

Soft dB

SIGNAL RANGER STD

Overview

Signal Ranger STD is a fixed point DSP board featuring a 100MHz TMS320C5402 DSP and a full-speed USB interface, providing fast communication and power supply to the board. Its Windows driver allows the connection of up to 127 boards to a single USB root (limited only by the USB standard).

Specifications

- Fixed point TMS320VC5402 DSP @ 100 MHz
- USB data throughput: 0,5 Mb/s

Memory

- 16Kwords on-chip (DSP) dual-access RAM, mapped in data space and program space
- 64Kwords external 1-wait-state static RAM, mapped in data space

Analog I/Os

- 8 16-bits sigma-delta analog inputs, sampling at up to 22Ks/s. Dynamic range $\pm 10V$
- 8 16-bits sigma-delta analog outputs, sampling at up to 22Ks/s. Dynamic range $\pm 2.5V$

Expansion

- External bus connectors give access to Program and I/O spaces of the DSP, as well as most DSP control signals that are not used on-board (interrupts, clock, ...). This external bus allows the development of daughter boards, featuring specialized DSP peripherals, not present on the board.

A software environment designed to accelerate your DSP development

- MatLab/Simulink converter that allows implementation of MatLab/Simulink design onto the Signal Ranger STD Board.
- USB "Plug and Play" drivers for Windows 9x, Windows Me and Windows 2000
- High-Level access libraries (DLLs) allowing the development of PC applications using the board
- LabView interface allowing the development of LabView applications using the board
- Complete and documented code examples (PC side and DSP side) illustrating the use of the LabView interface and access DLLs, and jump-starting the development:
 - Signal Tracker: A simple signal analyser
 - Response Tracker: A white noise correlator to identify in real time the impulse response between an analog output and an analog input
- DSP I/O driver simplifying the development of DSP code using the analog I/Os. The driver is written in assembly code and uses the DMA for best efficiency. It can be used in C or assembly. The source code is provided.
- Complete debugger with high-level features: dynamic DSP code execution, real time memory Read/Write, symbolic access to DSP variables and functions and graphic DSP data presentation

A technology designed to accelerate DSP learning

- Complete user manual including code examples to facilitate the development
- Unparalleled tool for teaching DSP technology to college and university students

A product with demonstrated performance and stability

Signal Ranger STD is presently used in several applications. Results demonstrate the stability and performance of this product:

- The TEAM project (TeleEducation in Aerospace and Mechatronics), coordinated in Canada by the Université de Sherbrooke, is a « distributed » research and education laboratory. It is composed of experimental setups contributed by several universities around the world and linked by Internet for tele-education. It uses **Signal Ranger STD** as a teaching tool in the field of control.
- D-Box technologies inc. uses **Signal Ranger STD** to capture and play-back motion signals as part of a new technology designed to integrate motion simulation to the home theatre.
- Under-graduate students in the Electrical Engineering program at Université de Sherbrooke (Canada) use **Signal Ranger STD** to learn the basics of Microprocessors and embedded systems.
- Mecanum inc., a company who specializes in acoustic materials testing and modeling, adopted **Signal Ranger STD** as the acquisition hardware for the “Poroverse system” – an advanced equipment used for the full characterization of open-cell poroelastic materials.

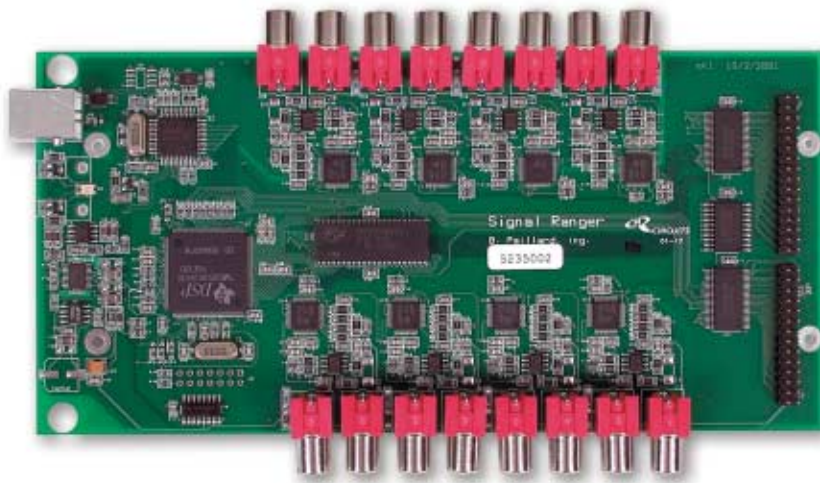
Applications

Signal Ranger STD is particularly suitable for a variety of applications, including:

- Multi-channel speech and audio acquisition and processing
- Multi-channel control
- Instrumentation and measurement
- Vibro-acoustic analysis
- Acoustic Array processing/Beamforming.
- DSP software development

About Soft dB

Soft dB provides innovative, state-of-the-art DSP boards, the **Signal Ranger** series. Combining performance, reliability and low cost, the **Signal Ranger STD** series is recognized throughout the world as an outstanding product on the DSP market in the fields of acoustics, vibrations, high speed control and related areas. Sold in more than 15 countries, our boards have proven to be extremely reliable and rugged and have established Soft dB's reputation as a high-quality DSP supplier.



Soft dB

1040 Belvédère Avenue, Suite 215
Québec (Québec) G1S 3G3 Canada
T. (418) 686-0993 F. (418) 686-2043
Toll free: 1 866 686-0993

www.softdb.com/a-dsp.html

TI Third Party Network
Member

