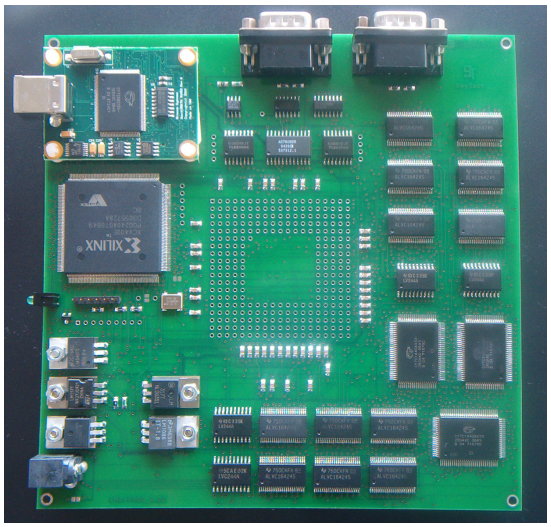
SKYTECH

LASER METROLOGY BOARD

LMB-A000

Features

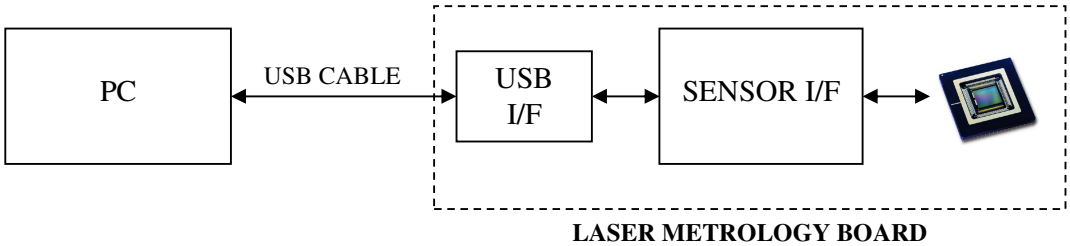
1280 x 1024 pixel
Fast Acquisition
Universal PC interfaces
Image processing on PC
Real-time Pre-processing by on-board FPGA
Sensor MICRON MT9M413C36STC



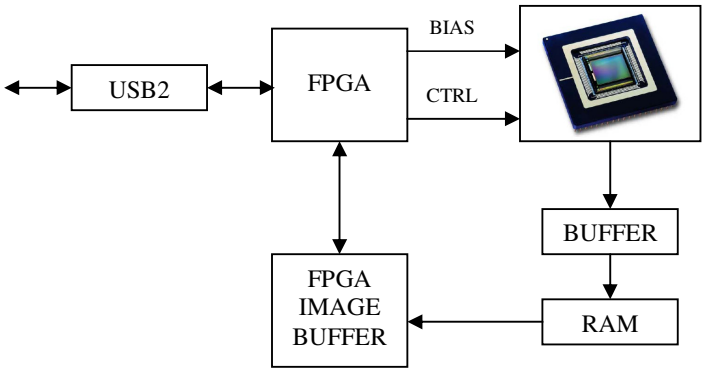
Applications
High-speed, high-frequency image acquisition
Process control
Monitoring of fast moving, fast rotating parts
Instrumentation

The Laser metrology Board is designed to interface and control the MICRON MT9M413C36STC image sensor and to acquire 1280x1024 pixel images with a frame rate of 500 fps. The acquired image is a 10-bit data stream that is processed either on-board (via programmable FPGA) or via the control PC.
The Control PC is interfaced with the Laser Metrology Board via USB2.0 and allows real-time and off-line image processing and analysis.

The typical configuration of a Laser Metrology acquisition system is the following:



The image acquisition sequence is the following:
1. acquisition of the 100-bit image: the image is stored in a 104-bit RAM bank
2. readout of the image by the FPGA using 52-bits packets
3. image processing by the FPGA and/or the application software



By the USB2 line, the system allows an easy access to the hardware resources of the interface board:

- High-speed parallel port
- GPIO
- RS232
- I2C
- FPGA programming i/f

The board mounts an Altera Cyclone II EP2C20F256C7.

Technical characteristics

Sensor	MT9M413C36STC
Image dimensions	1280 x 1024 pixel
Resolution	10 bits
Acquisition time	2 usec (min)
Frame rate	500 fps
PC interface	USB2

Ordering information

P/N	Description
LMB-A000	Laser Metrology Board
	Laser Metrology general purpose software