

Introduction

The ScoobyV1.5 Platform is powerful prototyping tool for evaluating performance of SMIA 1.0 compliant CMOS sensors. It is a complete Hardware-Firmware-Software package enabling designer to start application immediately.

Features

- Standard 16-pin Sensor Module socket
- ST SMIA832 Decoder interface
- On-board Real time processing with Xilinx FPGA and ARM Risc processor.
- On-board 32MB SDRAM Image Buffer
- External or Internal programmable Sensor Clock
- Real-Time CCP Timing measurement and error checking.
- Dual Programmable Voltage Power Supplies with build in active and leakage current measurements.
- Support for Internal or External Power Supplies.
- RMS noise measurement on analog power.
- Additional Programmable Voltage Power Supply simulating Cell-phone battery.
- Auto Calibration.
- Complete SMIA compliant CCI (I2C) interface with fully programmable timing parameters.
- Optional External IO connectors with: I2C , SPI, RS232 and general IO signals.
- Provided software package includes everything from 1394 Device Driver up to Display and Monitoring tools.
- Real-Time Image Capture via 800Mbs IEEE 1394b host interface.

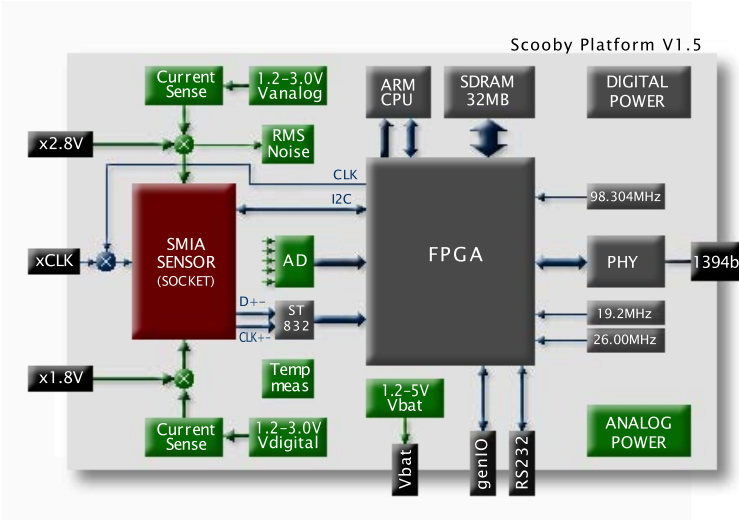
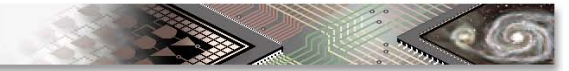
Analog		
Sensor Socket	Smia1.0 16-pin DIP	
Power Supply	Analog Power Supply 1.22V-3.0V / 0.5A internal or External DC jack	
	Digital Power Supply 1.22V-3.0V / 0.5A internal or External DC jack	
Current Measurement	Low Range	0-1000uA
	Mid Range	0-100mA
	High Range	0-500mA

Digital / Firmware	
SMIA Receiver	STSMIA832
FPGA	Xilinx Spartan3 LVCMOS1.8V Interface signals CCP interface CCI Interface I2C,SPI & genIO interface
Memory Buffer	32MB SDRAM
CPU	Atmel ARM AT91R40008 RISC 32bit/66MHz

Software	
System Software	Windows 2000 /XP 1394 Device driver
	ScoobyAPI15.dll
Console Tools (Visual C++ source code)	CCI Utility CalibrateVoltage CalibrateCurrent genIO Utility Data2File Capture
GUI Tools	ScoobyMon ScoobyDisplay



© 2006 Atra Vision. All rights reserved
. Scooby Platform™ is Atra Vision trademarks; all other trademarks and registered trademarks are the property of their respective owners



Analog Front-End

Provides interface to standard SMIA 16-pin DIP socket with CCP, CCI, Clock, ShutDown signals and Digital / Analog Power Supplies. High speed differential CCP interface is implemented with ST SMIA832 receiver. Power supplies, have built in multiple range current sensors, measuring active and leakage consumption in range from 1uA up to 500mA. The RMS converter measures noise component off analog power supply.

On Board Processing

The combination of local FPGA, SDRAM and high speed RISC processors provide support for extensive set of internal features. FPGA process raw CCP data stream, perform real-time extraction/verification of various video timing parameters and buffers the data in internal 32MB SDRAM buffer. CCI interface is implemented in firmware with programmable timing features beyond SMIA spec. range in resolution of 10 ns.

Host Interface

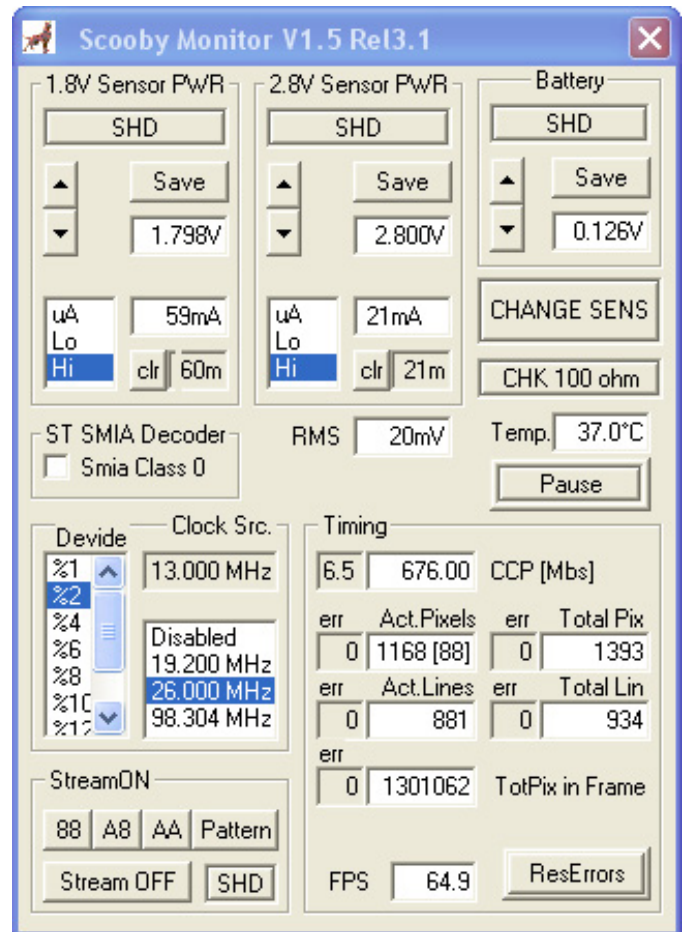
Captured data can be send to host PC, via high speed 1394b serial interface, either as a formatted video stream or raw file data.

Power Supply

Scooby Box is powered from 1394 cable 12 power supply. SMIA sensor powers are generate with low noise linear regulators

Software SDK

provides the documentation, samples, header files, libraries, and tools you need to develop custom applications. Basic functions: CCP Data capture, CCI operations, Power control are demonstrated with Visual C++ source code samples. Higher level GUI utilities: Image Display and Control Monitor are provided as a stand alone applications for fast product demonstration.



ScoobyV15 Documentation

Scooby_fly.pdf	Scooby product Brief
ScoobyAPI.pdf	Scooby API Data Sheet
ScoobyUM.pdf	User Manual

For additional information please contact
Atra Vision Inc.

Phone: +1.416.732.2571
E-mail: sales@AtraVision.com
Web: www.AtraVision.com