UM85C418

User's Manual

Ver 1.0

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1.0 INTRODUCTION

A VESA local bus adapter, equipped with UM85C418 and 1MB memory, supports IDE + SVGA non-interlaced and interlaced up to 256 colors at resolutions of 1024 x 768 and 800 x 600 and interlaced 1280 x 1024 in 16 colors.

Standard Modes

UM85C418 supports the following personal Computer Display Adapter standards:

VGA	IBM Video Graphics Array
EGA	IBM Enhanced Graphics Adapter
CGA	IBM Color Graphics Adapter
MDA	IBM Monochrome Display Adapter
Hercules	Hercules Graphics Card

Extended Modes

In addition to the standard graphics and text modes, UM85C418 supports the following extended modes.

MODE NO		Type	Color	Format	Start Address	Char Size	Resolution	Dot Clock	H_Freq	V_Freq
46		T	Mono	132x25	B0000	8x14	1056x350	44.900	31.50	70.00
47		T	Mono	132x29	B0000	8x12	1056x348	44.900	31.50	70.00
48		T	Mono	132x32	B0000	8x12	1056x384	44.900	31.50	70.00
49		T	Mono	132x44	B0000	8x8	1056x352	44.900	31.50	70.00
60		T	16	132x25	B8000	8x14	1056x350	44.900	31.50	70.00
61		T	16	132x29	B8000	8x12	1056x348	44.900	31.50	70.00
62		T	16	132x32	B8000	8x12	1056x384	44.900	31.50	70.00
63		T	16	132x44	B8000	8x8	1056x352	44.900	31.50	70.00
64		T	16	132x60	B8000	8x8	1056x480	44.900	31.50	60.00
72		T	16	80x60	B8000	8x8	640x480	25.175	31.50	60.00
72	35k	T	16	80x60	B8000	8x8	640x480	28.322	35.50	70.10
72	38k	T	16	80x60	B8000	8x8	640x480	36.000	38.00	70.30
72	75m	T	16	80x60	B8000	8x8	640x480	36.000	38.60	75.00
73		G	16	80x30	A0000	8x16	640x480	25.175	31.50	60.00
73	35k	G	16	80x30	A0000	8x16	640x480	28.322	35.50	70.10
73	38k	G	16	80x30	A0000	8x16	640x480	36.000	38.00	70.30
73	75m	G	16	80x30	A0000	8x16	640x480	36.000	38.60	75.00
74		T	16	80x66	B8000	8x8	640x528	28.322	35.30	60.00
78/6B		T	16	100x75	B8000	8x8	800x600	36.000	35.40	56.50
78	70m	T	16	100x75	B8000	8x8	800x600	50.000	48.10	70.00
78	75m	T	16	100x75	B8000	8x8	800x600	50.000	48.20	75.00
79/6A		G	16	100x75	A0000	8x8	800x600	36.000	35.40	56.50
79	70m	G	16	100x75	A0000	8x8	800x600	50.000	48.10	70.00
79	75m	G	16	100x75	A0000	8x8	800x600	50.000	48.20	75.00
58		T	16	80x32	B8000	9x16	720x512	32.500	35.50	60.00
5C		G	256	80x30	A0000	8x16	640x480	25.175	31.50	60.00
5C	35k	G	256	80x30	A0000	8x16	640x480	28.322	35.50	70.10
5C	38k	G	256	80x30	A0000	8x16	640x480	36.000	38.00	70.30
5C	75m	G	256	80x30	A0000	8x16	640x480	36.000	38.60	75.00
5E/6C		G	256	100x75	A0000	8x8	800x600	36.000	35.40	56.00
5E	70m	G	256	100x75	A0000	8x8	800x600	50.000	48.10	70.00
5E	75m	G	256	100x75	A0000	8x8	800x600	50.000	48.20	75.00
5Fi		G	16	128x48	A0000	8x16	1024x768	44.900	35.50	87.00i
5Fn		G	16	128x48	A0000	8x16	1024x768	65.000	48.50	60.00
5F	70m	G	16	128x48	A0000	8x16	1024x768	75.000	56.50	70.00
7D		G	256	64x32	A0000	8x16	512x512	44.900	35.40	60.00
7E		G	256	80x25	A0000	8x16	640x400	25.000	31.50	70.10
7Fi		G	256	128x48	A0000	8x16	1024x768	44.900	35.50	87.00i
7Fn		G	256	128x48	A0000	8x16	1024x768	65.000	48.50	59.20
7F	70m	G	256	128x48	A0000	8x16	1024x768	75.000	56.50	70.00
7Ai	38k	G	16	160x64	A0000	8x16	1280x1024	65.000	38.30	70.30i
7Ai	48k	G	16	160x64	A0000	8x16	1280x1024	80.000	48.00	87.00i
50		G	32/64K	80x30	A0000	8x16	640x480	50.000	31.50	60.20
50	35k	G	32/64K	80x30	A0000	8x16	640x480	65.000	35.50	70.10
50	38k	G	32/64K	80x30	A0000	8x16	640x480	65.000	38.10	70.10
50	75m	G	32/64K	80x30	A0000	8x16	640x480	65.000	38.70	75.10
51	35k	G	32/64K	100x75	A0000	8x8	800x600	75.000	35.50	56.50
51	38k	G	32/64K	100x75	A0000	8x8	800x600	80.000	38.40	60.00

T:	Text Mode
G:	Graphics Mode
n:	Non-Interlaced Mode
i:	Interlaced Mode
35k:	Select 35.5KHz Horizontal Scan Rate
38k:	Select 38.5KHz Horizontal Scan Rate
70m:	Select 70.0Hz Vertical Scan Rate
75m:	Select 75.0Hz Vertical Scan Rate

VL-BUS super VGA+IDE Software

The UMC Super VGA+IDE adapter comes with the following software programs. These
can help you to take full advantage of its superior features. Refer to each
section for detailed description and usage.

Utilities

UVGA.EXE	Set mode and diagnostic utility
JUMP.COM	Normal screen scroll utility
SMOOTH.COM	Smooth screen scroll utility

Device Drivers

UANSI.SYS	Extended ANSI driver
RAMBIOS.SYS or RAMBIOS.EXE	RAM resident video BIOS driver

Advanced Application Device Drivers

|	
AutoCAD	R12,11, 10.0 and 9.0
AutoCAD	2.5 and 2.6
AutoShade	2.0
GEM/3	3.11
Lotus 1-2-3	2.01 and 2.2
Symphony	2.0
Ventura Publisher	3.0, 2.0 and 1.1
Windows/386	2.10 and 2.03
Windows/286	2.10 and 2.03
Wordperfect	5.1 and 5.0
Windows	3.1 and 3.0
Wordstar	5/4/3
IBM OS/2 Presentation Manager	1.2 and 1.1 Driver
FrameWork	IV and III
PCAD	4.x
IDE 32-bit VL-BUS driver for DOS	
IDE 32-bit VL-BUS driver for WINDOWS	
IDE 32-bit VL-BUS driver for OS/2	

Compatible Monitors

UM85C418 supports fixed and multiple frequency analog monitors through a 15-pin analog connector. TTL monitor is not supported. In general, the characteristic of your monitor determine the mode availability. The chart on this page can help you to determine your monitor's capability.

MODE NO	Type	H_Freq	V_Freq	0(31.5)	1(35.5)	2(38.5)	3(48.5)	4(56.0)	5(64.0)
46	T	31.50	70.00	*	*	*	*	*	*
47	T	31.50	70.00	*	*	*	*	*	*
48	T	31.50	70.00	*	*	*	*	*	*
49	T	31.50	70.00	*	*	*	*	*	*
60	T	31.50	70.00	*	*	*	*	*	*
61	T	31.50	70.00	*	*	*	*	*	*
62	T	31.50	70.00	*	*	*	*	*	*
63	T	31.50	70.00	*	*	*	*	*	*
64	T	31.50	60.00	*	*	*	*	*	*
72	T	31.50	60.00	*	*	*	*	*	*
72 35k	T	35.50	70.10	-	*	-	-	-	-
72 38k	T	38.00	70.30	-	-	*	*	*	*
72 75m	T	38.60	75.00	-	-	*	*	*	*
73	G	31.50	60.00	*	*	*	*	*	*
73 35k	G	35.50	70.10	-	*	-	-	-	-
73 38k	G	38.00	70.30	-	-	*	*	*	*
73 75m	G	38.60	75.00	-	-	*	*	*	*
74	T	35.30	60.00	-	*	*	*	*	*
78/6B	T	35.40	56.50	-	*	*	*	*	*
78 70m	T	48.10	70.00	-	-	-	*	*	*
78 75m	T	48.20	75.00	-	-	-	*	*	*
79/6A	G	35.40	56.50	-	*	*	*	*	*
79 70m	G	48.10	70.00	-	-	-	*	*	*
79 75m	G	48.20	75.00	-	-	-	*	*	*
58	T	35.50	60.00	-	*	*	*	*	*
5C	G	31.50	60.00	*	*	*	*	*	*
5C 35k	G	35.50	70.10	-	*	-	-	-	-
5C 38k	G	38.00	70.30	-	-	*	*	*	*
5C 75m	G	38.60	75.00	-	-	*	*	*	*
5E/6C	G	35.40	56.00	-	*	*	*	*	*
5E 70m	G	48.10	70.00	-	-	-	*	*	*
5E 75m	G	48.20	75.00	-	-	-	*	*	*
5Fi	G	35.50	87.00i	-	*	*	*	*	*
5Fn	G	48.50	60.00	-	-	-	*	*	*
5F 70m	G	56.50	70.00	-	-	-	-	*	*
7D	G	35.40	60.00	-	*	*	*	*	*
7E	G	31.50	70.10	*	*	*	*	*	*
7Fi	G	35.50	87.00i	-	*	*	*	*	*
7Fn	G	48.50	59.20	-	-	-	*	*	*
7F 70m	G	56.50	70.00	-	-	-	-	*	*
7Ai 38k	G	38.30	70.30i	-	-	*	-	-	-
7Ai 48k	G	48.00	87.00i	-	-	-	*	*	*
50	G	31.50	60.20	*	*	*	*	*	*
50 35k	G	35.50	70.10	-	*	-	-	-	-
50 38k	G	38.10	70.10	-	-	*	*	*	*
50 75m	G	38.70	75.10	-	-	*	*	*	*
51 35k	G	35.50	56.50	-	*	-	-	-	-
51 38k	G	38.40	60.00	-	-	*	*	*	*

-: Not Available
*: Available

2.0 COMPONENT LOCATOR & JUMPPER SETTINGS
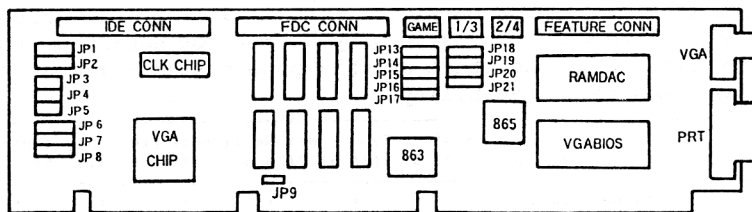
Refer to TK_85C418G_4J_D08

JP3 : IDE LED CONNECTOR

SYSTEM CONDITION	JP8	JP7	JP6
Under 40MB HDD or Non ATA Spec. HDD	L	H	H
CPUCLK = 50MHz or CPUCLK = 40MHz	L	L	L
CPUCLK = 33MHz or CPUCLK = 25MHz	L	L	H
CPUCLK < 25MHz or Enhance IDE Support	L	H	L

		JP2	JP1
MCLK=	50MHz	H	H(Default)
	40	H	L
	36	L	H
	32	L	L

JP9 : VGA IRQ9(Default Disable)
JP5 : ON HDC Disabled
       OFF HDC Enbaled
JP13:PRT EN/DISABLE
JP14:COM1,3 EN/DISABLE
JP15:COM2,4 EN/DISABLE
JP16:FLOPPY EN/DISABLE
JP17:GAME EN/DISABLE
JP18:LPT2/LPTI
JP19:COM1/COM3
JP20:COM2/COM4
JP21:HDC NOT EXIST/EXIST

Note: If JP5 is off, then the VESA HDC is enabled. Please be membered to plug the HDD cable to IDE connector in this card. If you forgot to do so, your computer will fail to access Hard Disk.

3.0 UTILITY PROGRAMS

The following Super VGA utility programs contained in the UTIL directory of the UMC Super VGA Utility and Driver Diskette can help you to take full advantage of this Super VGA adapter. Make a backup copy before using it.

UVGA.EXE	Set mode and diagnostic utility
SMOOTH.COM	Smooth screen scroll utility
JUMP.COM	Normal screen scroll utility
RAMBIOS.SYS RAMBIOS.EXE	RAM resident video BIOS driver
UANSI.SYS	Extended ANSI driver

Convention

In order to easily remember the correct usage, these conventions will be used throughout this manual to indicate when and what DOS commands should be used. All DOS commands will be shown in BOLD HELVETICA.

<ENTER>:	This represents pressing <ENTER> key.
{R3}:	One of the parameters has to be entered.
[OPTION]:	Parameter in the square bracket is optional.

UVGA.EXE   Set Mode and Diagnostic Utility

Command Syntax: >UVGA <ENTER>

This set mode and diagnostic program allows you to select and preview any mode that is available to your configuration. You may run this program either directly from the DOS prompt or from a menu.

GET HELP

UVGA ? — HELP
_____

SET VIDEO MODE

UVGA -Digit — set UMC video mode
_____

UVGA -mode number <ENTER>, for instance UVGA -13 <ENTER>, you will set the 320 x 200 256-color graphics mode. To return to the

default mode
    type **UVGA -3 <ENTER>**.

SET MONITOR TYPE

UVGA H(or h)Digit — set horizontal frequency
_____

    0 : Horizontal frequency 31.5 kHz
    1 : Horizontal frequency 35.5 kHz
    2 : Horizontal frequency 38.5 kHz
    3 : Horizontal frequency 48.5 kHz
    4 : Horizontal frequency 56.5 kHz
    5 : Horizontal frequency 64   kHz

For the difference monitor type, user can select the correspond-
ing or compatible monitor type at the DOS prompt (UVGA Hx <EN-
TER>) or following the UVGA menu-driven instructions. There are
6 monitor type support on the BIOS that you can select. The de-
fault type of monitor is 38.5 kHz horizontal
frequency.

SET RAM BUFFER

UVGA B(or b)Digit — set RAM buffer size
_____

    0 : Set RAM buffer size 256K
    1 : Set RAM buffer size 512K
    2 : Set RAM buffer size 1MB

FLICKER FREE

UVGA V(or v)Digit — set vertical frequency
_____

    0 : Set vertical frequency VGA 60Hz
    1 : Set vertical frequency VESA 70-72Hz
    2 : Set vertical frequency ISO 75-80Hz

For those who need to work with computer all day long and have
tolerated the ergonomic issues of eye strain and fatigue. You
can really give your eyes a break by using this utility.

The Flicker free feature in the UVGA increases the vertical re-
fresh rate of 60Hz, 70Hz and 75Hz for UMC display adapter.

By typing UVGA V1 <ENTER> at the DOS prompt or following the
UVGA menu-driven instructions, you may get 10 more frames per
second if your monitor supports 70Hz vertical refresh rate. The
default is OFF (60Hz).

AUTO_DISPLAY

UVGA A(or a)Digit — set AutoDisplay
_____

    0 : Set AutoDisplay OFF
    1 : Set AutoDisplay ON

simply enter A0 (AutoDisplay OFF) or A1 (AutoDisplay ON) to en-
able or disable all backward support.

UMC's Super VGA automatically selects the appropriate mode of
operation for most applications. If an older CGA game will not
operate, then try UVGA A1.
In general, leave AutoDisplay off.

UVGA MENU

By typing **UVGA** <ENTER> at the DOS prompt, you are entering a
menu-driven setmode program.

 UVGA Utility is used to select the desired video mode. By typ-
ing UVGA and pressing <ENTER> at DOS prompt, the UVGA main menu
is displayed on the screen as shown in Fig 2.1. In UVGA main
menu, video mode can be selected by UP arrow or DOWN arrow key,
then pressing <ENTER> key to set the selected video mode. UVGA
main menu would be exited to DOS prompt by pressing <ESC>.

UMC VIDOE series UVGA utility version 2.1 1994,2						
Mode	Type	Resolution	Color	Font	Alphabet	Vertical-reflash
0	Text	360 x 400	16	16x9	40 x 25	70Hz
1	Text	360 x 400	16	16x9	40 x 25	70Hz
2	Text	720 x 400	16	16x9	80 x 25	70Hz
3	Text	720 x 400	16	16x9	80 x 25	70Hz
4	Grap	320 x 200	4	8x8	40 x 25	70Hz
5	Grap	320 x 200	4	8x8	40 x 25	70Hz
6	Grap	640 x 200	2	8x8	80 x 25	70Hz
7	Text	720 x 400	Mono	16x9	80 x 25	70Hz
D	Grap	320 x 200	16	8x8	40 x 25	70Hz
E	Grap	640 x 200	16	8x8	80 x 25	70Hz
F	Grap	640 x 350	Mono	14x8	80 x 25	70Hz
10	Grap	640 x 350	16	14x8	80 x 25	70Hz
11	Grap	640 x 480	2	16x8	80 x 30	60Hz
11	Grap	640 x 480	2	16x8	80 x 30	70Hz
12	Grap	640 x 480	16	16x8	80 x 30	60Hz
12	Grap	640 x 480	16	16x8	80 x 30	70Hz
12	Grap	640 x 480	16	16x8	80 x 30	75Hz
13	Grap	320 x 200	256	8x8	40 x 30	70Hz
46	Text	1056 x 350	Mono	14x8	132 x 25	70Hz

Fig 2.1   Main Menu

By pressing <F1> key in UVGA main menu, user can select the monitor type.

```
+-------------------------------------------------------------------+
|         UMC VIDOE series UVGA utility version 2.1       1994,2     |
|-------------------------------------------------------------------|
| Mode  Type  Resolution   Color   Font   Alphabet   Vertical-reflash|
| 0    Text   360 x +-----------------------------------+   70Hz     |
| 1    Text   360 x |  Setup user MONITOR reference      |   70Hz     |
| 2    Text   720 x +-----------------------------------|   70Hz     |
| 3    Text   720 x | Horizontal frequency  31.5 kHz    |   70Hz     |
| 4    Grap   320 x | Horizontal frequency  35.5 kHz    |   70Hz     |
| 5    Grap   320 x | Horizontal frequency  38.5 kHz    |   70Hz     |
| 6    Grap   640 x | Horizontal frequency  48.5 kHz    |   70Hz     |
| 7    Text   720 x | Horizontal frequency  56.5 kHz    |   70Hz     |
| D    Grap   320 x | Horizontal frequency  64   kHz    |   70Hz     |
| E    Grap   640 x +-----------------------------------+   70Hz     |
| F    Grap   640 x 350   Mono   14x8   80 x 25        70Hz          |
| 10   Grap   640 x 350    16    14x8   80 x 25        70Hz          |
| 11   Grap   640 x 480     2    16x8   80 x 30        60Hz          |
| 11   Grap   640 x 480     2    16x8   80 x 30        70Hz          |
| 12   Grap   640 x 480    16    16x8   80 x 30        60Hz          |
| 12   Grap   640 x 480    16    16x8   80 x 30        70Hz          |
| 12   Grap   640 x 480    16    16x8   80 x 30        75Hz          |
| 13   Grap   320 x 200   256     8x8   40 x 30        70Hz          |
| 46   Text  1056 x 350   Mono   14x8  132 x 25        70Hz          |
+-------------------------------------------------------------------+
```

Fig 2.2   F1   Menu

By pressing <F10> key in UVGA main menu, user can save all UVGA.EXE setting
to C:\AUTOEXEC.BAT

```
+-------------------------------------------------------------------+
|         UMC VIDOE series UVGA utility version 2.1       1994,2     |
|-------------------------------------------------------------------|
| Mode  Type  Resolution   Color   Font   Alphabet   Vertical-reflash|
| 0    Text   360 x 400    16    16x9   40 x 25        70Hz          |
| 1    Text   360 x 400    16    16x9   40 x 25        70Hz          |
| 2    Text   720 x 400    16    16x9   80 x 25        70Hz          |
| 3    Text   720 x 400    16    16x9   80 x 25        70Hz          |
| 4    Grap                                            70Hz          |
| 5    Grap    +--------------------------------------+  70Hz        |
| 6    Grap    | Save UVGA.EXE-setting to AUTOEXEC.BAT |               |
| 7    Text    |                                      |  70Hz        |
| 8    Grap    | Press 'y" to conform and any key to exit | 70Hz     |
| 9    Grap    +--------------------------------------+  70Hz        |
| 10   Grap   640 x 350    16    14x8   80 x 25        70Hz          |
| 11   Grap   640 x 480     2    16x8   80 x 30        60Hz          |
| 11   Grap   640 x 480     2    16x8   80 x 30        70Hz          |
| 12   Grap   640 x 480    16    16x8   80 x 30        60Hz          |
| 12   Grap   640 x 480    16    16x8   80 x 30        70Hz          |
| 12   Grap   640 x 480    16    16x8   80 x 30        75Hz          |
| 13   Grap   320 x 200   256     8x8   40 x 30        70Hz          |
| 46   Text  1056 x 350   Mono   14x8  132 x 25        70Hz          |
+-------------------------------------------------------------------+
```

Fig 2.3   F10   Menu

SMOOTH.COM   Smooth Screen Scroll Utility
JUMP.COM   Normal Screen Scroll Utility

Command Syntax: >SMOOTH <ENTER>
                             >JUMP <ENTER>

The SMOOTH.COM is very useful especially when you are reviewing a long and wide list of alphanumeric data. You get a smoothly scrolled screen when you type SMOOTH <ENTER> at the DOS prompt.

Try DIR DOS command without running this utility to see if you can read those file names in motion. And try DIR after running SMOOTH.COM to find your files with ease. The effect of this utility is not noticeable under graphics modes.

You can bring the smoothly scrolled screen back to normal manner when you
type JUMP <ENTER> at the DOS prompt.

RAMBIOS.SYS   RAM Resident Video BIOS Driver
RAMBIOS.EXE

This driver can be installed to speed up video read and write operations.
Place **DEVICE = RAMBIOS.SYS** in the file CONFIG.SYS, and reboot the system to install this driver.

It is a memory resident program and must be installed before any other device driver to insure application programs compatibility.

RAMBIOS.EXE is a program for Autoexec.bat or under DOS prompt.

UANSI.SYS   Extended ANSI Driver

UANSI.SYS replaces the DOS ANSI.SYS driver. If it exists, **replace DEVICE = ANSI.SYS with DEVICE = UANSI.SYS** in the file CONFIG.SYS. Reboot the system to install this driver.

4.0 DRIVER INSTALLATION

You are ready to enjoy this high resolution graphics system. Simply install the application program according to the application software manual, and follow the instructions in the following sections to install high resolution drivers UMC provided.

Drivers listed in Table 3.1 come with your Super VGA purchase.

Table 3.1 Advanced Application Driver

Application Program	Driver Name	Resolution	Color
AutoCAD 12, 11, 10, 9	CT1K16.EXE	1024 x 768	16*
	CT6256.EXE	640 x 480	256*
	CT8256.EXE	800 x 600	256*
	CT1K256.EXE	1024 x 768	256**
	CT816.EXE	800 x 600	16
	CT1280.EXE	1280 x 1024	16**
AutoCAD 2.5, 2.6	DS1K16.EXE	1024 x 768	16*
	DS816.EXE	800 x 600	16
	DS121K.EXE	1280 x 1024	16**
AutoCAD R10, R11, R12 386	DSP800.EXP	800 x 600	16
	DSP1024.EXP	1024 x 768	16*
	DSP1280.EXP	1280 x 1024	16**
AutoCAD Display List	DSDL800.EXE	800 x 600	16
	DSDL1024.EXE	1024 x 768	16*
	DSDL1280.EXE	1280 x 1024	16**
AutoShade 2.0	RD800.COM	800 x 600	256*
	RD640.COM	640 x 480	256*
	RD1024.COM	1024 x 768	256**
GEM/3 3.11	SDFVGA1K.VGA	1024 x 768	16*
	SDFVGA86.VGA	800 x 600	16
	SDFVGA7K.VGA	768 x 1024	16*
Lotus 1-2-3 2.01, 2.2	132XALL.DRV	132 x 25, 29 32, 44, 60	16
(Symphony 2.0)	CT816.DRV	800 x 600	16
	CT1K16.DRV	1024 x 768	16*
	CT1216.DRV	1280 x 1024	16**
Ventura 2.0, 1.1	SDFVGA1K.VGA	1024 x 768	16*
	SDFVGA86.VGA	800 x 600	16
	SDFVGA7K.VGA	768 x 1024	16*
WordPerfect 5.0	CT1K16.WPD	1024 x 768	16*
	CT816.WPD	800 x 600	16
	CT1216.WPD	1280 x 1024	16**
	CT1K256.WPD	1024 x 768	256**
	CT8256.WPD	800 x 600	256*
	CT6256.WPD	640 x 480	256*
WordPerfect 5.1	WPCTK16.VRS	800 x 600	16
		1024 x 768	16*
		1280 x 1024	16**
	WPCTK256.VRS	640 x 480	256*
		800 x 600	256*
		1024 X 768	256**
(Text)	WPCTKTXT.VRS	132 x 25/29/32/60	
PM Microsoft OS/2 Presentation Manager V:1.1, 1.2 Driver	CT816.DLL	800 x 600	16
	CT1K16.DLL	1024 x 768	16*
PCAD 4.x	PCAD1280.DRV	1280 x 1024	16**
	PCAD1K16.DRV	1024 x 768	16*
	PCAD816.DRV	800 x 600	16
Windows 3.0, 3.1	UMC8.DRV	640 x 480	256*
		800 x 600	256**
		1024 x 768	256**
	UMC15.DRV	640 x 480	32K**
	UMC16.DRV	640 x 480	64K**
	UMC24.DRV	600 x 480	16M**
	UM8161.DRV	800 x 600	16
	UMC815.DRV	800 x 600	32K**
	UMC816.DRV	800 x 600	64K**
	UM8256A.DRV	800 x 600	256*
	UM1K160.DRV	1024 x 768	16 *(For Wiudows 3.1)
	UM1K161.DRV	1024 x 768	16 *(For Windows 3.0)
	UM7681K.DRV	768 x 1024	16 **
	UM121K.DRV	1280 x 1024	16 **
	UM8256B.DRV	800 x 600	256**(For Windows 3.0)
FrameWork III and IV (TEXT)	FW60.SC	132 x 25	16
(Text)	FW61.SC	132 x 29	16
(Text)	FW62.SC	132 x 32	16
(Text)	FW63.SC	132 x 44	16
(Text)	FW64.SC	132 x 60	16
(Text)	FW58.SC	80 x 32	16
(Text)	FW72.SC	80 x 60	16
(Text)	FW74.SC	80 x 66	16
(Text)	FW78.SC	100 x 37	16
(Graphics)	FW79*.SC	800 x 600	16
(Graphics)	FW73*.SC	640 x 480	16
WordStar R3/4/5	See driver disk #1 "Read.me" file.		

Note:
(1) These items marked with an asterisk <*> require 512KB memory.
(2) These items marked with two asterisks <**> require 1MKB memory.

This actual list of drivers is subject to change. Please refer to the READ.ME file on the diskette for up to date versions and information.

AutoCAD R12, 11, 10.0, 9.0, 2.6 and 2.5

Advanced drivers are contained in the AUTOCAD directory.

Use the following procedure to install this driver:

1. For AutoCAD 11.0, 10.0 and 9.0 copy CT1K16.EXE, CT816.EXE, CT6256.EXE, CT1K256.EXE, CT8256.EXE and CT1280.EXE from the UMC utility and driver diskette to AutoCAD directory, and then install an appropriate driver.

    a. Run CT1K16.EXE and select the desired options for the 1024 X 768 16-color driver.

        >CT1K16 <ENTER>

    b. Run CT816.EXE and select the desired options for the 80(x 600 16-color driver.

        >CT816 <ENTER>

    c. Run CT8256.EXE to select desired options to install the 800 x 600 256-color driver.

        >CT8256 <ENTER>

Entering driver name with option i changes the background color to black. You need to install this driver once at every power up.

2. Install AutoCAD following normal AutoCAD procedures and invoke the program by typing ACAD at the DOS prompt.

        >ACAD <ENTER>

3. From the AutoCAD Main Menu, select option number 5, Configure AutoCAD.

    Enter selection : **5 <ENTER>**

    Press return to continue : **<ENTER>**

4. From the AutoCAD Configuration menu, select number 3, Configure video display.

    Enter selection <0> : **3 <ENTER>**

    Type **Yes** to select a new display.

5. From the Available video display, select number 2, ADI display.

    Select device number ...... **2 <ENTER>**

    Hexadecimal interrupt code (INT 0XXh) **<7A>: <ENTER>**

    Answer your preference options **Yes, No** or accept the default by pressing **<ENTER>**.

6. From the Configuration menu, select number 0, Exit to Main Menu.

    Enter selection : **0 <ENTER>**

    Keep Configuration changes ? **Y <ENTER>**

7. From the AutoCAD Main Menu, select number 0, Exit to AutoCAD.

    Enter selection : **0 <ENTER>**

8. For AutoCAD 2.5 copy DS1K16.EXE, DS121K.EXE and DS816.EXE from the UMC Utility and Driver Diskette to AutoCAD directory, and then install an appropriate driver.

    a. Run DS1K16.EXE to install the 1024 x 768 16-color driver.
        >DS1K16 [i] <ENTER>

    b. Run DS816.EXE to install the 800 x 600 16-color driver.
        >DS816 [i] <ENTER>

Entering driver name with option i changes the background color to black . You need to install this driver once at every power up.

9. To run AutoCAD on single monitor, type ACAD at the DOS prompt.

        >ACAD <ENTER>

To run AutoCAD with two monitors, type MODE MONO to switch the console to the secondary monitor, and then type ACAD.

        >MODE MONO <ENTER>
        >ACAD <ENTER>

AutoCAD R12, R11, R10 and R9 with ADI P386 Driver

For AutoCAD R12, 11, 10 and 9 copy DSP1280.EXP, DSP800.EXP, DSP1024.EXP from UMC utility and driver diskette to AutoCAD directory, and then install an appropriate driver.

For example: If you use DSP1280.EXP as your device driver you would do the following steps.

1. Type **"set DSPADI=C:\ACAD\DSP1280.EXP"** at the DOS prompt.
   Remark: We default the AutoCAD package and device driver are both in the ACAD directory at Hard Disk C.

2. Install AutoCAD following normal AutoCAD procedures and invoke the program by typing ACAD at the DOS prompt:

>**ACAD <ENTER>**

3. From the AutoCAD Main Menu, select option number 5, Configure AutoCAD.

Enter selection : **5 <ENTER>**

Press return to continue : **<ENTER>**

4. From the AutoCAD Configuration menu, select number 3, Configure videodisplay.

Enter selection <0> : **3 <ENTER>**

Type **Yes** to select a new display.

5. From the Available video display, select number 1, ADI display.

Select device number ...... **1 <ENTER>**

xx **ColorTech** 1280 x 1024 16 color xx

Answer your preference options **Yes, No** or accept the default by pressing <ENTER>.

6. From the Configuration menu, select number 0, Exit to Main Menu.

Enter selection : **0 <ENTER>**

Keep Configuration changes ? **<Y> <ENTER>**

7. From the AutoCAD Main Menu, select number 0, Exit to AutoCAD.

Enter selection : **0 <ENTER>**

AutoShade 2.0

Advanced drivers are contained in AUTOSHAD directory.

From AutoShade's Installation & Performance Guide page 8 — " We do not recommend that you run AutoCAD and AutoShade at the same time under DOS ". We recommend that you may create your .FLM file under AutoCAD use AutoCAD driver. Reboot the system, install one of these two AutoShade drivers to display picture on the screen.

Use the following procedure to install the driver :

1. Install AutoShade following the normal AutoShade procedures and invoke the program by typing SHADE or SHADE -R to configure or reconfigure
   AutoShade.
   >**SHADE <ENTER>**
   >**SHADE -R <ENTER>**

2. From the select display device, select option number 1, AutoDesk Device Interface display driver.

Display selection : **1 <ENTER>**

3. From the select rendering display device, select option number 1, AutoDesk Device Interface rendering driver.

Rendering selection : **1 <ENTER>**
Do the display and rendering devices share a single screen (default = NO): **Y <ENTER>**

Does FLIPSCREEN require a redraw (default = NO):**Y <ENTER>**

4. Copy RD800.COM, RD640.COM and RD1K.COM from the UMC Utility and Driver Diskette to AutoShade directory, and then install an appropriate driver.

a. Run RD800.COM to install 800 x 600 16-color display driver and 800 x 600 256-color rendering driver.

>**RD800 <ENTER>**

b. Run RD640.COM to install 800 x 600 16-color display driver and 640 x 480 256-color rendering driver.

>**RD640 <ENTER>**

    c. Run RD1K.COM to install 800 x 600 16-color display driver and 1024 x 768 256-color rendering driver.

>**RD1K <ENTER>**

GEM/3 3.11

Advanced drivers are contained in the GEMVEN directory. Install GEM/3 according to the GEM/3 manual and use the following procedure to install a high resolution driver:

1. Install GEM/3 according to the GEM/3 manual.

2. Insert UMC Utility & Driver Diskette in drive A, change directory to **A:\GEMVEN**.

3. Run GEM768.BAT for the 768 x 1024 x 16 colors driver.

    Run GEM800.BAT for the 800 x 600 x 16 colors driver.

    Run GEM1024.BAT for the 1024 x 768 x 16 colors driver.

    Follow the instructions to install your high resolution driver.

    (1) Be sure your driver for GEM/3 is in current directory.

    (2) Press **GEMxxx.BAT** at DOS prompt.

    (3) Use arrow to select " **1 - Digital Research GEM/3** ", and press <ENTER> or press " **1** " directory.

    (4) Acknowledge all setting.

    (5) Press " **5** " to Exit to DOS.

Lotus 1-2-3 2.01, 2.2 and Symphony 2.0

Advanced text drivers are contained in the LOTUS directory.

NOTE: UANSI.SYS must replace ANSI.SYS in your DOS configuration and 80-column mode operation be in place prior to installation.

Subsequent to installing Lotus, use the following procedure to install the advanced drivers:

1. Copy the file **132XALL.DRV** from your Super VGA Utility and Driver Diskette to your Lotus 1-2-3 or Symphony subdirectory.

2. If it exists, delete SINGLE.LBR

>**DELETE SINGLE.LBR <ENTER>**

3. Run the Lotus installation program.

>**INSTALL <ENTER>**

4. From the Lotus installation program:

    a. Select **Advanced Options** from the main menu.

    b. Select **Modify Current Driver Set** within Advanced Options Menu.

    c. Select **Graphics Display**.

    d. Select **ColorTech VGA*....** Adapter.

    e. Save the changes mode. And answer **No** to the question "Do you want to leave installation".

Ventura Publisher 3.0, 2.0 and 1.1

Advanced drivers are contained in the GEMVEN directory.

Install Ventura Publisher according to the Ventura Publisher manual.

NOTE : If you have previously installed Ventura, and selected the Color Graphics Adapter, you must completely reinstall the program in order to choose the VGA adapter.

1. Insert UMC Utility & Driver Diskette in the drive A, change directory to **A:\GEMVEN**.

2. Run **VP86.BAT** for the 800 x 600 x 16 colors driver.

    Run **VP1K.BAT** for the 1024 x 768 x 16 colors driver.

    Run **VP7K.BAT** for the 768 x 1024 x 16 colors driver.

WordPerfect 5.0 and 5.1

Advanced graphics drivers are contained in the WP directory.

Use the following procedure to install the drivers:

1. **Copy *.WPD to WP50** directory and ***.VRS to WP51** directory.

2. Type **WP <ENTER>** to start WordPerfect.

3. Within the Document screen, hold down **SHIFT** key and press **<F1>** key to enter the Setup screen.

4. Within the Setup screen, select 3-Display by entering 3 or D.

> Selection : [3, D]

5. Within the Setup: Display screen, select 5-Graphics Screen Type by entering 5 or G.
> Selection : [5, G]

6. Use **UP-DOWN** arrow key to **select color graphic mode** then press <ENTER> to ensure your selection.

7. Within the Setup: Display screen, press **<F7>** key. This completes the driver installation.

FrameWork III, IV

1. Type **SETUPFW [ENTER]** within the FW III or IV directory.

2. From the SETUP menu choose option **2**.

3. Select an **appropriate location** for the FWSETUP file from the choices outlines on the screen.

4. Select the **configuration option** from the main menu of SETUPFW.

5. From the configuration menu, choose the **primary hardware option**.

6. Select in order, **screen driver** and I want to enter my own driver **file name**. Then enter the name of the driver you want to use.

WordStar R3/4/5

1. Start Wordstar's installation program by trying **WSCHANGE <ENTER>**.

2. Type **WS.EXE** as the filename of your WS program file, the type **WS408.EXE** as the filename for new change.

3. Select **option A** for console options.

4. Select **option A** for monitor options.

5. Select **option C** for screen options.

6. Select **option A** for height at the screen sizing menu, the enter the desired value for the screen height.

7. Select **option B** for width at the screen sizing menu, the enter a value for the screen width.

8. Run **UVGA.EXE** to set video mode.

9. Start Wordstar by typing **WS408 <ENTER>**.

Windows 3.0

This driver disk is designed to allow you to change the video driver for Windows external to the program itself. This means that changing the drivers requires you to select and install from the DOS prompt without Windows running. Note that these driver files are in Microsoft compressed format and can only be accessed and executed by installing through Windows Setup. Simply copying the files into your \Windows\System subdirectory WILL NOT work and may corrupt your Windows installation. Installing the drivers correctly is, however, a simple process. It is accomplished by following instructions:

You can install and change drivers in two different ways: from the floppy disk or from your hard disk. If you do not wish to have the drivers installed on your hard disk, you can load or change them from the floppy disk.

Installation from floppy disk

(1) **Insert your Driver Disk** in the appropriate floppy drive.

(2) From your Windows directory, type SETUP and select **DISPLAY to change the video driver.**

(3) Select **"Other disk..."** to direct the program to the floppy disk holding the new drivers.

(4) When asked where the drivers will be found, state, the following:

> **A:**

Following instructions 6-7 below.

Installation from Hard Disk

(1) Having the drivers loaded on the hard disk will make it easier and faster to change drivers in the future. Make a subdirectory to hold the driver files.

example: **C:>md \umcdrv**

and switch to that subdirectory (C:>cd \umcdrv)

(2) Insert the Drivers Disk into the appropriate drive and type the following command:

COPY A:*.*

(3) From your Windows directory, type **SETUP and select DISPLAY to change the video driver.**

(4) Select "**Other disk...**" to direct the program to the subdirectory holding the new drivers.

(5) When asked where the drivers will be found, type as the following

[drive:]\[directory]

e.g.: **C:>\umcdrv**

(6) A standard Windows selection menu will appear with additional video drivers from which to select.

(7) Proceed normally through the remainder of the process. Check Microsoft Windows installation procedures if necessary.

Windows 3.1

This driver disk is designed to allow you to select or change the video driver for Windows 3.1 using Windows Setup. Setup can be executed from within Windows, or from DOS. Note that these driver files are in Microsoft compressed format and can only be accessed and executed by installing through Windows Setup. Simply copying the files into your \Windows\System subdirectory WILL NOT work and may corrupt your Windows installation. Installing the drivers correctly is, however, a simple process. It is accomplished by following instructions:

Installation from floppy disk

(1) Insert your Driver Disk in the appropriate floppy drive.

(2) From your Windows directory, type **SETUP** and select DISPLAY to **change the video driver.** Or, with Windows running, select **Setup from the Program Manager Main group.** Refer to your Microsoft Windows User's Guide for assistance in running Setup from inside Windows.

(3) Select "Other disk..." to direct the program to the floppy disk holding the new drivers. Note that after the drivers are installed, you will not have to select "Other disk..." again should you decide to change resolutions. Look for the **UMC ColorTech** drivers in the Display selection menu to select the display resolution you want.

(4) When asked where the drivers will be found, state the following:

A:

Following instructions 6-7 below.

Installation from Hard Disk

(1) Having the drivers loaded on the hard disk will make it easier and faster to change resolutions in the future. Make a subdirectory to hold the driver files.

example: **C:>md \um418**

and switch to that subdirectory (C:>cd \um418)

(2) Insert the Drivers Disk into the appropriate drive and type the following command:
COPY A:*.*

(3) From your Windows directory, type **SETUP** and select DISPLAY to change the video driver. Or, with Windows running, select **Setup from the Program Manager Main group.** Refer to your Microsoft Windows User's Guide for assistance in running Setup from inside Windows.

(4) Select "**Other disk...**" to direct the program to the subdirectory holding the new drivers. Note that once the drivers are installed, you should not have to select "Other" again should you decide to change resolutions. Look for the **UMC ColorTech** drivers in the Display selection menu to select the display resolution you want.

(5) When asked where the drivers will be found, type as the fol-

lowing

[drive:]\[directory]

e.g.: C:>\um418

(6) A standard Windows selection menu will appear with additional video drivers from which to select.

(7) Proceed normally through the remainder of the process. Check Microsoft Windows installation procedures if necessary.

In order to be used conveniently, an available install program under Windows is also provided for copying all files to Windows's system subdirectory, selecting all video modes, monitor types to meet your need. To ensure that all of your drivers are installed successfully, you had better follow the procedures listed as below:

(1) If you had installed these drivers provided in this floppy disk by using the setup procedure provided by Windows as listed above, you must change to the Windows's system directory (windows\system) and then delete all the device drivers provided by **UMC** (**um*.drv,um*.386**) and setup initial file corresponding to **UMC** (found among **oem*.inf**).

(2) Select standard VGA driver from Windows's supported setup utility under DOS by prompting :

cd \windows
setup

to select Display item to change to VGA driver.

(3) Enter Windows 3.1 and then run the **"install.exe"** file from the **UMC**'s distribution disk. You can follow the procedures from the screen as shown.

(4) After installing all the drivers and programs, you can see a ICON and a GROUP created by the program. Afterwards by **pressing the ICON twice**, the setup utility windows are popped up and you can select what video mode or monitor type you want.

PCAD 4.x

Advance drivers are contained in PCAD directory, use the following procedure to install the driver.

1. Copy **PCAD1K16.DRV, PCAD1280.DRV** and **PCAD816.DRV** from the **UMC** utility and driver diskette to PCAD directory and then install

an appropriate driver.

2. You also must make sure that the SIBMPC.DRV and IMOUSYS.DRV are both in the PCAD directory, if not copy them into the PCAD directory.

Remark: SIBMPC.DRV and IMOUSYS.DRV both them are supplied by PCAD package. Find them out and copy them into PCAD directory. Here we assume PCAD package are in the PCAD directory.

3. Install an appropriate driver.
From example: If you install PCAD1K16.DRV as you driver, then you should do the following steps.

    (a) Type   SYSTEM   C:\PCAD\SIBMPC.DRV
               INPUT   C:\PCAD\IMOUSYS.DRV
               DISPLAY   C:\PCAD\PCAD1K16.DRV

        by PE II editor utility, and save them at the ROOT directory by the name   **PCADDRV.SYS**.
        Remark: We assume C:\ is ROOT directory.

    (b) Change directory to PCAD by typing **CD\ C:\PCAD** at the DOS prompt.

    (c) Type **PCCARDS** at DOS prompt and **<ENTER>** .

        OK !!! Driver has installed.

IDE 32-bit VL-BUS driver for DOS
    - IDEDRV   SYS ...enable IDE VL-BUS controller function for DOS

    The dos driver can enable the 32-bit VL-BUS function for **UMC** IDE controller chip. The function can speed up the data access time from the hard disk. The only option is to activate the multi-sector Read/Write when the hard disk you are using has the function of multi-sector.

    You can use the driver by adding one line in the config.sys :

    device=idedrv.sys

IDE 32-bit VL-BUS driver for WINDOWS
    - IDEDRV   386 ...enable IDE VL-BUS controller function for WINDOWS

The Windows Virtual Device Driver can enable the 32-bit VL-BUS function for UMC IDE controller chip. The function can speed up the data access time from the hard disk.

You can use the driver by checking and replacing one line in the file system.ini as follows:
Look at the fields of [386Enh]
Ensure 32BitDiskAccess to be set 'on' => **32BitDiskAccess=on**, because the VDD 386 driver can work only when 32BitDiskAccess is set as 'on'. And the following two lines should be :

        device=*int13
        device=*wdctrl
Replace 'device=*wdctrl' by 'device=idedrv.386' and then you can read/write the hard disk by 32-bit access method actually.

IDE 32-bit VL-BUS driver for OS/2
- UMC1S506.ADD ...enable IDE VL-BUS controller function for OS/2

The OS/2 driver can enable the 32-bit VL-BUS function for **UMC** IDE controller chip. The function can speed up the data access time from the hard disk.

You can use the driver by adding one line in the config.sys :

Replace 'device=IBM1S506.ADD' by 'device=UMC1S506.ADD'