

MN6750165 / 245 / 325 / 405

Type	MN6750165 / 245 / 325 / 405		
ROM (x8-bit)	16K / 24K / 32K / 40K		
RAM (x8-bit)	384 / 512 / 640 / 768		
Minimum Instruction Execution Time	0.5μs (at 4.5 to 5.5V, 8MHz) 128μs (at 3.0 to 5.5V, 8MHz, operates in fosc/256) (Operation with 32.768kHz by Mask Option)		
Interrupts	<ul style="list-style-type: none"> • RESET • Runaway • External • Input Capture 0 • Input Capture 1 • Timer 0 • Timer 1 • Timer 2 • Timer 3 • Timer 4 • Serial Transmission/Reception • Serial Transmission/Reception / A/D 		
Timer Counter	<p>Timer Counter 0 : 16-bit x 1 (Synchronous Interrupt function) Clock SourceSystem Clock, 1/16, 1/256 of OSC Oscillation Clock Interrupt SourceOverflow of Timer Counter 0, Coincidence of Output Compare Register 0 compare to Timer Counter 0</p> <p>Timer Counter 1 : 16-bit x 1 (Timer Output, Event Count, Synchronous Serial Clock Generator, Linear Time Counter [Counter for CTL Signal]) Clock SourceSystem Clock, 1/16 of OSC Oscillation Clock, CTL Signal Interrupt SourceOverflow of Timer Counter 1</p> <p>Timer Counter 2 : 16-bit x 1 (Timer Output, Input Capture) Clock SourceSystem Clock, 1/16, 1/24 of OSC Oscillation Clock Interrupt SourceOverflow of Timer Counter 2, DCTL Signal Edge, Shift Register 4-bit Counter Underflow, Coincidence of Compare Register and Shift Register</p> <p>Timer Counter 3 : 16-bit x 1 (Timer Output, Serial Index Search) Clock SourceSystem Clock, 1/16 of OSC Oscillation Clock Interrupt SourceOverflow of Timer Counter 3</p> <p>Timer Counter 4 : 16-bit x 1 (Timer Output, Event Count, Time Base) Clock Source1/4, 1/16, 1/256 of OSC Oscillation Clock, XI Oscillation Clock, External Clock Input Interrupt SourceSPGIRQ, HOCRIRQ, Overflow of Timer Counter 4</p> <p>Timer Counter 5 : 16-bit x 1 (Timer Output, Watchdog) Clock Source1/4 of OSC Oscillation Clock</p>		
Serial Interface	<p>Serial 0 : 8-bit x 1 (Synchronous Type) (Transfer direction of MSB/LSB selectable, Start Condition function) Clock Source1/2 1/4, 1/8 of Timer Counter 1, 1/2 of Timer 4, SBT0 Pin Input</p> <p>Serial 1 : 8-bit x 1 (Synchronous Type) (Transfer direction of MSB/LSB selectable, Start Condition function, Simple Remote Control Reception) Clock Source1/2, 1/4, 1/8 of Timer Counter 2, 1/2 of Timer 4, SBT1 Pin Input</p>		
I/O Pins	I/O	39	• Common use : 23 • Clock / HSW Synchronous Output Port selectable (Mask Option)
	Input	12	• Common use
	Output	1	• Common use
A/D Inputs	8-bit x 8ch (without S/H)		
PWM	11-bit x 2ch (at Repetition Cycle 256 μ s, 8MHz), 10-bit x 2ch (at Repetition Cycle 128 μ s, 8MHz), 14-bit x 1ch (at Repetition Cycle 8.192ms, 8MHz)		
ICR	16-bit x 5ch		

OCR	16-bit x 7ch, 8-bit x 1ch
Special Ports	Tri-state Output : VLP, Synchronous Output : 7, Tri-state Synchronous Output : 4, CTL Amp, FG Amp etc. built-in
Notes	VISS/VASS Detector function, 14-bit PWM, Digital PGMM, XI/XO Pin, added to MN675201
Package	QFP084-P-1818E

Electrical Characteristics

Supply Current

Parameter	Symbol	Condition	Limit			Unit
			min	typ	max	
Operating Supply Current		At 8MHz Operation, No load STBH (ANACNT; bp0)=1		25	50	mA
Supply Current at STOP		Oscillation halt, No load STBH (ANACNT; bp0)=0			50	μA

(Ta=25°C, VDD=5.0V, VSS=0V)

A/D Converter Characteristics

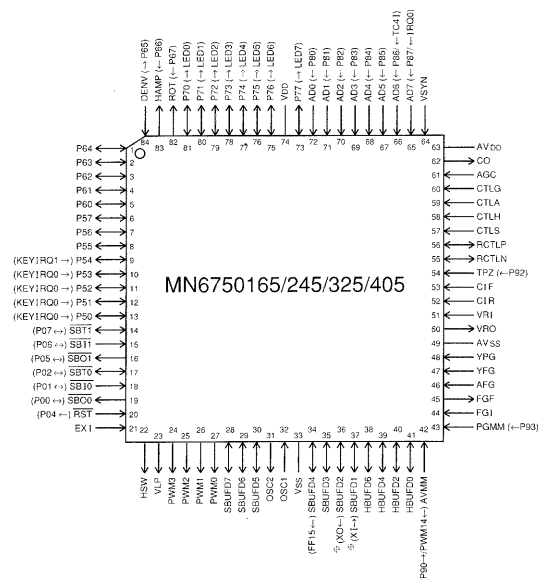
Parameter	Symbol	Condition	Limit			Unit
			min	typ	max	
Differential Nonlinearity	ΔNLad				±3	LSB
A/D Conversion Time	Tad	8MHz		32		μs

(Ta=25°C, VDD=5.0V, VSS=0V)

Support Tool

In-Circuit Emulator	PX-ICE1870 / 80 + PX-PRB6750325
Piggyback	Use EP6750325 as piggy in QFP084-P-1818E package.
EPROM built-in Type	Use MN67P50645 [ES (Engineering Sample) available] in QFP084-P-1818E package.

Pin Assignment



QFP084-P-1818E

※ XI, XO : Mask Option