

# MN1522

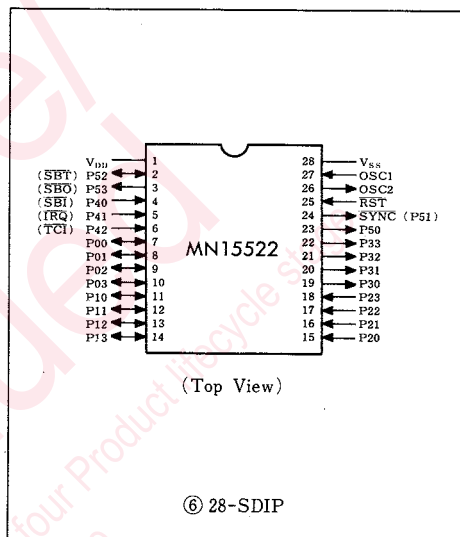
## ■ Features

- ROM capacity: 2,046×8 bits
- RAM capacity: 128×4 bits
- Machine cycle: 2 $\mu$ s(4.5 to 5.5 V)  
6 $\mu$ s(2.5 to 5.5 V)
- Interrupt: External interrupt 1  
Timer interrupt 1  
Serial interrupt 1
- Timer/counter: Timer and event count functions provided by 8-bit programmable timer with 7-bit prescaler
- Serial interface: 8-bit synchronous type
- Backup mode: STOP/HALT mode
- Operating voltage range: 2.5 to 5.5 V
- I/O pins: 8 for general purpose output  
7 for general purpose input  
8 for general purpose I/O  
1 for serial data input  
1 for serial data output, 1 for serial clock I/O
- Process: Silicon gate CMOS
- Package: 28-SDIP
- Piggyback: EP15522

## ■ Pin Descriptions

Pin	Symbol	Pin name	I/O	Description
1 28	V <sub>DD</sub> V <sub>SS</sub>	Power supply	I	Impresses +2.5-5.5 V to V <sub>DD</sub> , and 0 V to V <sub>SS</sub> .
27	OSC1	Clock input	I	Oscillation pins to connect f <sub>osc</sub> ceramic oscillator or crystal oscillator. A feedback resistor between OSC1 and OSC2 can be selected with a mask option.
26	OSC2	Clock output	O	
25	RST	Reset input	I	Reset is applied if the "L" level is inputted over 1 machine cycle. A pull-up resistor can be specified with a mask option.
5	IRQ (P41)	External interrupt/input	I	External interrupt pin which receives an interrupt at a negative edge. Also available as a normal input port. A pull-up resistor can be specified with a mask option.
2	SBT (P52)	Serial interface clock I/O/output	I/O /O	Serial interface send/receive clock I/O terminal. It serves as an output terminal in the internal clock mode, and as an input terminal in the external clock mode. A pull-up resistor can be specified with a mask option. Can be also specified as a normal output port with a mask option.

## ■ Pin Configuration



## ■ Pin Descriptions(Continued)

Pin	Symbol	Pin name	I/O	Description
3	$\overline{\text{SBO}}$ (P53)	Serial interface data output/output	O	Serial interface send data output terminal. It outputs 8-bit serial data in the send mode. A pull-up resistor can be specified with a mask option. Can be specified as a normal output port with a mask option.
4	$\overline{\text{SBI}}$ (P40)	Serial interface data input/external interrupt/input	I	Serial interface receive data input terminal. It inputs 8-bit serial data in the receive mode. Can be also specified as an external interrupt pin with a mask option. Also available as a normal input port. A pull-up resistor can be specified with a mask option.
6	$\overline{\text{TCI}}$ (P42)	Count signal input/input	O	External clock input in the event count mode. Also available as a normal input port.
24	$\overline{\text{SYNC}}$ (P51)	Sync.signal output terminal/output	O	An internal timing signal is outputted every machine cycle. Can be also specified as a normal output port with a mask option.
7~10	P00~P03	Parallel data/I/O	I/O /O	4-bit parallel data I/O or output ports. I/O or output can be selected with a mask option. "H" level at reset time. A pull-up resistor can be specified with a mask option.
15~18 4~6	P20~P23 P40~P42	Parallel data input	I	4-bit parallel data input ports. P40~P42 are jointly used as $\overline{\text{TCI}}$ , $\overline{\text{IRQ}}$ and $\overline{\text{SBI}}$ , respectively. A pull-up resistor can be specified with a mask option.
19~22	P30~P33	LED drive output pin/parallel data output	O	4-bit parallel data output ports. Open drain output. Capable of driving LEDs at the "L" level. High impedance at reset time. Can be also specified as a normal output port with a mask option.
23,24, 2,3	P50~P53	Parallel data output	O	4-bit parallel data output ports. P51~P53 are jointly used as $\overline{\text{SYNC}}$ , $\overline{\text{SBT}}$ and $\overline{\text{SBO}}$ , respectively. Can be also specified as a normal output port with a mask option. "H" level at reset time.

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