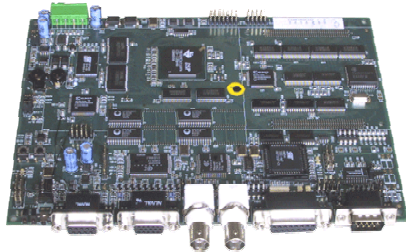




## **Sindsp-C6000 Stand-Alone DSP Board For Image Capture and Processing**



### **Sindsp-C6000 board**

**Sindsp-C6000** board is designed and manufactured by *Sinartis* to be embedded in industrial and commercial systems which need to capture, to process and to display video images, in a stand-alone way (no personal computer is required).

The **Sindsp-C6000** board image processing unit is a *Texas Instruments Digital Signal Processor (DSP)* TMS320C6711. It is a 32-bit floating-point processor at 150 MHz.



### **TMS320C6711 DSP**

The on board video chip-set encoder/decoder is a new generation one and it is able to multiplex up to 4 color video standard inputs, to execute *real-time image scaling* and to grab at low *jitter*. In addition, it has an analog color monitor out.

The video input section is independent from the video output section, so that the video input and the video output streamings can be controlled separately. It is possible also to control a restart-reset camera acquisition mode.

The **Sindsp-C6000** on board synchronous dynamic RAM of 64 Mbytes together with the use of the internal cache, allows an optimized use of the DSP processing power.

The image processing *Software* is preloaded as *Firmware* on a *flash EPROM* and it is executed by the DSP. The *Firmware* can be delivered as a set of basic functions for image acquisition and displaying, or as a set of image processing libraries, or customized for the specified application.

**Sindsp-6000** communicates with a remote processor (*PLC, CNC, PC, etc.*) by means of standard multi-serial interfaces *RS-232* or *RS-485* (by a specified protocol delivered by *Sinartis* to the user).

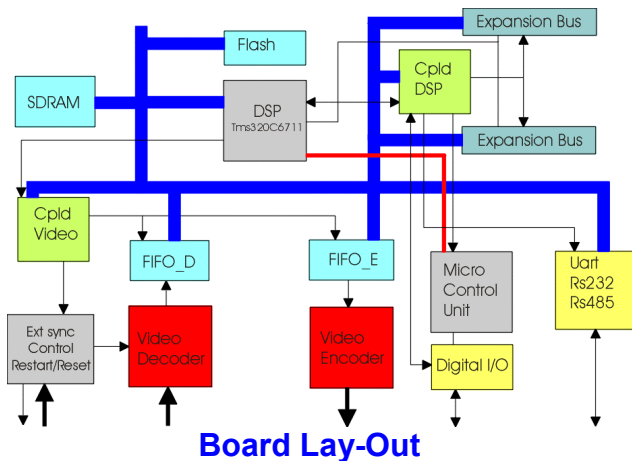
## **Key Features**

### *Sindsp-C6000*

- TI DSP Processor TMS320C6711
- 64 Mbytes SDRAM
- 4 Mbytes Flash EPROM
- Four Video Composite Inputs
- External Sync for Restart-Reset Camera Mode
- CCD-Control Frame-Integration
- Integrated Video Capture, Processing and Display
- Separate FIFOs for Video Input and Video Output
- Composite Video output
- RS-232/485 Multi-Serial Communication
- Opto-isolated digital I/Os
- TI Standard Daughter-Board Connectors
- Customizable Image Processing Firmware Based on TI IMG67X Image/Video Processing Library
- SinLib Image processing library
- Boxed version with front panel control keyboard and display
- Dual board rack-mounted version
- (Opt) CCS TI Development Tools



## Sindsp-C6000 Stand-Alone DSP Board For Image Capture and Processing



### Applications are

- Stand alone image processing
- Stand-alone vision systems for industrial automation including X-Ray applications
- Security and surveillance
- Robotics
- Imaging developer DSP-board.



### Connectors

- DSUB 15: p HD female for 4 video inputs, 1 power output 12 Volt-0.5 A
- DSUB 9: camera control
- DSUB 9: serial communication
- DSUB 15: digital IO
- BNC connector for 1 video input
- BNC connector for 1 monitor output
- TI standard daughter board connectors

### HOW TO ORDER

Code	Description
8S0908	Sindsp DSP C6000 Board + application FW (to be specified)
8S0825	Cable 5 m BNC-BNC for monitor
8S0846	Cable 3 m DSUB-HD 15p – 4 BNC

### TECHNICAL SPECIFICATIONS

#### Video input

- PAL, NTSC, CCIR, RS-170
- External sync for restart reset camera

#### Video multiplexer

- MUX on Video decoder: 4 video inputs
- High speed MUX (opt): 4 video inputs

#### Display

- Composite analog color video output (PAL, NTSC)

#### DSP Processor

- Texas Instruments TMS320C6711
- 32 bits floating point 150 MHz

#### Microcontrollers

- a-Microcontroller (Core 8051) connected with DSP host port
- b-Microcontroller (Core 8051) for restart-reset camera control

#### Memory on board

- 64 Mbytes SDRAM @100MHz
- Flash EPROM 4 Mbytes

#### Video settings

- SW controlled video parameters (contrast, brightness, color...)
- Real time image scaling

#### Board dimensions

- 180 mm x 205 mm

#### Power in

- +5 Volt - 1 A
- +12 Volt 500 mA (only for camera powering)

#### Power out

- +12 Volt - 500mA

#### External trigger

- 1 TTL pulse

#### Firmware

- Image processing Firmware libraries for industrial applications
- Customizable Firmware for applications

#### Optional

- Boxed version with front panel Keyboard and display LCD
- Dual board rack-mounted system

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