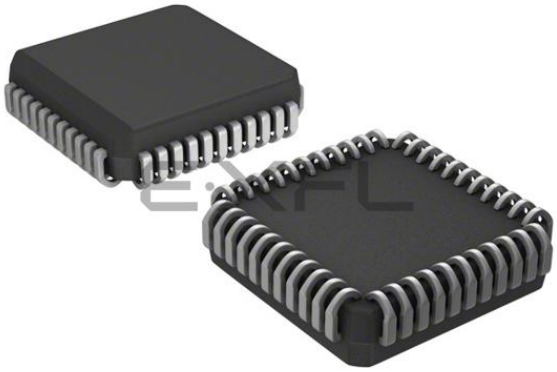


Welcome to E-XFL.COM

What is "Embedded - Microcontrollers"?

"Embedded - Microcontrollers" refer to small, integrated circuits designed to perform specific tasks within larger systems. These microcontrollers are essentially compact computers on a single chip, containing a processor core, memory, and programmable input/output peripherals. They are called "embedded" because they are embedded within electronic devices to control various functions, rather than serving as standalone computers. Microcontrollers are crucial in modern electronics, providing the intelligence and control needed for a wide range of applications.

Applications of "Embedded - Microcontrollers"

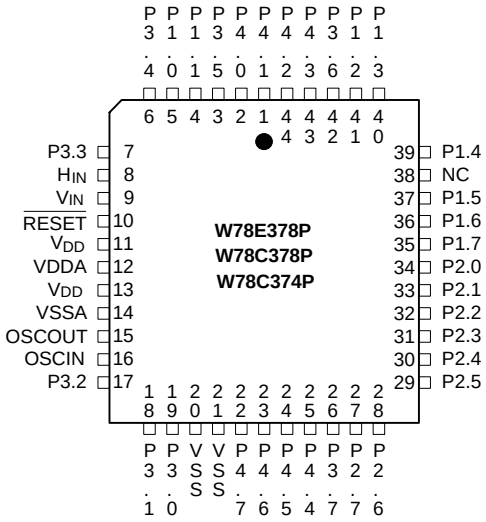
Details	
Product Status	Obsolete
Core Processor	80C31
Core Size	8-Bit
Speed	10MHz
Connectivity	EBI/EMI, Serial Port
Peripherals	LVD, POR, WDT
Number of I/O	25
Program Memory Size	32KB (32K x 8)
Program Memory Type	FLASH
EEPROM Size	-
RAM Size	576 x 8
Voltage - Supply (Vcc/Vdd)	4.5V ~ 5.5V
Data Converters	A/D 7x8b; D/A 11x8b
Oscillator Type	Internal
Operating Temperature	0°C ~ 70°C (TA)
Mounting Type	Surface Mount
Package / Case	44-LCC (J-Lead)
Supplier Device Package	44-PLCC (16.59x16.59)
Purchase URL	https://www.e-xfl.com/product-detail/nuvoton-technology-corporation-america/w78e378a10pl

PIN CONFIGURATIONS

40-pin DIP:

	W78E378E			40-pin DIP		
	W78C378E	P4.1	1		40	P4.2
	W78C374E	P4.0 (HFI)	2	32-pin DIP	39	P4.3
		P3.5 (ADC4, T0)*	3	1	38	P3.6 (ADC5, T1)*
		P1.1 (DAC1)*	4	2	37	P1.2 (DAC2)*
32-pin DIP:	W78E378	P1.0 (DAC0)*	5	3	36	P1.3 (DAC3)*
	W78C378	P3.4 (VOUT)	6	4	35	P1.4 (DAC4)*
	W78C374	P3.3 (HOUT)	7	5	34	P1.5 (DAC5)*
		H_{IN}	8	6	33	P1.6 (DAC6)*
		V_{IN}	9	7	32	P1.7 (DAC7)*
		$\overline{RESET}$	10	8	31	P2.0 (DAC8)
		V_{DD}	11	9	30	P2.1 (DAC9)
		V_{SSA}	12	10	29	P2.2 (DAC10)
		OSCOUT	13	11	28	P2.3 (Hclamp)
		OSCIN	14	12	27	P2.4 (ADC0)
		P3.2 ($\overline{INT0}$)	15	13	26	P2.5 (ADC1)
		P3.1 (SCL)*	16	14	25	P2.6 (ADC2)
		P3.0 (SDA)*	17	15	24	P2.7 (ADC3)
		V_{SS}	18	16	23	P3.7 (ADC6)*
		P4.7 (HFO)	19		22	P4.4 (SCL2)*
		P4.6	20		21	P4.5 (SDA2)*

44-pin PLCC



Pin Description, Continued

PIN NAME	I/O	DESCRIPTION
P2.0 (DAC8)	I/O	General purpose I/O, DAC8 Special Function output Sink/Source current: 4 mA/-100 µA (-4 mA for SF output)
P2.1 (DAC9)	I/O	General purpose I/O, DAC9 Special Function output Sink/Source current: 4 mA/-100 µA (-4 mA for SF output)
P2.2 (DAC10)	I/O	General purpose I/O, DAC10 Special Function output Sink/Source current: 4 mA/-100 µA (-4 mA for SF output)
P2.3 (Hclamp)	I/O	General purpose I/O, Hclamp Special Function output Sink/Source current: 4 mA/-100 µA (-4 mA for SF output)
P2.4 (ADC0)	I/O	General purpose I/O, ADC input channel 0 Sink/Source current: 4 mA/-100 µA
P2.5 (ADC1)	I/O	General purpose I/O, ADC input channel 1 Sink/Source current: 4 mA/-100 µA
P2.6 (ADC2)	I/O	General purpose I/O, ADC input channel 2 Sink/Source current: 4 mA/-100 µA
P2.7 (ADC3)	I/O	General purpose I/O, ADC input channel 3 Sink/Source current: 4 mA/-100 µA
P3.0 (SDA)	I/O	General purpose I/O, DDC port serial data I/O **Schmitt trigger input** V_{IH}/V_{IL} = 0.7 V_{DD}/0.3 V_{DD}, V+/V- = ~0.6 V_{DD}/ 0.4 V_{DD} **Open-drain output**, sink current: 8 mA
P3.1 (SCL)	I/O	General purpose I/O, DDC port serial clock I/O **Schmitt trigger input** V_{IH}/V_{IL} = 0.7 V_{DD}/0.3 V_{DD}, V+/V- = ~0.6 V_{DD}/ 0.4 V_{DD} **Open-drain output**, sink current: 8 mA
P3.2 ($\overline{INT0}$)	I/O	General purpose I/O, $\overline{INT0}$ input Sink/Source current: 1 mA/ -100 µA
P3.3 (H_{OUT})	I/O	General purpose I/O, H_{OUT} special function output Sink/Source current: 4 mA/-100 µA (-4 mA for SF output)
P3.4 (V_{OUT})	I/O	General purpose I/O, V_{OUT} special function output Sink/Source current: 4 mA/-100 µA (-4 mA for SF output)
P3.5 (ADC4, T0)	I/O	General purpose I/O, ADC input channel 4 **Open-drain output**, sink current: 4 mA
P3.6 (ADC5, T1)	I/O	General purpose I/O, ADC input channel 5 **Open-drain output**, sink current: 4 mA
P3.7 (ADC6)	I/O	General purpose I/O, ADC input channel 6 **Open-drain output**, sink current: 4 mA