References to the JTAG and TRACE interfaces are omitted.

The Secure Digital Card, Accelerometer and Serial Flash chip utilize SPI port 1.

The Codec uses SPI port 3.

SPI ports 1 and 3 are brought out to Header 2 for further expansion.

I2C port 2 is used by the Codec and EEPROM. It is also brought out to a Header 2 for further expansion.

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