

# MN1876478

<b>Type</b>		<b>MN1876478</b>	
<b>ROM (x8-bit)</b>		64K	
<b>RAM (x8-bit)</b>		928	
<b>Minimum Instruction Execution Time</b>		2/3 dividing 0.5µs (at 4.5 to 5.5V, 12MHz)	
<b>Interrupts</b>		<ul style="list-style-type: none"> <li>• RESET • External 0 • External 1 • External 2 • External 3 • Timer 0 • Timer 1 • Timer 2</li> <li>• I<sup>2</sup>C • Serial • Remote Control • Line 21 • MOSD • COSD</li> </ul>	
<b>Timer Counter</b>		<p><b>Timer Counter 0 : 8-bit x 1</b>            Clock Source .....1/1, 1/4, 1/16, 1/64 of System Clock            Interrupt Source .....Overflow of Timer Counter 0</p> <p><b>Timer Counter 1 : 8-bit x 1</b>            Clock Source .....1/2, 1/16, 1/64, 1/256, 1/512 of System Clock            Interrupt Source .....Overflow of Timer Counter 1</p> <p><b>Time Base Counter</b>            Clock Source .....1/4096 of System Clock            Interrupt Source .....1/1, 1/2, 1/4, 1/8 of Timer Counter 2</p> <p><b>Watchdog            Counter for Clock (Clock function)            AC Counter</b></p>	
<b>Serial Interface</b>		<p><b>Serial 0 : 8-bit x 1</b> (Transmission/Reception of variable bit length, Transfer direction of MSB/LSB selectable, Clock Polarity selectable, Start Condition function)             Clock Source .....System Clock</p> <p><b>I<sup>2</sup>C x 1</b> (Two bus line system)</p>	
<b>I/O Pins</b>	<b>I/O</b>	<b>36</b>	• Common use : 29
	<b>Input</b>	<b>3</b>	• Common use : 3
	<b>High Voltage Output</b>	<b>7</b>	• Nch Open-drain (Breakdown Voltage 12V) : 7
<b>A/D Inputs</b>		5/7-bit x 10ch (without S/H)	
<b>PWM</b>		14-bit x 1ch (Repetition Cycle 16µs, at 12MHz), 8-bit x 8ch (Repetition Cycle 32µs, at 12MHz), 7-bit x 1ch (Repetition Cycle 16µs, at 12MHz)	
<b>Special Ports</b>		Hsync Detection, Remote Control Reception	
<b>CRTC</b>		Double OSD built-in (Menu OSD : 12 x 18, 512 letters, Caption OSD : 12 x 26, 176 letters)	
<b>Notes</b>		Remote Control Data Detection Circuit built-in, On-chip synchronous separator for caption decoder	
<b>Package</b>		SDIP064-P-0750	

**Electrical Characteristics**

**A/D Converter Characteristics**

Parameter	Symbol	Condition	Limit			Unit
			min	typ	max	
A/D Conversion Time	TAD	fosc=12MHz	9/12			μs
Analog Input Voltage	VAD		VSS		VDD	V

(Ta= -20 to +70°C, VDD=5.0V, VSS=0V)

**Support Tool**

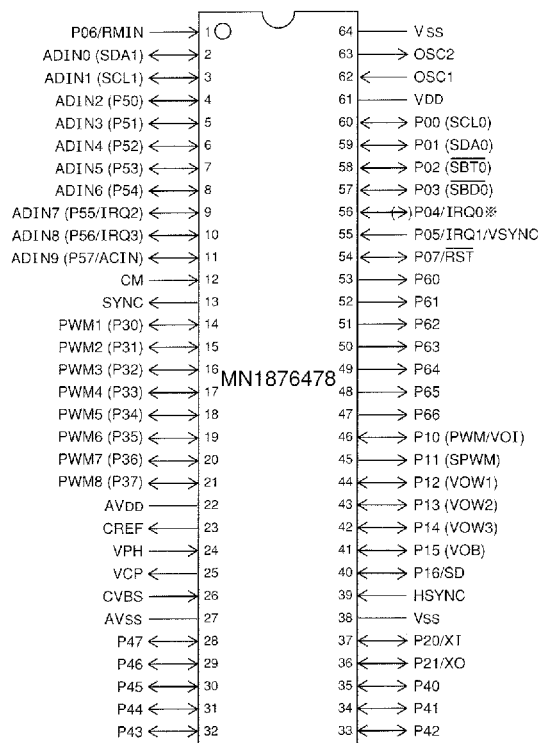
**In-Circuit Emulator**

PX-ICE1870 / 80 + PX-PRB1876462, PX-PRB1876476, PX-PRB1879682

**EPROM built-in Type**

Use **MN18P79682** in SDIP064-P-0750 package.  
(PWM are 5V ; not connectable to 12V systems)

**Pin Assignment**



SDIP064-P-0750

※ P04 • IRQ0 pin

TYPE A	Stand-by function is available	Input pin
TYPE B	Stand-by function is not available	I/O pin