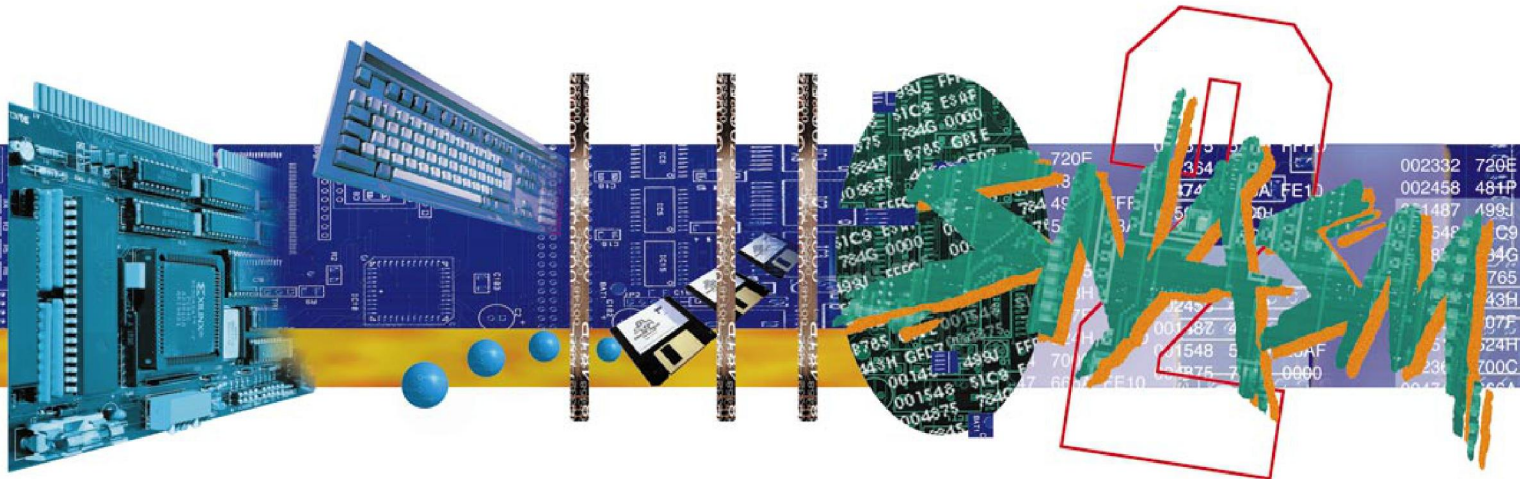


005656 31C0:00233A  
002458 481P:00234A 6706:50F9  
001487 499J:F



# technical data

# SATURN

## Multi-Purpose Documented Interface Standard

The interface hardware we supply forms part of an open interface standard, so it supports other tools such as sound editors and artwork designers which are already available from Sega and third parties, with many more products planned for the future.

## High Performance Interface

The interface hardware has its own RISC processor to avoid burdening the SH2s with communications tasks, and it uses a high-speed SCSI-2 interface so you get ultra-fast downloads and responsive debugging. The interface firmware is in flash memory so that any updates that may be required can be quickly and easily performed on-site without needing to return systems for upgrade.

## Supports GNU C and Hitachi Mnemonics

You can rapidly port existing code, or samples, as we support GNU and Hitachi syntax in addition to our powerful SNASM2 code syntax. The system includes assemblers for SH2 and 68000 processors, a powerful multi-processor linker, GNU C compiler so you can work in any mixture of C or assembly language with full source-level debugging facilities being provided by our advanced SNASM2 remote debugger.

## NMIs to all three processors

By adding shielded NMI cables between the Saturn target and the hardware interface, the debugging process is greatly improved. Rather than insisting that the program being debugged periodically checks to see if the PC wants to communicate, a separate Non-Maskable Interrupt is used for each processor. This means that the target is still available if the program being debugged should hang and that code can be debugged in its final production form.

## All Systems Supplied V-CD Ready

Our debugging systems have been designed to work alongside the Saturn CD BIOS so you get full access to the CD features without having to jump through hoops. SNASM2 for Saturn can be used with a Programmer's Small Box, or we can supply a production Saturn which is modified to allow it to be used with a CD emulator such as the JVC V-CD or Mirage CD Emulator.



## A Complete System

The SNASM2 Saturn development systems can be tailored to the developers specific requirements from low-cost options through to a comprehensive multi-purpose development environment and is supplied with all necessary hardware and software to begin development immediately.

SEGA



# technical data

## SATURN

The SNASM2 professional development environment consists of a core set of features and syntax which are common across all processors and all platforms. This means that you don't need to learn a new set of development tools or environment each time you change target, greatly reducing the learning curve of new platforms saving both time and money.

### SNASM2 - Assembler/Linker

Fast and powerful assembler written specifically for the games industry. 32-bit 386 protected mode provides even more speed and supports larger projects.

Combined assembler and linker allows any combination of direct assembly and linking, and any combination of C and assembler code.

### SNASM2 - Debugger

TRUE source level debugging automatically knows where source files are and which should be loaded when.

Source level debug C, assembler or mixed mode projects.

Debug multiple processors on a single screen. Split-screen code window - view source and disassembly at the same time and trace in either.

32-bit 386 protected mode to provide unlimited windows, symbols, debug info, etc. Configurable breakpoints to allow stopping on condition, logging without stopping, etc. Session save to maintain windows, breakpoints etc. between debugging sessions.

### SNASM2 - Data

Genuine download speed of 600k per second. Output file types: COFF, Binary, S19.

### SN320 - Saturn Development System Contains:

#### SNASM2 - Standard Software

- SH2 Assembler/Linker
- SH2 Source-level Debugger
- Brief macros
- Librarian
- Make utility
- GNU C Compiler for SH2
- Test utility

#### SNASM2 - Standard Hardware

- Adaptec SCSI card
- SCSI cable
- Enhanced Production Saturn targets
- Cart Dev interface for Saturn

- Detailed technical documentation.
- 12 months unlimited technical support and upgrades.
- Access to dedicated BBS for upgrades.

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