



VISION
2008

**Vision Award
Winner 2008**

Technical information

leanXcam

- Programmable smart camera
- Open-source
- Low-cost

leanXcam

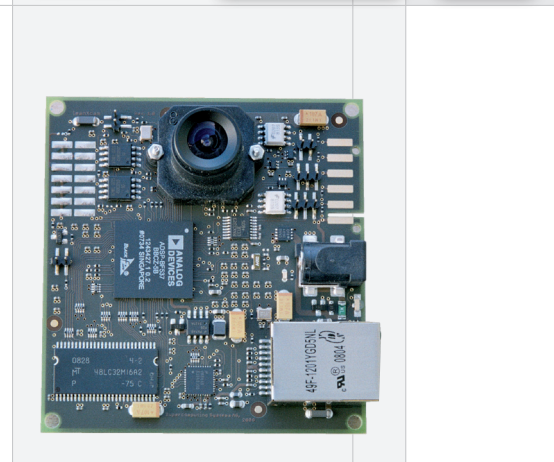
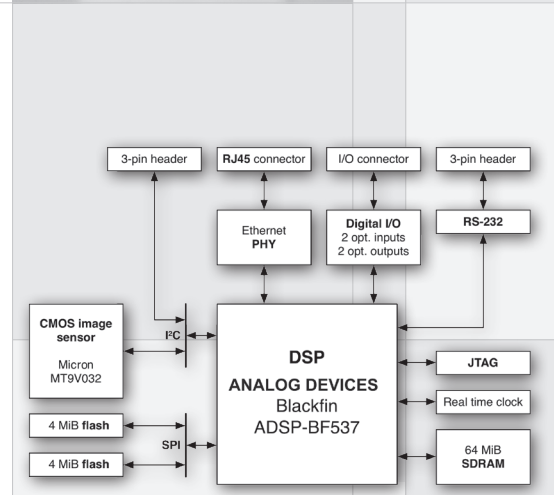
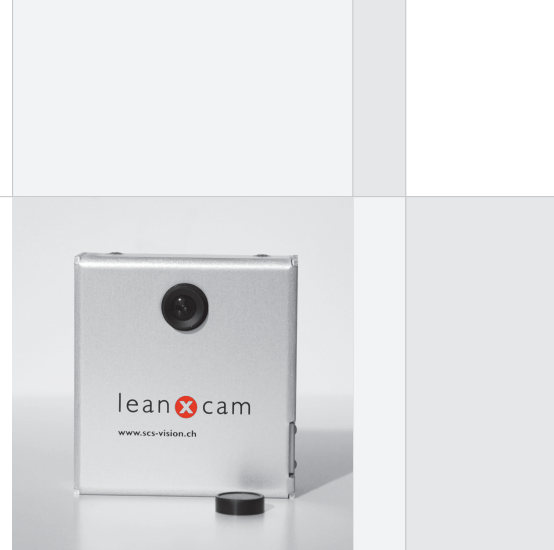
leanXcam is an intelligent colour camera with a rich set of features that provides an impressive performance, in spite of its low production cost. The smart combination of a well-established sensor chip, a fast digital signal processor, a tailored Linux-based operation system and the image processing framework from SCS-Vision makes the leanXcam an incomparable achievement in the field of Vision. Communication is ensured by Ethernet connection and digital I/Os. The development environment and the entire software framework are distributed under the LGPL V2 open-source license and hence free of charge.

Software and programming

Operating System
µClinux – Microcontroller Linux OSCAR – Image Processing Framework
Programming
C using GNU Toolchain (Crosscompiler) GDB Debugger, Serial, Ethernet & JTAG
Communication
Ethernet – TCP/IP Stack, Webserver, FTP, TFTP Client, SSH, RSH
Further information and support
www.leanXcam.ch

Technical information

System	
Processor	ANALOG DEVICES Blackfin ADSP-BF537, 500 MHz
SDRAM	64 MByte
Flash	2 x 4 MByte
Camera	
Sensor	CMOS 1/3" Micron
Resolution	Wide-VGA 752H x 480V, 10 bit per pixel
Frame rate	60 fps (at full resolution)
Lens	M12 Micro Mount, Standard f=3.6 mm (other focal lengths on request)
Shutter Type	Global Shutter
Input / Output	
Input	Trigger or General Purpose, optoisolated, up to 24V
Input	General Purpose, optoisolated, up to 24V
Output	Trigger for external Flash or General Purpose, up to 24V
Output	General Purpose, optoisolated, up to 24V
Communication	
Ethernet	100Mbs, RJ45
Serial	1 RS232 line, baud rate 1200 - 115200, 3-pin header
I²C	3-pin header
Mechanical Characteristics	
Dimensions	81 x 74 x 30 mm (L x W x H)
Power	
Power Supply	5V DC, <500 mA



Field of view with f=3.6mm	
Distance	Object
0.2 m	0.26x0.17 m
0.5 m	0.67x0.43 m
1.0m	1.33x0.85 m

