RHEED Software | SAFIRE

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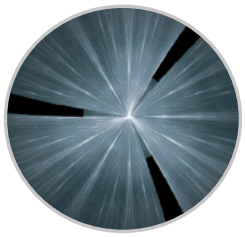
The RHEED software SAFIRE is a powerful and easy to use RHEED evaluation tool. It combines sophisticated evaluation algorithms with extensive options for data representation and documentation. SAFIRE can handle an arbitrary number of parallel measurements and offers quick real-time data exchange with MBE controller for closed feedback loop operation. Multiple measurements can be stored in the same display for comparison. Hard disk recorder allows live streaming to the hard disk and replay for subsequent analysis. SAFIRE runs on Windows XP, 7 and 10.

Features

- Arbitrary number, shape and size of areas of interest
- Variable image acquisition rate (depending on camera)
- On-chip integration for minimum noise at low signal levels
- Quick bi-directional signal bus
- Multi-tasking technology for parallel measurements
- Extensive triggering capabilities
- Pre-trigger for easy adjustment and data recording
- Multiple repetitions of measurement for easy comparison and parallel evaluation
- Suitable for LEED observations
- Continuously growing library of processing and fitting algorithms:
  - Lattice constant determination
  - FWHM of reflections as a funtion of time
  - Fourier transforms in space and time
  - Integration in space and time for reduction of dimensionality
  - Slicer to extract data
  - Kikuchi line analysis
  - Full length and running average sine fit
  - Azimuthal scan for planar cuts through reciprocal space

Options

- Digital CCD camera GigE monochrome
- Digital CCD camera USB 14 bit
- Computer with monitor for SAFIRE
- Camera holder
- RHEED screen set
- Software update for current operating system



CCD CAMERA TYPE	GigE monochrome	USB 14 bit
SENSOR	1/3“	2/3“
RESOLUTION	659 x 494 pixel	normal: 1392 x 1040 pixel center: 800 x 600 pixel
EXPOSURE TIME	32,48 µs to 2 s	5µs to 60s
MAX. FRAME RATE	120 fps	13,5 fps
DATA INTERFACE	Hirose 12 pin (Ethernet cable CAT 6)	USB 2.0
CAMERA DIMENSIONS	29 x 44 x 75 mm | 125 g	39 x 47 x 71.5 mm| 250 g
LENS	RICOH 25 mm | f 1.4 | C-Mount	
QUANTUM EFFICIENCY	-	up to 65 %
DYNAMIC RANGE A/D	-	14 bit

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