



Tech Info Library

Apple IIGS: Specifications (Discontinued)

Article Created: 6 October, 1986

I. Technical Specifications

A. Central Processing Unit (CPU)

1. Microprocessor: 65C816
2. Clock speeds: 2.8 or 1.0 megahertz
 - Speed selected by user or software
3. Address bus: 24 bits
4. Data bus: 8 bits
5. Address range: 16,777,216 bytes
6. 16-bit registers:
 - a. Accumulator
 - b. 2 index registers
 - c. Direct register
 - d. Stack pointer
 - e. Program counter
7. 8-bit registers:
 - a. Data bank
 - b. Program bank
 - c. Status
8. Addressable memory (as used in the Apple IIGS):
 - a. RAM: Up to 8 megabytes
 - b. ROM: Up to 1 megabyte

B. Memory

1. RAM: 256 kilobytes
 - Expandable to 8 megabytes
2. ROM: 128 kilobytes
 - Expandable to 1 megabyte
 - a. Control Panel

- b. QuickDraw II graphics routines
- c. Applesoft BASIC
- d. Desk Accessory Manager
- e. Memory Manager
- f. Free-form sound playback capabilities
- g. Apple IIe and IIc soft switches and supporting code
- h. AppleTalk protocols
- i. Apple DeskTop Bus firmware
- j. SANE (trademark) numerics
- k. Event Manager
- l. Tool Locator
- m. Video firmware
- n. Drivers for built-in devices:
 - Mouse and ports for serial interface
and disk drive
- o. Extensions to system monitor for 65C816 support
- p. Diagnostic routines

C. Display modes

1. Graphics

- a. Super-high-resolution
 - 1. 320 dots horizontally by 200 dots vertically
 - Colors per line: Up to 16
 - Colors per screen: 256 from 4096
 - 2. 640 dots horizontally by 200 dots vertically
 - Colors per line: 4 or more
 - Colors per screen: 128 from 4096
- b. Double-high-resolution
 - 560 dots horizontally by 192 dots vertically
 - Monochrome
- c. Double-low-resolution
 - 80 dots horizontally by 48 dots vertically
 - Colors: 16
- d. High-resolution
 - 280 dots horizontally by 192 dots vertically
 - Colors: 6
- e. Low-resolution
 - 40 dots horizontally by 48 dots vertically
 - Colors: 16

2. Text

- a. 40-column text mode
 - 40 columns by 24 lines
- b. 80-column text mode
 - 80 columns by 24 lines

D. Character sets

1. Letters

- a. Uppercase: 32
- b. Lowercase: 32

2. Characters:
 - a. Special: 32
 - b. MouseText: 32
 - c. Unique: 12
 - For each international character set: U.S., U.K., French, Danish, Spanish, Italian, German, and Swedish

E. Keyboard

-- Standard typewriter-style

1. Keys:
 - a. Main board: 80
 - b. Numeric keypad: 14
2. Apple DeskTop Bus (ADB) connectors: 2
 - a. For attaching keyboard to computer
 - b. For daisy-chaining a maximum of 16 ADB input devices
3. Layouts: 11
 - Selected through Control Panel
 - a. QWERTY (Sholes)
 - b. Dvorak
 - c. International sets: 9
 - U.S., French Canadian, U.K., French, Danish, Spanish, Italian, German, and Swedish

F. Sound capability

1. Ensoniq 32-oscillator digital synthesizer chip
 - Dedicated 64K RAM
2. Simultaneous voices: Up to 15
3. Output:
 - a. Internal speaker
 - b. Audio output jack:
 - Inside diameter 3.60mm
 - Accepts a 3.5mm stereo plug
 - c. Signal-to-noise ratio: 48bd
 - d. Volume adjusted from Control Panel

G. Interfaces

1. Expansion slots
 - a. Multipurpose RAM and ROM expansion slot
 - b. General purpose input/output slots: 7
 - For peripheral control cards
 - Each slot fully buffered
 - Interrupt and DMA priority

2. Serial ports: 2
 - 8-pin mini-circular connectors
 - AppleTalk
 - Utilize SCC communication chip
3. Disk drive port:
 - 19-pin D-style connector
 - Supports daisy-chaining
4. Video output
 - a. Analog RGB via 15-pin D-style connector
 - b. Composite color via RCA phono connector
5. Apple DeskTop Bus ports: 3
 - 4-pin mini-circular connector
 - a. On back of IIGS: 1
 - b. On keyboard: 2
6. Game I/O: 9-pin D-style connector
 - For joysticks, graphics tablet, etc.
7. Audio
 - a. RCA mini jack
 - Programmable volume control
 - b. Input/output connector on main logic board

H. Operating systems

1. ProDOS (registered trademark):
 - a. ProDOS 8
 - b. ProDOS 16
2. Pascal
3. DOS 3.3
4. CP/M
 - With appropriate co-processor card

I. Other Features

- Real time clock
 - Set through Control Panel
- Battery backup for Control Panel settings

J. Electrical

1. Line voltage: 107 to 132 volts AC; 50 to 60 Hertz
2. Power consumption:
 - Typical: 11 watts
 - Maximum: 60 watts

3. Supply:

| | Voltage in volts | Voltage Tolerance | Maximum current in milliamps (ma) |
|----|---------------------|----------------------|--------------------------------------|
| a. | + 5 | 3% | 2500 ma |
| b. | +12 | 6% | 1500 ma |
| c. | - 5 | 10% | 250 ma |
| d. | -12 | 10% | 250 ma |

4. Safety and EMI qualifications

- a. FCC Part 15, Class B Computing Devices
- b. CSA 22.2, No, 154-1979
- c. UL 114-Office Appliances and Business Equipment

K. Environmental

- | | Degrees | |
|---|-----------|------------|
| | Celsius | Fahrenheit |
| 1. Ambient operating temperature: | 0 to 45 | 32 to 113 |
| 2. Maximum temperature on power supply case: | 55 | 130 |
| 3. Relative humidity: | 5% to 85% | |

L. Physical

- | | mm | inches |
|------------|-----------------------|--------|
| 1. Width: | 284 | 11.2 |
| 2. Depth: | 348 | 13.7 |
| 3. Height: | 117 | 4.6 |
| 4. Weight: | 3.96kg or 8.72 pounds | |

Article Change History

12/14/92 - Modified to add Discontinued to title
08/23/89 - Reviewed For technical accuracy
Copyright 1988 Apple Computer, Inc.

Keywords: SPECSHT

=====
This information is from the Apple Technical Information Library.

19960215 11:05:19.00

Tech Info Library Article Number: 1937