Model: DTV-05C

486SX Series
486DX Series
486DX2 Series
486DX4 Series
Cyrix 5x86 Series
AMD Am5x86-P75

Compact Line Lan-Station
User's Manual

Nov./11/1996.

Contents

Note: Cirrus Logic VGA 542X User's Manual is in the Diskette 2 of 2 VGADOC(Sub-directory)

CHAPTER 1   INTRODUCTIONS

1.1 Introductions:
Congratulation on the purchase of your DTV-05C !

You are now the owner of a state-of-the-art DTV-05C that offers features, speed, and performance that is unrivaled and unattended by other conventional PC's or microcomputers based on Intel, AMD, CYRIX or UMC(486SX, 486DX, 486DX2 486DX4 & 5x86) processor , running 32 bits, DTV-05C have a built-in Vesa Local Bus VGA port, IDE/FDD controller, 2 serial and 1 parallel ports.

The system random access memory is up to 16MB or 32MB RAM on board also included Vesa Local Bus VGA port on board. The super slim size accommodate the personal user or cooperation workstation utilities. DTV-05C sets the new pace for personal computing.

The DTV-05C compatible ALI M1429 CHIPSet is an enhanced, high performance signal chip VLSI implementation of the control logic used on the IBM Personal Computer AT. The flexible architecture of the ALI M1429 CHIPSet allows it to be used in any 80486SX / 80486DX/DX2/DX4 based system.

1.2 Features:
Model no. : **DTV-05C**
CPU : Supports 5x86, 80486SX, 80486DX2/DX4, and M6/M7 processor types.
Speed : Operates in speeds of 20/25/33/40/50/66/100/120/133 MHz.
Memory : Support 4/8/16MB or 32MB RAM on board(72-pin SIMM sockets x 2).
ChipSet : System Chips   * Mainboard   : ALI M1429
                                   * VGA Cirrus Logic   : GD5429 Vesa Local Bus
                                   * I/O Port   : Twinhead TH6460
ROM: : AMI BIOS.
Display : Vesa Local Bus 32-Bit VGA Port. With 1024KB, Resolution:
         800x600 / 1024x768 / 1280x1024.
Hard Drive : Support one 3.5-inch HDD (/200/245/420/850MB & 1.2GB up(LBA)).
Floppy Drive : Support one 3.5-inch FDD (1.44MB).
Serial Port : COM1 (address: 3F8-3FF, IRQ4, Jumper selectable).
(Mouse)   COM2 (address: 2F8-2FF, IRQ3, Jumper selectable).
Parallel Port : LPT1 (address: 378, IRQ7, Jumper selectable).
Keyboard : 102 keys keyboard / European Language available (optional).
Lan Card : 8-bits or 16-bit networking card (optional).
Expansion Slot : **Three standard 16-bits AT Bus Slot Free.**
Power Supply: 60W, 90V-270V input, UL/CSA/TUV approval.
Dimension : Mainboard: 26.5cm(w) x15.2cm(D) Screw Holes:0.5cm.
         System: 28cm x 28cm x 7.5cm(11" x 11"x 3").
Export Packing : Each set packing 34cm x 34cm x 17cm (13.5" x 13.5" x 6.75").
         Two Sets packing 39cm x 39cm x 37.5cm(15.35" x 15.35" x 14.36").

1.3 Product & Function Description Of The Main Chip M1429:
     * Super integrated ASIC with built-in RTC and clock cell.
     * Supports 486DX2, P24T, Cyrix M6/M7 CPU write-back cache design.
     * Support VESA 50-MHz master, slave and ISA DMA master to VESA logic.
     * Support 486SX/DX/DX2/DX4, M6/M7 and CPU clock from 20MHz to 100MHz.

        * Support DRAM size of up to 128MB using , 1MB, 4MB, 8MB, to16MB 72-pin SIMM
         module RAM.

Features :
        * Supports 486SX, 486DX/DX2/DX4, M6 processor types.
        * Supports faster Vesa Local Bus:-1 SLAVE and 2 MASTER up to 50MHz.
                            -Allows ISA Master/DMA access to Local device.
        * Operates in speeds of 20/25/33/40/50/60/66/100/120 and 133MHz.

Function :
        The M1429 provides the single-chip solution to support VESA standards and the most advanced, currently available CPUs in the market today. It is a new-generation, single-chip solution that offers the most cost-effective system integration for 486 to P24T systems. With the M1431 TTL ASIC buffer, it allows the system to run on 486SX, 486DX/DX2/DX4 and P24T CPUs and supports Vesa Local bus architecture.

CHAPTER 2   GETTING FAMILIAR WITH DTV-05C

2-1   System Configuration:
2.1   The System Unit Chassis:
        The following information will help acquaint you with the arrangement of the DTV-05C computer when you open the box you will have as Figure 2-1

Figure 2-1 Export Packing

Figure 2-1 shows the full packing. The left side is each set packing up side put cord, mouse, down side is system unit contains 3.5" floppy disk and hard disk right hand side is two sets packing carton.

2.2   *The Front Panel Composition:*

From left to right, the front panel of DTV-05C contains the following:

Figure 2-2 Front View or System Unit

a. Power Indicator   : This green color activates when the system is powered on.

b.Turbo Indicator   : Yellow color or orange when change to high speed by keyboard it
 will light on turbo mode.

c. HDD Indicator   : Red color when system is accessing the hard disk, the light is on.

d. FDD Hole   : This Hole can used any 1.44MB FDD

e. Power Switch   : Pls. open the FDD lid and Push the green button is On and push again is off

f. AC Power Input   : For AC input power cord and AC output monitor power connector.

g. Parallel Port: : For connecting to the printer only.

h. COM1/COM2   : For connecting to peripherals such as a serial printer, serial mouse.

i. Keyboard   : Keyboard Connector.

j. Pulling Knob   : Pull the whole system out off CHASSIS.

k. VGA Display   : VGA Monitor.

l. Expansion Slot   : Three slots for standard 3/4 size 16 bit card.

2.3   *The Rear Panel Composition:*

From left to right, the rear panel of DTV-05C contains the following:

1. AC Power Input   2. AC Power Output 3. Parallel Port
4. COM1 Port   5. COM2 Port   6. Display (VGA) Port
7. Keyboard Port   8. Pulling Knob   9. Three Slots Free for any upgrade

2.4 The System Internal Composition:

1. Power Supply: * AC Input 90~260V, * DC Output: +5V(4A), +12V(3A), -12V(0.3A).
2. HDD/FDD Holding Set   3. Main Board   4. AC Power Switch
5. 4 Slots Slot card   6. LED (Turbo, Power, HDD)

DTV-05C Mainboard Layout

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15cm x 27cm

2.5 The Connector & Jumper Pin Location Map:

V2:   DC Input Power Connector.   **JV1**:   HDD LED   **CN100:** FAN Connector

J2:   Keyboard Connector   **JP13**: Power LED   **JP101:** FAN Connector

P1:   VGA FEA Connector   **JP14**: BUZZER

P2:   VGA Connector (15 pin)   **JP15**: Turbo LED

PV1: HDD Data Cable Connector. **JP24**: Hardware Reset

PV2: FDD Data Cable Connector. **JP22:** Mono/Color Display Selection:

PV4: COM1 Connector.   * 1-2 Closed for Monochrome.

PV5: COM2 Connector.   *** 2-3 Closed for Color.(* Default)**

PV6: LPT1 Parallel Port

    JV2:   LPT JV2 1-2 & 3-4 pin Jumper Setting for Address Selection & Disable.

Address	1-2 Pin	3-4 Pin
Disable	Open	Open
&H 378	**Open**	**Closed (* Default)**
&H 278	Closed	Open
&H 3BC	Closed	Closed

    JV2:   FDD, HDD, COM1, COM2 Enable/Disable.

Jumper	Closed	Open
5-6 FDD	**Enable(* Default)**	Disable
7-8 HDD	**Enable(* Default)**	Disable
9-10 COM1(3F8)	**Enable(* Default)**	Disable
11-12 COM2(2F8)	**Enable(* Default)**	Disable

JP100: **1-2 Closed VGA Port Enable.(* Default)**
          2-3 Closed VGA Disable.
JP102: **Open for select On board COM1(3F8) & COM2(2F8).(* Default)**
          Closed for select On board COM3(3E8) & COM4(2E8).
JP103 &104: 2-3 Closed for Normal Pin Output.(* Default)
          1-2 Closed for COM Port 9th pin Output with +5V for CCD.
JP105: **Open(* Default)**
          Closed for discharge the Dallas CMOS setup.(Must Use 12C887A)

JP1 to JP8 and JPA12/JPB13/JP106/JPR17: Jumper for select CPU type:

PCB Ver.:   **Ver. C.**
BIOS Ver.:   Ver. G./H./I./J.

CPU	JP1	JP8	JPB13	JPR17
486SX/DX	Open	1&2	Open	Open

486DX2	Open	1&2	Open	Open

Cx486DX2/4	*Close*	*2&3*	*Open*	*1&2*
Cyrix 5X86	Open	2&3	Open	Open
AMDDX4V8T	Open	1&2	2&3	Open
AMDDX4V8B	Open	2&3	Open	Open

AMD5x86	Open	2&3	Open	2&3
I486DX4WT	Open	1&2	Open	Open
I486DX4WB	Open	2&3	Open	Open

JX2:   **Jumper for select CPU VCC +5V or +3.3V

          +5V output   **1&4, 2&5, 3&6. Close.**

          +3.3V or 3.45V output   4&7, 5&8, 6&9. Close. (* Default)

JX1:   **3.3V output   1&2 Closed.(* Default)

          3.45V output   2&3 Closed.(for Cyrix 5x86 CPU)

JP16:   **Jumper for select clock generator output frequency for CPU & M/B speed**

Frequency CLK1 Pin1 & Pin2   Pin3 & Pin4   Pin5 & Pin6   Pin7 & Pin8

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Frequency	Pin1 & Pin2	Pin3 & Pin4	Pin5 & Pin6	Pin7 & Pin8
25Mhz	**Closed**	**Open**	**Closed**	**Open**
33.33MHz(133Mhz 4x)	**Closed**	**Closed**	**Open**	**Open(*Default)**
40MHz(120Mhz 3X)	**Open**	**Closed**	**Closed**	**Closed**
50MHz	**Closed**	**Open**	**Closed**	**Closed**
66.66MHz	**Closed**	**Closed**	**Open**	**Closed**
80MHz	**Open**	**Open**	**Closed**	**Closed**
100MHz	**Open**	**Closed**	**Open**	**Closed**

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JP17/20/21/23: Jumper to select Configuration of Cache RAM size

CACHE SIZE	JP17			JP20	JP21	JP23
64KB	1&2			Open	1&2	1&2
128KB	1&2	3&4		Closedt	2&3	1&2
256KB	**1&2**	**3&4**	**5&6**	**Closed**	**1&2**	**1&2(*Default)**

CHAPTER 3   UPGRADING

NOTE:

     Your warranty remains in effect only if an authorized dealer of technician adjusts the internal settings. This section is intended only for those users who wish to perform the adjustments themselves and void the warranty.

At any time, you can add (or remove) hardware to your DTV-05C computer and modify its capabilities. The information in this chapter will instruct you on how to open the CHASSIS, Configure the Main Board to recognize add-in hardware, and install optional devices.

3.1 Removing The Cover:
WARNING : make sure that the power to your systems, as well as any peripheral devices, is off before removing the chassis.

Remove 2 screws located at the rear panel of the system. Use the pulling knob to pull out the system from the chassis. The system tray contains the Main Board, hard disk, floppy disk and add-on card (option)

As you removing the system from the chassis, mark or label plugs for correct orientation to simplify reassemble. Improperly plugging connectors or plugs can damage your system when you power it up.

Ready a tray to hold screws, and label the tray so you know where the screws will go for reassemble. Since your system required different sizes of screws, keeping screws separated will save you time and minimize frustration.

3.1.1 Tools
You will need a few simple tools to remove the DTV-05C Compact Line LAIN-Station Machine.
* Philips screwdriver
* Labeling material (tape, paper, pen) (optional)
* Cups or trays to hold various screws (optional)

3.1.2 Adding Add-On Card:
DTV-05C includes 3 slots for 16 bit add-on card, for additional peripheral.

3.2 Installing The Hard Disk:

WARNING: Only hard disk with 3 1/2" with 1" higher are accommodated to install in the machine. If you buy a DTV-05C without hard disk and you like to upgrade it later. Please consult with your dealer. The procedures are as following:
1. Apply 3.1 opening the DTV-05C case.
2. Pull pulling knob take the outside case.
3. Screw on the hard disk and connect power cable and data cable toPV1, Select right power cable for different brand Hard Disk.
4. Test the system and format hard disk before screw on the system CHASSIS. Make sure the system is in good condition.
5. By opposite direction to screw on the systems.

3.3 Adding System Memory:

Your DTV-05C come with 4MB (option) already installed. However, DTV-05C system memory can be upgraded to 4/8/16/32 MB. To upgrade the system memory, Pls. add or replace SIMM modules and also pls. re-configure your BIOS setup.

3.3.1 Selected SIMM Module:

Only 70ns-80ns faster Simm modules are applicable, you need to fill at least one complete bank of memory at a fame.

3.3.2 Installing SIMM Module:

Use the following steps to adjust SIMM modules on your DTV-05C Main Board.
NOTE:===
SIMM modules are very sensitive to static electric even a mild static shock can   destroy a   chip. To protect your chips ground yourself by touching any metal   surface every time before   you pick up a chip.
1. Carefully hold the edge of the module insert the edge connectors into the SIMM socket at a 23 degree angle.
2. When the connectors are in place, carefully straight to the module upright to that it is positioned firmly to the Main Board.

3.4 Memory Configuration:

The DTV-05C lets you increase the system's main memory via on board SIMM (Single In-line Memory Modules) sockets. The DTV-05C supports two banks of 2/4/8/16MB SIMM modules. The DTV-05C requires SIMM of at least 80ns access time.
The DTV-05C memory is located on two banks:
Bank 0 and Bank 1.
Bank 0 : SI1.(72 Pin SIMM Socket)
Bank 1 : SI2.(72 Pin SIMM Socket)

The DTV-05C support the following configuration:

Memory Size	Bank (SIMM1)	Bank (SIMM2)
2MB	1 x 1MB SIMM	1 x 1MB SIMM
4MB	1 x 4MB SIMM	Not Install
8MB	1 x 4MB SIMM	1 x 4MB SIMM
8MB	1 x 8MB SIMM(Pls. note for 8MB SIMM only can install one)	
16MB	1 x 16MB SIMM	Not Install
32MB	1 x 16MB SIMM	1 x 16MB SIMM

When installing or adding memory the Banks must be filled in order from Bank 0 up. Each Bank can contain only one kind of chip. Different types of chips can not be mixed in the same Bank , For Each bank must be completely full with function properly. Also The minimum of the installation of Bank 0 must be 2 or 4MB.

3.5   Page / Interleave Memory:

Memory access for the DTV-05C is based on what is called a page/interleave arrangement. This means information stored in the memory subsystem is divided up, some of it going to on Bank and some to another. This allows faster memory access but requires that banks operate in pairs, hence the physical organization of the memory system on the board. In order to use the interleave option at least two Banks must be filled. A chart in the Quick Set program displays which combinations can be interleave. Use of the Interleave feature will maximize the performance of any DTV-05C-based system without requiring expensive high-speed RAM chips.

3.6   Shadow RAM:

If you have 1MB or more memory installed it is possible to use a feature of the DTV-05C chip set called " Shadow RAM ". This feature allows the relocation of the ROM BIOS to a memory location in RAM above 640K. Bear in mind that this can only be enabled if there is at least 1MB of memory present. It must be used if more memory is present. Turning on the Shadow RAM feature is done by the CMOS BIOS Setup.

CHAPTER 4   BIOS SETUP
4.1   Setup Overview:

The DTV-05C contains its own permanently programmed SETUP routing, which allows it to recognize and utilize the system's hardware. For example, one can set the system to identify hard disk and floppy diskette drive capacity, the type of video card being used, and the amount of memory installed. The BIOS (BASIC input / output System) will read this information each time the system boots up. The first time the system is powered on, run SETUP to configure it properly.

The following parameters are determined by the SETUP routine:

a) Date:
b) Time:
c) Floppy Drive A Type:
d) Floppy Drive B Type (if present):
e) Hard Disk Type For Drive C (if present):

f) Type of Display Card:
g) Presence of Keyboard:
h) Access RAM option:

4.2   AMI BIOS Setup:
      The BIOS setup program provided with the Main Board is the AMI BIOS from American Megatrends
Inc.. Enter the AMI Setup program's Main Menu as following:
          1. Turn on or reboot the system. After a serial of diagnostic check, the following
           message appears:
          2. Press the <DEL> key to enter the AMI BIOS setup program and the Following
           screen appears :

DTV-05C Compact Line System BIOS Setup Manual
4.2.1. SETUP:

A. Standard:
      Date/Time:

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B. Advanced:

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C. Chipset:

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4.2.2. Utility:
A. IDE Setup:

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B. Color Set:

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C. Default: Pls. when you setup the system pls. default the Optimal first.

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D. When you setup the BIOS pls. selector your line then press "ENTER"
** Then you can selector options by**

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CHAPTER 5   KEYBOARD SPEED SWITCH

5.1   Keyboard Switch:
        The processing speed can also be changed using a keyboard command is sequence. To use this feature do the following :

* Hold down the \<Ctrl\>, \<Shift\> and \<Alt\> keys simultaneously and press :
    The "-" (minus) key for the Low speed.

* Hold down the \<Ctrl\>, \<Shift\> and \<Alt\> keys simultaneously and press :
    The "+" (plus) key for the High speed.

In practice you will probably always want to use the high speed mode unless you encounter software compatibility problems. These might occur with some older software that is speed defendants and must run at the lower speed. This is a common feature of dual high-speed main Boards.

CHAPTER 6   WARRANTY POLICY

LIMITED WARRANTY
This product is warranted. To be free of defects in material and workshop. This warranty period shall begin on the invoice date and will be in effect for a period of one year for labor and one year for parts.

WARRANTY RETURN PROCEDURES
The customer must call the Dealer technical support department in order to receive a return merchandise must have the following information readily available:

   1)   Name and Address.
   2)   Phone Number.
   3)   Contact.
   4)   Serial Number.
   5)   Invoice Number.
   6)   Date of Purchase.

Failure to provide complete and correct information will result in significant delays in processing your repair. Any merchandise sent to without a valid RAM will not be accepted. RMA sent C.O.D. to Dealer will not be accepted, Also Dealer will not cross-ship any repair parts, no repair will be done until the merchandise is received.
When returning merchandise for repair of refund, please mark the RMA# clearly visible on the box, otherwise this is going to delay your repair of refund. While returning for refund. You must return all parts or else you will be charged for any missing parts.

THE FOLLOWING SHALL VOID WARRANTY
Any unauthorized service, modification or tampering any damages due to accident, misuse, abuse and operation outside of electrical specifications.
There will be charges for labor and/or materials on repair after the warranty period had expired.

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| **<u>Dealer Information:</u>** |
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