

M380 - M380 C - M380 C NEW

CHARACTERISTICS

Microprocessor	80386
Clock	16 MHz
RAM access time	120 ns
Wait states	1
ROM memory	128 KB
Expansion slots	Two 8 bits, two 16 bits, three 32 bits
Coprocessor	Intel 80387
Memory	1 MB to 48 MB No memory on system board. All memory resides in expansion boards to be installed on BUS
Hard disk and floppy disk controllers	M380, M380 C GO717 (WD1003-WAH) - ST506-MFM 3:1 (Hard disk controller) GO720 (WD1005-WAH) - ESDI 3:1 (Hard disk controller) M380 C NEW GO723 (WD1003 RA-2) - ST506-RLL 2:1 (HDD and FDD controller)

SYSTEM BOARD

BA806
BA818

ROM BIOS

Rev. 1.14

POWER SUPPLY

M380 C LA16/C
M380 C N LA16/C

M380 LA21/C

MEMORY BOARDS

ME908 1 MB
 4 SIMM 256 Kb x 9
ME912 4 MB
 16 SIMM 256 Kb x 9
ME916 1 MB
 4 SIMM 256 Kb x 9
ME919 1 MB
 4 SIMM 256 Kb x 9
ME923 16 MB
 16 SIMM 1 Mb x 9
ME927 4 MB
 16 SIMM 256 Kb x 9

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BOARDS

FUNCTION	DESCRIPTION	D.R.S. CODE	CHARACTERISTICS
CPU system board	BA806		
CPU system board	BA818	411766 V	ROM BIOS 1.14
Bus Adapter	IF615	411868 U	7 SLOT
Bus Adapter	IF624	412318 V	
Power supply 220 V	LA16/C	411711 N	M380 C/M380 C N 185 W
Power supply 110 V	LA16/C	411710 Z	
Power supply 220 V	LA21/C	411771 S	M380 230 W
Power supply 110 V	LA21/C	411770 D	
U-TURN board	IF614	497576 N	
RAM expansion	ME908	411767 W	1 MB
RAM expansion	ME912	-	4 MB
RAM expansion	ME916	-	1 MB
RAM expansion	ME919	-	1 MB
RAM expansion	ME923	411895 G	16 MB
RAM expansion	ME927	-	4 MB
OEC monitor adapter	GO451/GO467/GO491	411860 Y	EGA compatible
PGC monitor adapter	GO423	411688 Y	Positive
OVC monitor adapter	GO470/GO481	412444 L	M380 C NEW (VGA)
Hard Disk controller	GO717/WD1003 WAH	411709 D	ST506-MFM 3:1
Hard Disk controller	GO723/WD 1003 RA-2	412141 L	ST506-RLL 2:1 (COMBO)
Hard Disk controller	GO720/WD 1005 WAH	411869 V	for M380 C NEW ESDI 3:1

ROM BIOS/PAL/EPROM LEVEL ON SYSTEM BOARD

		POS.	EVOLUTION			
ROM BIOS	H L	N07B1 SO751	PBUK 1.05 PBUJ 1.05	PBUZ 1.09 PBUQ 1.09	PBVQ 1.13 PBVR 1.13	PBVN 1.14 PBVP 1.14
Buffer control	PBUFCNT	B06B	PLYH			PLYH
Clock generator	CLOCKGEN	C06B	PLYJ			PLXL
Cycles generator	CYCLEGEN	D06B	PLYS	PLYZ	PLX7	PLXD/ PLX8
Bus initialization	BUSINIT	E06B	PLYU			PLYL
EPROM control	SBUFCNT	F06B	PLY			PLYG
Orders generator	GSIGGEN	G06B	PLYE	PLY	PLXX	PLXX
Refresh control	RFSHCNT	C05BN	PLYN	PLY3	PLX2	PLX2
Bus master	BMASCONT	D05BN	PLYK			PLXM
Wait states	DELASCNT	E05BN	PLYM	PLY1		PLY1
Coprocessor control	COPRCONT	F04B	PLYU			PLYU
Bus cycle initialization	ALTINIT	G05BN	PLYT			PLYT
BAJAS direction	LOWADOR	M07B7	PLYV			PLYV
Floppy control	FLOPCONT	N09B	PLYQ			PLYQ
I/O decoder	IODEC	R0837	PLYR			PLYR
I/O port control	SPPCONT	V0731	PLYP			PLYP
Keyboard ctrl uP8742	AHP	X09DB	CSP6	CSL5/4.04	CSLS/4.05	CSL2
Floppy controller R6765P		W113G	CSFA		CSFE	

COMPATIBILITY

ROM BIOS 1.09 (CD 250.60.1/505)	- More accurate error signalling in auto-test - RAM capacity display above 32 MB - WEITEK coprocessor management routines implemented
ROM BIOS 1.13 (CDM 250.60.1/506)	- 80 and 300 MB ESDI HDU management
ROM BIOS 1.14 COM509	- OS/2 Compatibility
ROM BIOS 2.0 COM511	- CP3106 Hard disk (100 MB) field only

SYSTEM BOARD COMPONENTS AND JUMPERS

(See chapter M380 T, M380/XP1, M380/XP3, M380/XP5, page 8-3).

MEMORY BOARD TABLE

MEMORY BOARD	CAPACITY	SIMM	SIMM TYPE
ME908 ME912 ME919	1 MB 4 MB 1 MB	4, 256 Kb x 9 16, 256 Kb x 9 4, 256 Kb x 9	TI TM4256GU9-10L TI TM4256U9-12L NEC MC41256A9B-12 SAM KMM59256-12 MIC MT9259-10
ME912 ME919	4 MB 1 MB	16, 256 Kb x 9 4, 256 Kb x 9	NMB MM2801J9S-8 HIT HB561003B-12
ME916 ME927	1 MB 4 MB	4, 256 Kb x 9 16, 256 Kb x 9	NMB MM2801J9S-8 TI TM4256GU9-12L TI TM4256U9-12L NEC MC41256A9B-12 SAM KMM59256-12 MIC MT9259-10 MIC MT9259-12 HIT HB561003B-12
ME923	16 MB	16 DA 1 Mb x 9	TOS THM91000S-10 TOS THM91000S-12 TI TM024EAD9-12L

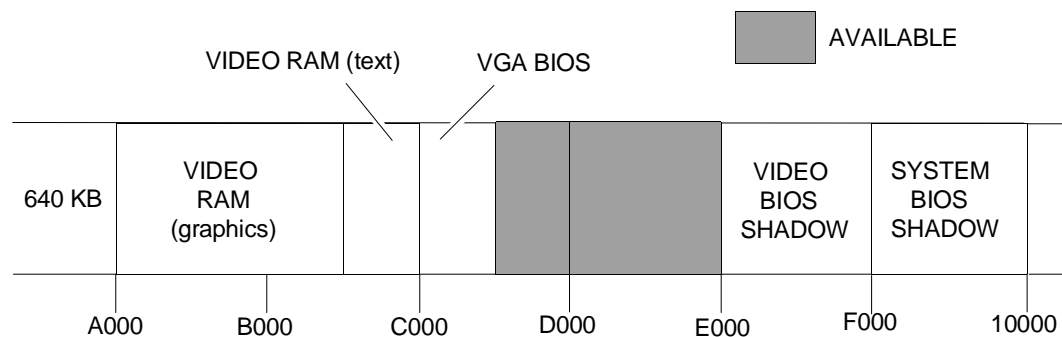
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PAL LEVEL ON MEMORY EXPANSION BOARDS

FUNCTION	POSITION	EVOLUTION		
PARGEN	E07	PLYA	PLY7	PLX4
INTLCONT	C07	PLYD	PLY6	
CASCONT	D08	PLYC		
RASCONT	D07	PLYB		

MEMORY BOARD INSTALLATION

(See chapter M380 T, M380/XP1, M380/XP3, M380/XP5, page 8-6).

MEMORY MAP

I/O ADDRESS MAP

ADDRESS	FUNCTION	ADDRESS	FUNCTION
000-01F	DMA controller 1	0C0-0DF	DMA controller 2
020-02F	Interrupt controller 1	0E0-0FF	Coprocessor
040-05F	Timer	278-27F	Parallel port 2
060-06F EVEN	Keyboard controller 8742	2F8-2FF	Serial port 2
060-06F ODD	Port B status check	378-37F	Parallel port 1
070-07F EVEN	NMI	3F0-3F7	Floppy controller
070-07F ODD	RTC	3F8-3FF	Serial port 1
080-09F	DMA page register	400-FFFF	
0A0-0BF	Interrupt controller 2	2BG+F8-2GB+FF	80387

INTERRUPT LEVELS

LEVEL	FUNCTION	LEVEL	FUNCTION
IRQ0	Timer	IRQ8	RTC
IRQ1	Keyboard	IRQ9	Redirected to IRQ2 via software
IRQ2	Interrupt from interrupt controller 2	IRQ10	Available
IRQ3	Serial port 2	IRQ11	Available
IRQ4	Serial port 1	IRQ12	Available
IRQ5	Parallel port 2	IRQ13	80387
IRQ6	Floppy disk	IRQ14	Hard disk
IRQ7	Parallel port 1	IRQ15	Available

DMA CHANNELS

CHANNEL	FUNCTION	CHANNEL	FUNCTION
DRQ0	8-BIT memory refresh	DRQ4	Reserved
DRQ1	8-BIT reserved	DRQ5	16-BIT available
DRQ2	8-BIT floppy disk	DRQ6	16-BIT available
DRQ3	8-BIT reserved	DRQ7	16-BIT available

COMPATIBLE HARD DISKS

TYPE	MANUFACTURER	CAPACITY	CYL	T	WPC	LZ
1	Standard 85 ms	10 MB	306	4	128	305
2	OPE XM5221 half size	21 MB	615	4	256	700
2	Seagate ST225	21 MB	615	4	256	700
2	NEC D3126	21 MB	615	4	256	700
3	WREN 2 full size	40 MB	925	5	128	924
4	CDC WREN 1	30 MB	697	5	128	696
5	ST4096	80 MB	1024	9	NO	1023
6	OPE XM5340	42 MB	820	6	256	819
7	NEC D5146H	42 MB	615	8	128	614
8	TM755 slim size	42 MB	981	5	NO	980
9	CDC WREN II slim size	42 MB	981	5	128	980
10	Micropolis 1324 full size	53 MB	1024	6	NO	1023
10	RODIME RO413 full size	53 MB	1024	6	NO	1023
11	CDC WREN II full size	55 MB	925	7	128	924
12	Micropolis 1325 full size	71 MB	1024	8	NO	1023
12	RODIME RO414 full size	71 MB	1024	8	NO	1023
13	CDC WREN II full size	71 MB	925	9	128	924
14	Micropolis 1323-A full size	44 MB	1024	5	NO	1023
15	RESERVED					
16	OPE XM5220 85 ms	20 MB	612	4	128	656
16	NEC D5126	20 MB	612	4	128	656
16	OPE XM3220	20 MB	612	4	128	656
16	Miniscribe M3425	20 MB	612	4	128	656
16	NEC D5126H	20 MB	612	4	128	656
17	TANDON TM 362 85 ms	20 MB	612	4	NO	663
18	Seagate ST251 40 ms	40 MB	820	6	NO	880
19	Rodime RO3055 40 ms	40 MB	872	6	0	871
20	Miniscribe M8425 68 ms	20 MB	612	4	0	663
21	Seagate ST277TR	62 MB	820	6	-1	819
22	OPE XM5340/60	62 MB	820	6	123	819
23	NEC D5147H	62 MB	615	8	384	664
24	NEC D5652	136 MB	820	10	-1	822
25	Micropolis 1355 ESDI	135 MB	1021	8	-1	1023
26	Micropolis 1353 ESDI	67 MB	1021	4	-1	1023
27	NEC D5452	62 MB	823	10	512	824

Where: CYL: No. of disk cylinders

T: No. of disk heads

WPC:Precompensation cylinder number

LZ: Head parking cylinder number