
PIC10(L)F320/322 Product Brief

High-Performance RISC CPU:

- Only 35 Instructions to Learn:
 - All single-cycle instructions, except branches
- Operating Speed:
 - DC – 16 MHz clock input
 - DC – 250 ns instruction cycle
- Up to 500 Words of Flash Program Memory
- Up to 64 Bytes Data Memory
- Eight-level Deep Hardware Stack
- Interrupt Capability
- Processor Self-Write/Read access to Program Memory
- Pinout Compatible to other 6-Pin PIC10FXXX Microcontrollers

Special Microcontroller Features:

- Low-Power 16 MHz Internal Oscillator:
 - Factory calibrated to $\pm 10\%$, typical
 - Software selectable frequency range from 16 MHz to 31 kHz
- Wide Operating Range:
 - 1.8V to 3.6V (PIC10LF32X)
 - 2.3V to 5.5V (PIC10F32X)
- Power-on Reset (POR)
- Power-up Timer (PWRT)
- Brown-out Reset (BOR)
- Ultra Low-Power Sleep Regulator
- Extended Watchdog Timer (WDT)
- Programmable Code Protection
- Power-Saving Sleep mode
- Selectable Oscillator options (EC mode or Internal Oscillator)
- In-Circuit Serial Programming™ (ICSP™) (via Two Pins)
- In-Circuit Debugger Support
- Fixed Voltage Reference (FVR) with 1.024V, 2.048V and 4.096V ('F' variant only) Output Levels
- Integrated Temperature Indicator
- 100K Read/Write Endurance
- 40-year Flash Data Retention

Low-Power Features (PIC10LF32X):

- Standby Current:
 - 20 nA @ 1.8V, typical
- Operating Current:
 - 25 μ A @ 1 MHz, 1.8V, typical
- Watchdog Timer Current:
 - 500 nA @ 1.8V, typical

Peripheral Features:

- 4 I/O Pins:
 - 1 input-only pin
 - High current sink/source for LED drivers
 - Individually selectable weak pull-ups
 - Interrupt-on-Change
- Timer0: 8-Bit Timer/Counter with 8-Bit Programmable Prescaler
- Timer2: 8-Bit Timer/Counter with 8-Bit Period Register, Prescaler and Postscaler
- Two PWM modules:
 - 10-bit PWM, max. frequency 16 kHz
 - Combined to single 2-phase output
- A/D Converter:
 - 8-bit resolution with 3 channels
- Configurable Logic Cell (CLC):
 - 8 selectable input source signals
 - Two inputs per module
 - Software control of combinational/sequential logic/state/clock functions
 - AND/OR/XOR/XOD/SR/JK
 - External or internal inputs/outputs
 - Operation while in Sleep
- Numerically Controlled Oscillator (NCO):
 - 20-bit accumulator
 - 16-bit addend
 - True linear frequency control
 - High-speed clock input
 - Selectable Output modes
 - Fixed Duty Cycle (FDC)
 - Pulse Frequency Modulation (PFM)
- Complementary Waveform Generator (CWG):
 - 4 selectable signal sources
 - Selectable falling and rising edge dead-band control
 - Polarity control
 - 2 auto-shutdown sources
 - Multiple input sources: PWM, CLC, NCO

PIC10(L)F320/322

TABLE 1: PIC10(L)F320/322 FEATURE SUMMARY

Device	Program Memory Flash (words)	SRAM (bytes)	I/O ⁽¹⁾	8-bit A/D (ch)	CLC	10-bit PWM	Timers 8-bit	NCO	CWG
PIC10F320	256	32	4	3	1	2	2	1	1
PIC10LF320	256	32	4	3	1	2	2	1	1
PIC10F322	512	64	4	3	1	2	2	1	1
PIC10LF322	512	64	4	3	1	2	2	1	1

Note 1: One pin is input-only.

Note: Pin details are subject to change.

FIGURE 1: 6-PIN DIAGRAM, PIC10(L)F320/322

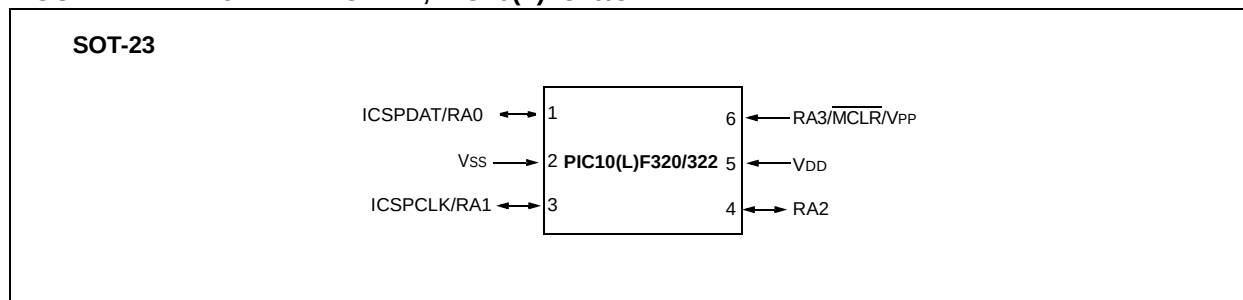


FIGURE 2: 8-PIN DIAGRAM, PIC10(L)F320/322

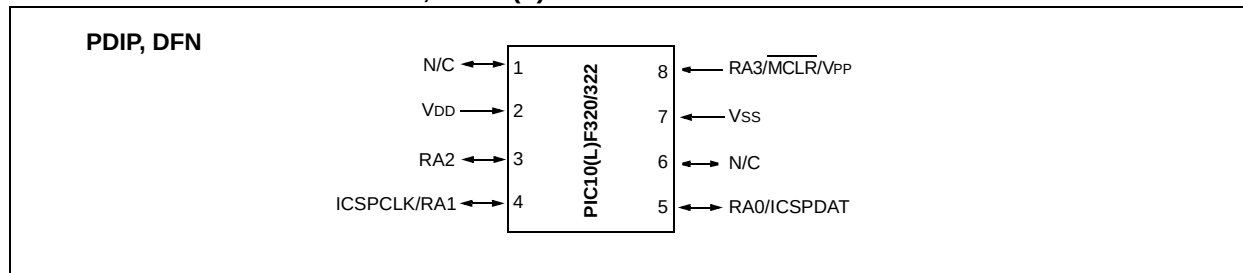


TABLE 2: 6 AND 8-PIN ALLOCATION TABLE (PIC10(L)F320/322)

I/O	6-Pin	8-Pin	Analog	Timer	CCP	Interrupts	Pull-ups	CWG	NCO	CLC	Basic	ICSP
RA0	1	5	AN0	—	PWM1	IOC0	Y	CWG1OUT0	—	CLC1IN1	—	ICSPDAT
RA1	3	4	AN1	—	PWM2	IOC1	Y	CWG1OUT1	—	CLC1OUT	CLKIN	ICSPCLK
RA2	4	3	AN2	T0CKI	—	INT/IOC2	Y	—	NCOxOUT	CLC1IN2	CLKR	—
RA3	6	8	—	—	—	IOC3	Y	—	—	—	MCLR	VPP
N/C	—	—	—	—	—	—	—	—	—	—	—	—
N/C	—	—	—	—	—	—	—	—	—	—	—	—
VDD	5	2	—	—	—	—	—	—	—	—	—	—
Vss	2	7	—	—	—	—	—	—	—	—	—	—

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