

# Z-159

## Enhanced Desktop PC System



*The fully-featured IBM*

*PC-compatible with 16-bit*

*speed, expansion capability,*

*and two video display options.*

**ZENITH** | data  
systems

THE QUALITY GOES IN BEFORE THE NAME GOES ON®

Power for today. Expansion for tomorrow.



#### **Fully featured**

The Z-159 IBM PC-compatible desktop system is powerful enough to run an entire business, with video card, multiple expansion slots, serial and parallel ports, MS-DOS®, and the backing of Zenith Data Systems.

#### **Think faster!**

Unlike many other PCs, the Z-159 operates at zero wait states, making this system extremely fast. It processes as fast as you can think, so your system won't slow you down. The advanced 16-bit 8088 microprocessor is standard. An optional 8087 coprocessor can be added if applications require a great deal of mathematical computations. Z-159 clock speed can be set for 4.77 or 8 MHz.

#### **Expanded Memory Specification (EMS) Capabilities to 5MB**

Because more and more applications are pushing the memory limits of many PCs on the market, the Z-159 comes with 640K RAM and 128K EMS standard. The Z-159 can accommodate 640K user RAM and 640K EMS RAM to increase RAM up to 1.2MB on the main board. If additional memory is required, 3 additional EMS memory cards (Z-315) can be added to bring RAM up to 5MB. EMS capability is becoming increasingly important for users who work with large spreadsheets, databases or windowing environments. The Z-159 follows the Lotus/Intel/Microsoft specification. Check with your ZDS dealer about software requirements for EMS operation.

#### **Run IBM software "out-of-the-box"**

The Z-159 personal computer allows you to select from virtually the full range of 16-bit software written for the IBM personal computer.

#### **Choose from 31.5KHz analog or Hercules®-compatible video options**

The Z-159 offers you a choice of two popular high resolution graphics cards—the Z-449 card (31.5KHz analog) or Hercules-compatible. The Z-449 video option standard in Z-159 Models 12 and 13 provides the ultimate in flexibility. This card supports virtually all

medium- and high-resolution text and graphics modes (e.g. Hercules, MDA, CGA, EGA and VGA mode 12), including 640 x 480 graphics on 31.5KHz analog monitors such as Zenith's ZCM-1490 color monitor or other IBM PS/2™-compatible 31.5KHz monitors.

Hercules-compatible Models 2 and 3, combined with the Zenith ZVM-1240 monitor, offer high-definition monochrome graphics capabilities (720 x 350) with crisp, high quality text displays. Or use Zenith's ZVM-1330 color monitor, with CGA compatibility, for brilliant color graphics.

#### **Grows with your growing needs**

Depending on the model selected, up to 5 open expansion slots make additions to the basic system simple. Add additional memory, a modem, additional serial or parallel ports, plus much more.

#### **Choose from four models**

The Z-159 is designed for flexibility. Model 2 features two 5.25" 360K floppy drives, Hercules-compatible or CGA video, and 84-key keyboard. Model 3 features one 5.25" 360K floppy drive, 20MB hard disk, Hercules-compatible or CGA video, and 84-key keyboard. Model 12 offers two 5.25" 360K floppy drives, Z-449 video card, and 101-key keyboard. Model 13 provides one 5.25" 360K floppy drive, 20MB hard disk, Z-449 video card, and 101-key keyboard. All models include MS-DOS.

#### **Total support from Zenith Data Systems**

When you invest in a ZDS PC, you get much more than just a computer. You get the full backing and support of Zenith Data Systems—support that includes comprehensive documentation, a one year limited carry-in warranty, and complete on-site or off-site coverage with the exclusive ZDS IQ (Insured Quality) service contract.

And with hundreds of Zenith Data Systems dealers across the country, you're never far from dependable service or experienced technical support.

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## CPU AND MEMORY

**Processor:** . . . . . 8088—16-bit microprocessor  
0 wait states  
8/4.77 MHz switchable  
8087 coprocessor socket.

**Memory:** . . . . . System memory card supports  
system RAM and EMS RAM.  
640K of Dynamic RAM plus  
128K EMS standard. Internal  
parity check standard. Expand-  
able to 1.2MB on main board  
(640K RAM, 640K Expanded  
Memory Specification). Total  
possible system EMS RAM is  
5MB using Zenith memory  
boards.

**Operating System:** . . . MS-DOS included. Microsoft  
Windows included with Z-159  
Models 3 and 13.

**Keyboard:** . . . . . 84-key keyboard (Models 2 &  
3): detached low profile to con-  
form with DIN standards; 3 ft  
coiled expandable to 6 ft; 10  
function keys; 17 keypad keys;  
57 alphanumeric; caps lock and  
numeric lock are lit; audible click  
on each keypress.

101-key keyboard (Models 12  
& 13): 12 function keys; 4 dedi-  
cated cursor control keys; 4  
special keys; 6 screen keys;  
17-key numeric keypad; 58  
alphanumeric keys; caps, scroll  
and numeric lock keys are lit;  
audible click on each keypress.

**Cursor:** . . . . . Blinking, underline, and reverse.

**Cursor Controls:** . . . . Up, down, left, right, home.

**Cursor Addressing:** . . Relative and direct.

**Tab:** . . . . . 8 column tab.

**Refresh Rate:** . . . . . 50 Hz, 60 Hz.

**Edit Function:** . . . . . Insert and delete character line.

**Erase Function:** . . . . Erase line, erase to beginning  
to line; erase to end of page;  
erase to end of line.

**Bell:** . . . . . Audible alarm in receipt of the  
ASCII BEL command.

**Video:** . . . . . Z-449 video card or Hercules/  
CGA-compatible; varies with  
computer model. Supports text  
and graphics modes. Graphics:  
all points addressable. Resolu-  
tion: dependent on computer  
model. Text: Alphanumeric; 40  
or 80 character lines (columns),  
25 lines per screen. Video mon-  
itor support: dependent on  
model. TTL-compatible mono-  
chrome. RGBI (color), RGBrgb  
(enhanced color), or 31.5KHz  
analog. Video output connector:  
9-pin D-type for all RGBI,  
RGBrgb and TTL monitors.  
15-pin D type for all 31.5KHz  
(VGA) type monitors. Monitor  
select switch: Two-position  
switch on Models 2 & 3 to select  
monochrome or color monitor.

## SERIAL I/O PORT

**Interface:** . . . . . RS-232C 9-pin input/output  
port supports serial devices up  
to 9600 baud.

**Mode:** . . . . . Asynchronous full or half duplex.

## PARALLEL I/O PORT

**Interface:** . . . . . Female Centronics-compatible  
parallel printer port with a DB-25  
pin connector accessible from  
the rear of the unit.

## PRINTER COMPATIBILITY

**Printers:** . . . . . Any Centronics-compatible  
parallel printer; serial interface.

## DISK SYSTEM

**Drives:** . . . . . Single or dual 5.25" floppy disk  
drives. 48 tracks per inch, dou-  
ble sided/double density.

**Capacity:** . . . . . 320K or 360K (IBM 8 or 9 sec-  
tor formats) per drive. 720K total  
(double drives).

**Tracks:** . . . . . 40 per side.

**Hard Disk:** . . . . . Optional hard disk drive. With  
single 5.25" floppy. (Approx.  
26.6MB unformatted—21.4MB  
formatted, 85 milliseconds).

## EXPANSION

**Capability:** . . . . . Hercules monochrome version:  
five slots available for future  
expansion. Additional slot used  
for hard disk controller. Z-449  
video card version: four slots  
available. Additional slot used  
for hard disk controller.

## PHYSICAL

**Case:** . . . . . All metal for strength with deco-  
rative bezels for strength with deco-  
rative bezels for superior styling  
modularized for easy field  
service.

**Size:** . . . . . 16"W x 6.25"H x 16.5"D (with-  
out keyboard). (40.64cm x  
15.88cm x 41.91cm).

**Weight:** . . . . . Approx. 42 pounds (keyboard  
and two drives). (18.9 kg).

**Operating Temp:** . . . . 15-30°C (59-86°F).

## POWER

**Power Requirements:** 120/240 volts at 50/60 Hz at  
300 watts maximum 165 watts.

**Power Supply:** . . . . . Output power: 168 watts  
DC output: +5V. +12V. -12V.  
Input power: 100 to 130 VAC or  
200 to 230 VAC, switch  
selectable.

## ORDER NUMBERS

**Z-159 Model 2:** . . . . . 640K RAM plus 128K EMS; two  
5.25" 360K floppy drives;  
Hercules-compatible or CGA  
video; 84-key keyboard.

**Z-159 Model 3:** . . . . . 640K RAM plus 128K EMS; one  
5.25" 360K floppy drive; 20MB  
hard disk; Hercules-compatible  
or CGA video; 84-key keyboard.

**Z-159 Model 12:** . . . . 640K RAM plus 128K EMS; two  
5.25" 360K floppy drives;  
Z-449 video card; 101-key  
keyboard.

**Z-159 Model 13:** . . . . 640K RAM plus 128K EMS; one  
5.25" 360K floppy drive; 20MB  
hard disk; Z-449 video card;  
101-key keyboard.

## OPTIONS

**Z-315:** . . . . . Memory board for additional  
memory.

**Z-316-8:** . . . . . 8087 numeric coprocessor.

**ZD-72:** . . . . . 3.5" 720K floppy drive (ZCA-16  
cable required).

**CB-5063-50:** . . . . . Real Time Clock Chip.

**TM-159:** . . . . . Technical Manual.

Specifications subject to change without notice.