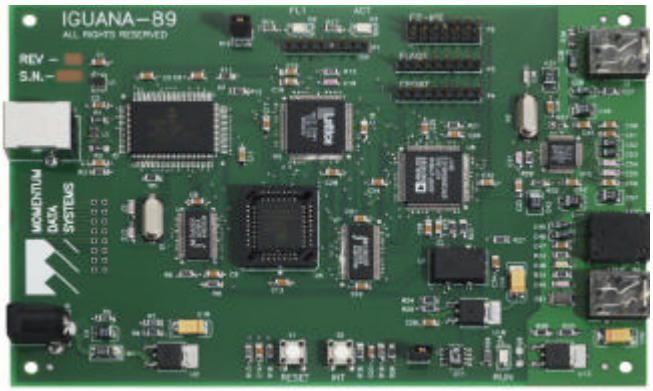
17330 Brookhurst St., Suite 140, Fountain Valley, CA 92708
Phone: 714-378-5805 / Fax: 714-378-5985
email: dsp@mds.com */ web URL:* http://www.mds.com



Iguana-89

The Iguana-89 is a cost effective **audio DSP board**. It uses the Analog Devices **ADSP2189** processor which is a 16 bit, **75 MIPS** DSP processor with 192 kbytes of on-chip RAM (32 kwords program and 48 kwords data memory), and high speed serial interfaces. The Iguana provides a high quality **stereo analog audio interface**, and control from a PC using the Universal Serial Bus (**USB**).

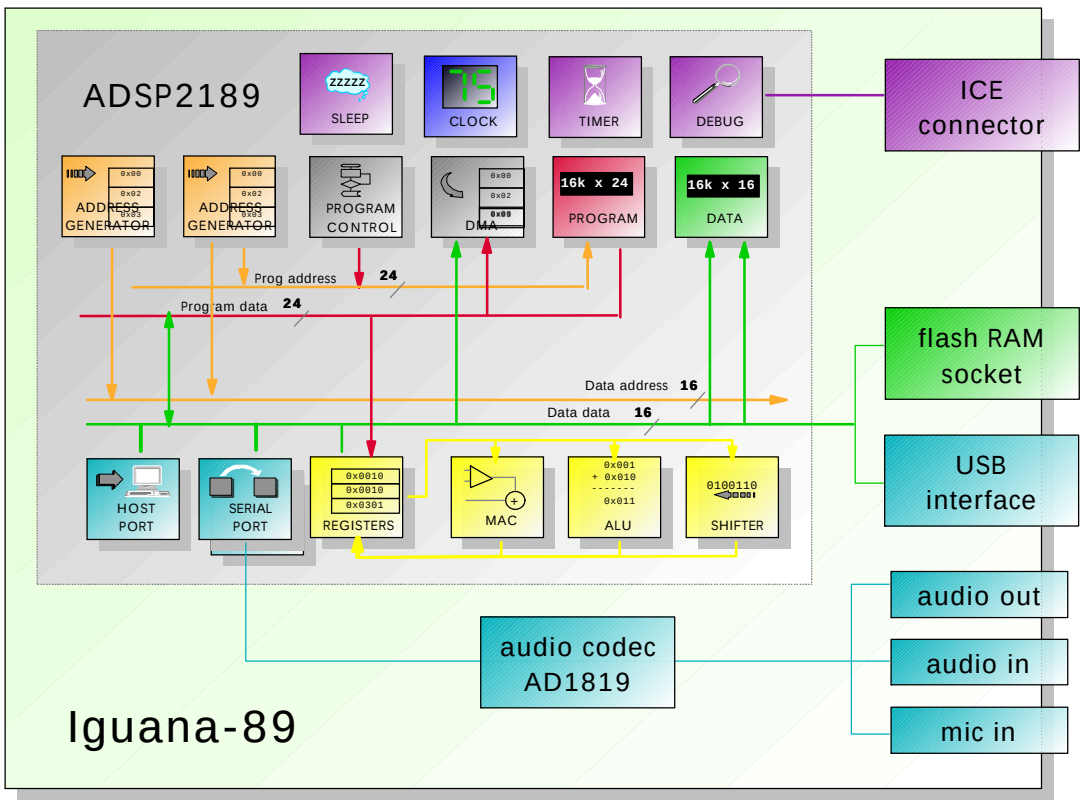
The Iguana-89 is an **ADSP2189 development system** for the ADSP2189. The USB interface makes program downloading and debugging faster than the RS232 interface of older products, and allows for audio data transfer between PC and DSP. Software is provided to download and control programs across the Universal Serial Bus (USB) as well as to upload and download data.

The ADSP2189 can be programmed in C or assembly language.

The Iguana is also designed for **stand alone operation**, so it is reasonable to develop an application using the Iguana as a development platform and then base a final product on the same hardware in an **embedded or stand alone** system. There is a **flash RAM socket for autonomous booting** and program loading.

Features:

- line level **stereo audio input and output**
- mono **microphone input**
- EZ-ICE connector for In Circuit Emulator
- **flash socket for stand alone operation**
- DSP example programs and Windows 98 program loader
- **Universal Serial Bus (USB) interface**



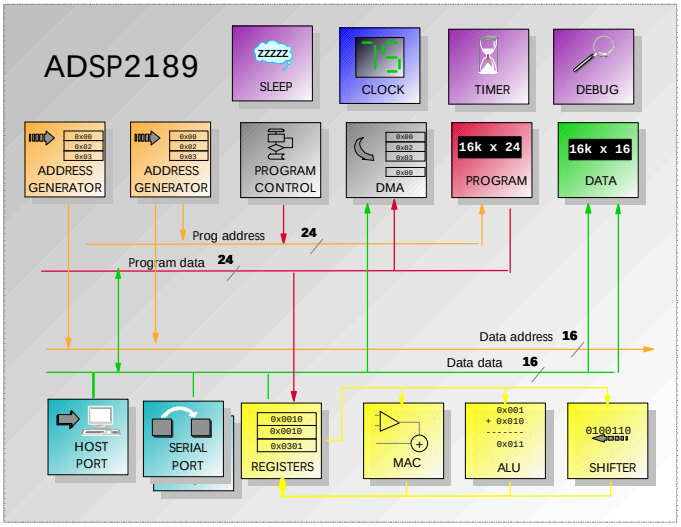
Iguana-89 data sheet

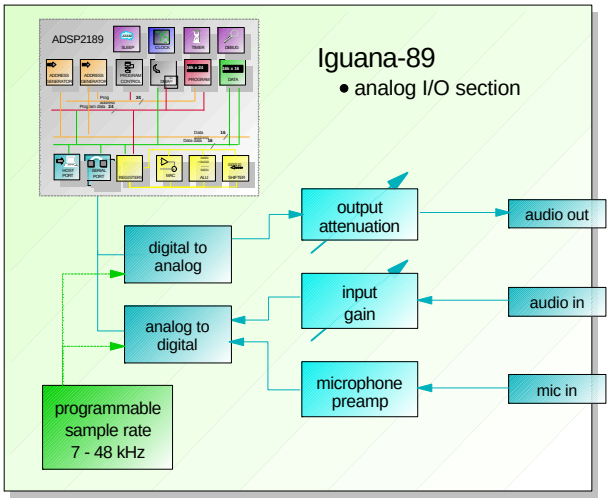
The DSP

The **ADSP2189** is a high speed, **low power**, Digital Signal Processor (DSP) with a 13.3 ns instruction cycle time. Every instruction can execute in a single processor cycle and the architecture allows multiple operations in parallel, reaching a maximum sustained speed of **75 MIPS**.

The ADSP2189 provides **192 kbytes of memory** - 32 kwords for program and 48 kwords for data - which is adequate for most real time DSP applications.

Programming can be in **C or assembly language**. The device is ideally suited to real time programming with **concurrent I/O**.





Analog interface

The **dual channel analog interface** provides high quality **16 bit** analog I/O at sample rates which are programmable between **7 - 48 kHz**. Input gain is programmable between 0 and 12 dB, and output gain or attenuation between +12 dB and -34.5 dB.

The Iguana brings **line level analog audio** input and output, as well as a separate **microphone input**, to standard audio connectors.

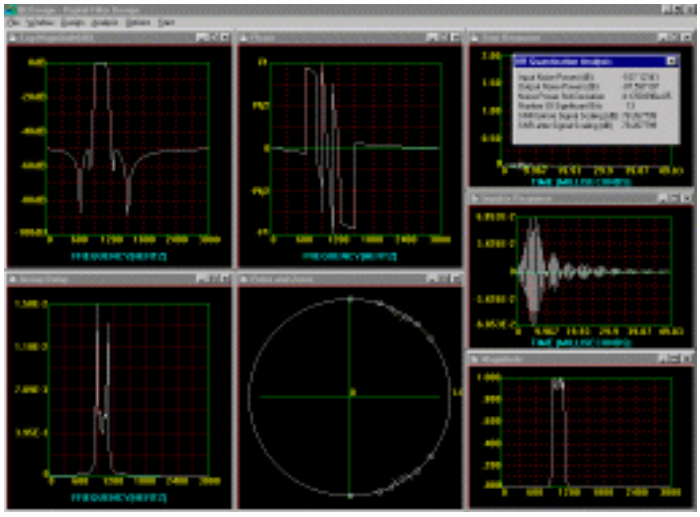
Analog signals are interfaced to the ADSP2189 processor's **high speed serial interface**, which makes programming of analog I/O simple and efficient.

Software

Software is provided to download and control programs across the Universal Serial Bus (**USB**), as well as to upload and download data.

The Iguana is also supported by Momentum's **QEDesign** software which **generates real time digital filter program code** as subroutines or as complete programs which can be executed straight away on the HummingBird, operating upon real time analog signals.

Program examples are provided showing how to program the analog I/O, and for typical real time DSP applications such as real time digital filtering.



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