

## 1.1 SPECIFICATIONS

### DESCRIPTION

This specification describes the functional characteristics for the Commodore Slimline Series Computers — Models SL286-16, SL386SX-16 and SL386SX-20. These systems consist of a processor, memory, control unit, video card and casework. The systems are compatible with the IBM AT series of computers. Monitors for the systems are independent units and must be VGA compatible.

### MOTHERBOARD SPECIFICATIONS

	<i>SL286-16</i>	<i>SL386SX-16</i>	<i>SL386SX-20</i>
	P/N 390330 (DTK TECH 1663)	P/N 390916 (DTK PEER 1660C)	P/N 390917 (DTK PEER 2060)
<b>Processor</b>	80286-16	80386SX-16	80386SX-20
<b>Coprocesor</b>	80287-16 (optional)	80387SX-16 (optional)	80387SX-20 (optional)
<b>Clock Speeds</b>	16 MHz/8 MHz	16 MHz/8MHz	20 MHz/10 MHz
<b>Chip Set</b>	Chips and Technologies' NEAT compatible Chip Set; Battery backed-up real-time clock/calendar		

### Ports

Parallel — Output:	Centronics (IBM Compatible)
Serial — Output:	(2) RS-232 (IBM AT, 9 pin)
Mouse Port:	IBM PS/2 Compatible mini DIN
Keyboard:	Standard AT style 5 PIN DIN

**Expansion Slots** 16 bit x 1 (expandable to 16 bit x 3 + 8 bit x 2 by use of riser card)

### Interface

Floppy Disk Interface -	IBM AT
Hard Disk Interface -	IDE 40 PIN

### RAM System

Architecture	Page Interleaved
Configuration	DIP-44256 x 8 + 41256 x 4 SIMM: 4 PCS
Total Memory	1MB onboard standard, expandable to 5MB

### ROM System

Architecture	Shadow RAM for BIOS and Video ROM
Configuration	64KB - Phoenix

### BLOCK MEMORY MAP

Standard Memory  
 640 KBytes range from 0 to 655360 decimal (0 to 9FFFF hexadecimal)  
 384 KBytes range from 1048576 to 1441792 decimal (100000 to 160000 hexadecimal)  
 The top 384 KBytes of memory can be disabled to function with add-on boards.

### SLIMLINE SERIES CASEWORK

Height 4.00 in.  
 Depth 14.75 in.  
 Width 16.25 in.

Slim Line Enlight EN6305	Bezel - Light Gray - CBM# 394202-01 Cover - Light Beige - CBM# 394204-01 Disk Drive - Accent Beige
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**1.1 SPECIFICATIONS (Continued)****VIDEO REQUIREMENTS**

These systems will require a separate video card to be installed into each system. The Video Graphics Array (VGA) card used in each unit shall be compatible with Western Digital VGA8/16 F512 with a horizontal scan frequency of 31.5 KHz.

**VIDEO FEATURES**

VGA Display RAM - 256K Byte, expandable to 512K

**ALPHANUMERIC MODES**

<b>MODE #</b>	<b>COL X ROW</b>	<b>CHAR MATRIX</b>	<b>RESOLUTION</b>	<b>COLORS</b>	<b>STANDARD</b>
0, 1	40 X 25	8 X 8	320 X 200	16	CGA (1)
		9 X 16	360 X 400	16 OF 256K	VGA (1) & (2)
2, 3	80 X 25	8 X 8	640 X 200	16	CGA (1)
		9 X 16	720 X 400	16 OF 256K	VGA (2)
7	80 X 25	9 X 14	720 X 350	MONOCHROME	MDA
		9 X 16	720 X 400	MONOCHROME	VGA (2)
54	132 X 43	7 X 9	924 X 387	COLOR	ENHANCED
55	132 X 25	7 X 16	924 X 400	COLOR	ENHANCED
56	132 X 43	7 X 9	924 X 387	MONOCHROME	ENHANCED
57	132 X 25	7 X 9	924 X 400	MONOCHROME	ENHANCED

**GRAPHICS MODES:**

4, 5	320 X 200	4	CGA (1)
		4 OF 256K	VGA (1) & (2)
6	640 X 200	2	CGA
		2 OF 256K	VGA (1) & (2)
D	320 X 200	16 OF 256K	VGA (1)
E	640 X 200	16 OF 256K	VGA (1)
F	640 X 350	MONOCHROME	VGA
10	640 X 350	16 OF 256K	VGA
11	640 X 480	2 OF 256K	VGA/MCGA
12	640 X 480	16 OF 256K	VGA
13	320 X 200	256 OF 256K	VGA/MCGA (1)
5E	640 X 400	256 OF 256K	EXTENDED VGA
58	800 X 600	16 OF 256K	EXTENDED VGA

**NOTES**

- (1) All 200 line modes are double scanned for 400 line resolution.
- (2) The VGA implementation of these modes is the default.

## 1.1 SPECIFICATIONS (Continued)

**VIDEO SIGNALS**

<i>Vertical Resolution</i>	<i>Horizontal Frequency</i>	<i>Sync Polarity</i>	<i>Vertical Frequency</i>	<i>Sync Polarity</i>
350 lines	31.5 KHz	+	70.1 Hz	-
400 lines	31.5 KHz	-	70.1 Hz	+
480 lines	31.5 KHz	-	59.9 Hz	-
600 lines*	35.2 KHz	-	56.2 Hz	-

\*Requires an Analog Multisync compatible monitor. (MultiSync is a registered trademark of NEC)

**ADDITIONAL SYSTEM FEATURES**

Security lock for keyboard lock out (Key included with each unit)

Built-in speaker

External Configuration switches (on VGA card)

Metal case (can support monitor)

Front panel reset switch

Front panel turbo switch

LED Indicators for HDD and Turbo mode

Socket for 80287 NCP at 10 MHz

LIM 4.0 Support

This unit shall have three AT type expansion slots and two (2) XT slots on the riser card. Each of these slots is capable of accepting a card measuring 333.5 mm (13.13 in) length by 97.02 mm (3.81 in) height (excluding the connector fingers).

**SYSTEM STORAGE CAPABILITY**

The 286SX-16 Family of systems can support the following drives:

FDD — 1.44 MB 3.5" - 313067-05

1.2 MB 5.25" - 380825-01

HDD — 40 MB - 313241-02

50 MB - 311839-01

100 MB - 311840-01

Mass Storage — 970 40 MB Streaming Tape Drive

971 80 MB Streaming Tape Drive

System cabinet will house two (2) 5.25" devices in drive bays. A maximum of two (2) 1/4 height hard disk drives can be mounted internally.

**POWER SUPPLY**

150 W Switching Power Supply, 115/230 V Switchable p/n 394217-01

**KEYBOARD FEATURES**

(Keyboard appears as part of 582860 and 582861)

Standard

United States ASCII 101

International 102 Key

Special keyboards and drivers are available to customize the keyboard for Germany, Spain, France, Italy and the United Kingdom.

Keyboard Type - "Typewriter"

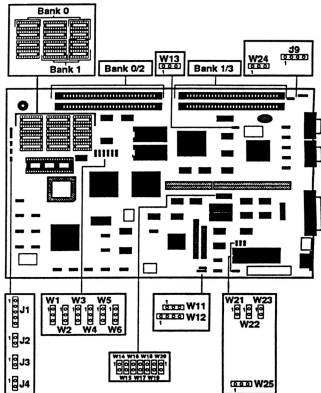
Additional Features

Numeric Keypad

4 cursor keys in an inverted T formation

## 3.1 RAM BANK LOCATIONS, JUMPER SETTINGS

<i>JUMPERS</i>	<i>FUNCTION</i>	<i>SL286-J6</i>
W1-W6	Memory Bank Selection	1 & 2 Shorted - One or Two RAM Banks 2 & 3 Shorted - Three or Four Ram Banks
W11	Hard Drive IDE Select	1 & 2 Shorted - Gates IRQ14 W/ Drive Select or Busy Signal (Use for CP-342) 2 & 3 Shorted - IDE Normal Operations
W14	Floppy Disk Drive	Shorted - Enable Open - Disable
W15, W16	Serial Port 1	Both Shorted - COM1 W15 Open, W16 Shorted - Disable COM1 Both Open - COM3 W15 Shorted, W16 Open - Disable COM3
W17, W18	Serial Port 2	Both Shorted - COM2 W17 Open, W18 Shorted - Disable COM2 Both Open - COM4 W17 Shorted, W18 Open - Disable COM4
W21	Hard Drive Enable	Shorted - Enable Open - Disable
W22	Game Port	Shorted - Enable Open - Disable
W23	Display Mode Settings	Open - Monochrome Shorted - Color
W24	Battery Select	1 & 2 Shorted - External 2 & 3 Shorted - Internal
W25	Power Good	1 & 2 Shorted - Power Fail Detect Active (Default) 2 & 3 Shorted - External Power Good Active
J1	Keylock	
J2	Turbo LED	
J3	Reset	
J4	Turbo Switch	
J8	Power Connector	
J9	External Battery Connector	
J13	PS/2 Mouse Connector	
J14	Keyboard Connector	



THE LOCATION OF JUMPERS AND BANKS

RAM LOCATIONS — SL286-16

	512KB A	512KB B	640KB	640KB	1MB	1MB	1.5MB	2MB	2MB	3MB	4MB	5MB
W1-W6	ALL 2-3	ALL 1-2	ALL 1-2	ALL 1-2	ALL 1-2	ALL 1-2	ALL 2-3	ALL 2-3	ALL 1-2	ALL 2-3	ALL 1-2	ALL 2-3
<b>BANK 0</b>												
U1	44256		44256			44256	44256	44256		44256		44256
U2	44256		44256			44256	44256	44256		44256		44256
U3	44256		44256			44256	44256	44256		44256		44256
U4	44256		44256			44256	44256	44256		44256		44256
U20	41256		41256			41256	41256	41256		41256		41256
U21	41256		41256			41256	41256	41256		41256		41256
<b>BANK 1</b>												
U13						44256	44256	44256		44256		44256
U14						44256	44256	44256		44256		44256
U15						44256	44256	44256		44256		44256
U16						44256	44256	44256		44256		44256
U22						41256	41256	41256		41256		41256
U23						41256	41256	41256		41256		41256
<b>BANK 0 (2)</b>												
CON1		41256		41256	41256		41256	41256	411000	411000	411000	411000
CON2		41256		41256	41256		41256	41256	411000	411000	411000	411000
<b>BANK 1 (3)</b>												
CON3			4164	4164	41256			41256			411000	411000
CON4			4164	4164	41256			41256			411000	411000