

# TM990/101MA

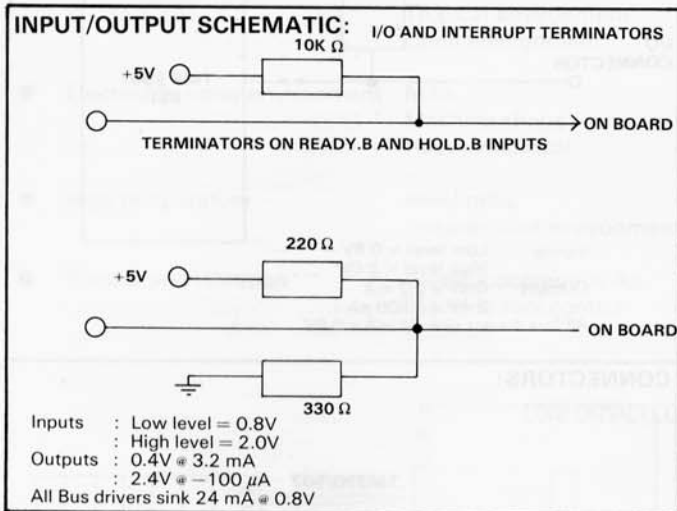
## T-BUS MICROCOMPUTER

### FEATURES:

- 3 MHz TMS 9900 16 Bit CPU.
- 4K bytes of 2114 Static RAM.
- 8K bytes of 2716 EPROM or ROM.
- 2 EIA/TTY asynchronous ports.
- 16 TTL programmable I/O and Interrupts.
- 3 programmable timers.
- Fully compatible with "T-BUS".
- 0-70°C temperature range.
- Factory burnt-in.

### DESCRIPTION:

This complete Microcomputer board contains sockets for up to 4 EPROMS (either TMS 2708 or TMS 2716) and up to 8 RAMS (TMS 4014 or 2114). Memory Map options are provided to allow the RAM area to be mapped in either to the high or to the low end of the memory. Full DMA facilities are provided, both to on-board and off-board memory. 16 TTL input/output lines are provided by the TMS 9901 and any of these inputs can be configured to cause an INTERRUPT. Interrupts can be generated by signals from the T-BUS and all interrupts are individually maskable. Interrupt level 6 is also provided with EDGE DETECTION logic to allow for either positive or negative edge triggering. A variety of SERIAL input/output methods are supported by the two ports, including EIA, 20 mA neutral current loop TTY (port A only), Differential line driver/receiver (port A only) and Series 102 and 103 Modems (port B only). If required the TMS 9902 can be replaced by the plug compatible TMS 9903 to provide synchronous serial communication. Each TMS 9901 or TMS 9902 also has an on-chip TIMER which is available for use, and may be configured as an EVENT COUNTER in the case of the TMS 9901. Full CRU expansion facilities are implemented to allow a maximum of 4096 inputs and outputs.



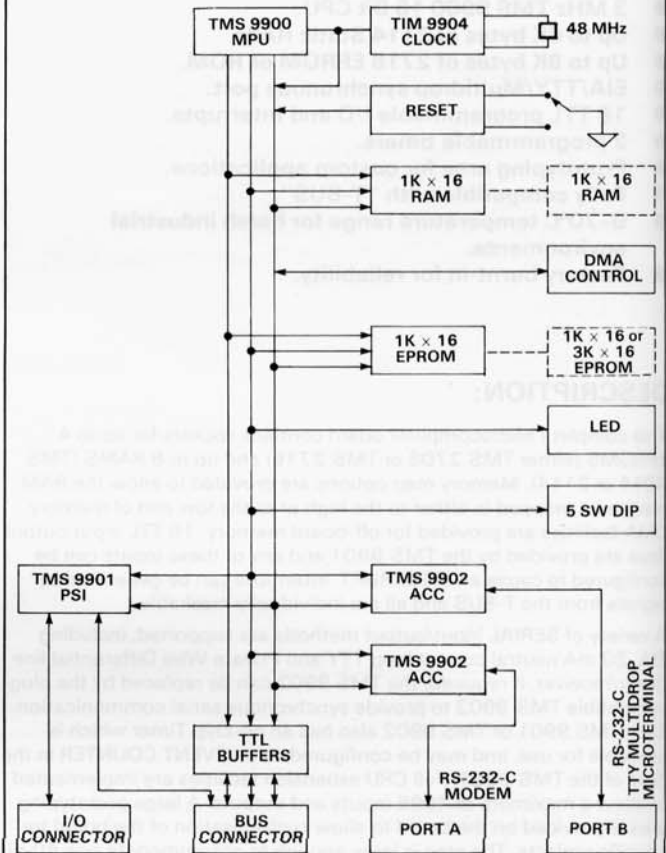
### TYPICAL POWER REQUIREMENTS:

	101MA-1	101MA-2	101MA-3
Vcc × 5V ± 3%	1.8 A	1.8 A	1.8 A
Vdd × 12V ± 3%	0.3 A	0.3 A	0.4 A
Vaa -12V ± 3%	0.2 A	0.2 A	0.2 A

### ORDERING INFORMATION:

Part number	EPROM	RAM	Port A option
TM990/101MA-1	2 × 2708 with TIBUG monitor	4 × 2114 (2Kbytes)	TTY/EIA
TM990/101MA-2	2 × 2716 Blank	4 × 2114 (2Kbytes)	EIA/MD
TM990/101MA-3	4 × 2716 Blank	8 × 2114 (4Kbytes)	TTY/EIA
TM990/101MA-10	4 × 2716 with POWER BASIC	4 × 2114 (2Kbytes)	TTY/EIA

### BLOCK DIAGRAM:



### CONNECTORS:

