

MN6755240 / 320

Type		MN6755240 / 320	
ROM (x8-bit)		24K / 32K	
RAM (x8-bit)		704 / 1024	
Minimum Instruction Execution Time	With Main Clock operated	0.33μs (at 3.3 to 5.5V, 12MHz)	
	With Sub-clock operated	0.25μs (at 4.2 to 5.5V, 16MHz) 122μs (at 3.3 to 5.5V, 32.768kHz)	
Interrupts	<ul style="list-style-type: none"> • RESET • Runaway • External 0 • External 1 • Cylinder FG • Capstan FG • HSW • VSYNC • General-use Capture • Free Running Counter • CTL • Winding Reel FG • Feeding Reel FG • Timer 0 to 4 • Synchronous Output • Continuous Synchronous Output • DMA • Direction Detection • Serial 0, 1 • A/D 		
Timer Counter	Timer Counter 0 : 16-bit x 1 (Synchronous Interrupt function)		
	Clock SourceSystem Clock, XI Oscillation Clock, 1/32 of OSC Oscillation Clock		
	Interrupt SourceOverflow of Timer Counter 0, Coincidence of Output Compare Register		
	Timer Counter 1 : 16-bit x 1 (Event Count, Synchronous Serial Clock Generator)		
	Clock SourceSystem Clock, 1/32 of OSC Oscillation Clock, AFG Frequency Dividing Signal		
	Interrupt SourceOverflow of Timer Counter 1		
	Timer Counter 2 : 16-bit x 1 (Event Count, Input Capture, Synchronous Interrupt function)		
	Clock SourceSystem Clock, 1/32, 1/48 OSC Oscillation Clock		
		Interrupt SourceOverflow of Timer Counter 2, DCTL Signal Edge, Bit Counter Underflow of Shift Register, Coincidence of Compare Register and Shift Register	
	Timer Counter 3 : 16-bit x 1 (Timer Output [Possible by Mask Option], Event Count, Serial Index Search)		
	Clock SourceSystem Clock, 1/32 of OSC Oscillation Clock, TC13 Input		
		Interrupt SourceOverflow of Timer Counter 3	
	Timer Counter 4 : 16-bit x 1 (Event Count, Linear Time Count)		
	Clock Source1/32 of OSC Oscillation Clock, CTL Signal		
		Interrupt SourceOverflow of Timer Counter 4	
	Watchdog Timer : 19-bit x 1 (Watchdog)		
	Clock SourceOSC Oscillation Clock, XI Oscillation Clock,		
	Interrupt SourceWatchdog Timer period 32.7ms (fosc=at 16MHz), 43.7ms (fosc=at 12MHz), 64ms (XI=at 32kHz)		
Serial Interface	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 System Clock, 1/2 of Timer Counter 1, $\overline{\text{SBT0}}$ Pin Input		
	Serial 1 : 8-bit x 1 (Synchronous Type) (Transfer direction of MSB/LSB selectable, Start Condition function)		
	Clock Source1/2, 1/4, 1/8 of System Clock, 1/2 of Timer Counter 1, $\overline{\text{SBT1}}$ Pin Input		
I/O Pins	I/O	64	• Common use : 32
	Input	25	• Common use
	Output	4	
A/D Inputs	8-bit x 12ch (without S/H)		
D/A (Analog) Outputs	13-bit x 2ch		
PWM	8-bit x 2ch (at Repetition Cycle 32 μ s, 6MHz), 14-bit x 1ch (at Repetition Cycle 1.024ms, 16MHz)		
ICR	18-bit x 3ch, 16-bit x 5ch		

Electrical Characteristics

Supply Current

Parameter	Symbol	Condition	Limit			Unit
			min	typ	max	
Operating Supply Current	IDD1	fosc=12M, STBH (ANACNT, #A9)='01'		30	50	mA
Supply Current at STOP	IDD2	Oscillation halt, No load STBH (ANACNT, #A9)='00'			50	μA

(Ta=25°C, VDD=5.0V, VSS=0V)

A/D, D/A Converter Characteristics

Parameter	Symbol	Condition	Limit			Unit
			min	typ	max	
A/D Conversion Absolute Error					±3	LSB
A/D Conversion Relative Error					±3	LSB
A/D Conversion Time		fosc=16MHz		3.25		μs
Analog Input Voltage			0.5		4.5	V

(Ta=25°C, VDD=5.0V, VSS=0V)