

M37762M8A/MCA/MFA-XXXGP

16-BIT CMOS MICROCOMPUTER

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1. DESCRIPTION

This microcomputer is a single-chip microcomputer that adopts a high-performance silicon gate CMOS process, and is contained in a 100-pin plastic mold QFP. This single-chip microcomputer is provided with an instruction queue buffer and a data buffer for executing instructions at high speed. The central processing unit runs in a 16-bit parallel processing mode but can be converted into an 8-bit parallel processing mode when necessary. This product has been designed exclusively for video equipment system controls, incorporating a time measuring circuit for VCR servo control, a real-time pattern generating circuit, analog amplifiers, an OSD display circuit, and a data slicer, among its many other peripheral capabilities.

	instructionsROMRefer to Figu	ire 2.1.1 Memory Map
Instruction execution (fastest instruction)	tion time n, 16 MHz high-speed mo	ode) 250 ns
(fastest instruction	n, 12 MHz double-speed	
•Cingle newer sev	****	167 ns
●Single power sou In 16 MHz high-s		
•	off)	4 0 V to 5 5 V
•	on)	
In 12 MHz double	,	
	off)	4.0 V to 5.5 V
(OSD/data slicer	on)	4.75 V to 5.25 V
In 32 kHz low-sp	eed mode	
(OSD/data slicer	off)	2.6 V to 5.5 V
●OSD power source	ce	4.75 V to 5.25 V
●Interrupt		23 factors, 6 levels
•	us serial I/O	
	n perform automatic 64-by	
	(single master)	
	er1 unit (11 channe er	
	÷I	
•Time measureme		
	r measuring time to ge	nerate input signals
	PPG, VSYNG, and GEN	
	measuring time to genera	ate input signals RLS
●Remote-control r	oise filter (majority of 4 sa	amplings)

Outputs real-time pattern to exterior, RECCTL signal to CTL head control circuit, trigger for start the A-D converter, trigger for

CTL head control circuit, CTL amplifier, CTL schmidt circuit, drum PG circuit, drum FG circuit, capstan FG circuit, capstan

- Pulse duty detection circuit (VISS and VASS signal detection features embedded) Measures PBCTL signal duty ratio.
- Synchronous signal separation circuit
- ●EOR output feature (HASW, CROT)2-bit output
- Watchdog timer

- ●4 Embedded clock-generating circuits

 Built-in feed-back resistor between XIN-XOUT

 Built-in feed-back resistor between XCIN-XCOUT
- ●CPU double-speed enable (f(XIN) max. 12.0 MHz)
- ●ROM correction function included
- ●OSD function

u	OSD function		
	Display characters	32 characters	X 16 lines
	Kinds of characters	Composite Output	254 kinds
		RGB Output	285 kinds
	Kinds of character si	zes	8 kinds
	Output method	Composite video signal, RGB ou	ıtput (PAL,
		MPAL, NTSC, NPAL)	
	Special function	Display with backgrour	ıd shadow

(button display)

On-chip sync correct circuit (AFC)

Data slicerOn-chip slicer for XDS

1.2 APPLICATION

VCR, TVCR

•Real-time pattern (RTP) generation circuit

starting OSD vertical display

Amplification circuits

FG amplifier circuit

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