

# General Information

The Sega Dreamcast, released in late 1998 in Japan and 1999 in North America and Europe, was Sega's final home console and a technically advanced system for its time. It featured a custom Hitachi SH-4 RISC processor running at 200 MHz and a PowerVR2 CLX2 GPU capable of hardware transform and lighting, supporting a maximum resolution of 640x480. The system included 16 MB of main RAM, 8 MB of video RAM, and 2 MB of audio RAM. Its audio was powered by a Yamaha AICA sound processor with a built-in ARM7 CPU, providing 64 hardware channels and advanced effects processing.

One of the Dreamcast's standout features was its built-in 56K modem (or optional broadband adapter), enabling online multiplayer gaming and web browsing, an industry first for consoles at the time. It used proprietary GD-ROM discs capable of storing up to 1.2 GB of data, which offered more capacity than standard CDs but less than DVDs used by later systems. Hardware-wise, the Dreamcast is known for its modular internal design, making it relatively easy to disassemble and service. Common hardware issues include power supply failure, GD-ROM drive read errors, and controller port fuse problems. The console also featured the VMU (Visual Memory Unit), a unique memory card with its own screen, buttons, and micro controller, capable of running mini-games and displaying in-game data. The Dreamcast remains a favorite among modders and enthusiasts due to its accessible architecture, strong homebrew scene, and support for VGA output and optical drive emulators (ODEs) like GDEMU.

## Hardware Specifications

- **CPU:** Hitachi SH-4 (200 MHz, 32-bit RISC)
- **GPU:** PowerVR2 CLX2 (100 MHz, 3 million polygons/sec, hardware T&L)
- **RAM:**
  - 16 MB main system RAM
  - 8 MB video RAM
  - 2 MB audio RAM
- **Storage Media:** GD-ROM (1.2 GB capacity per disc)
- **Audio:** Yamaha AICA sound processor with ARM7 (32-bit, 45 MHz)
- **Video Output:** Composite, S-Video, RGB SCART, VGA (via adapter)
- **Expansion:**
  - 56K Modem (RJ11)
  - Optional Broadband Adapter (LAN)
  - Controller ports (x4) with VMU support
- **Power Supply:** 100-240V AC internal PSU (frequently fails due to heat)

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