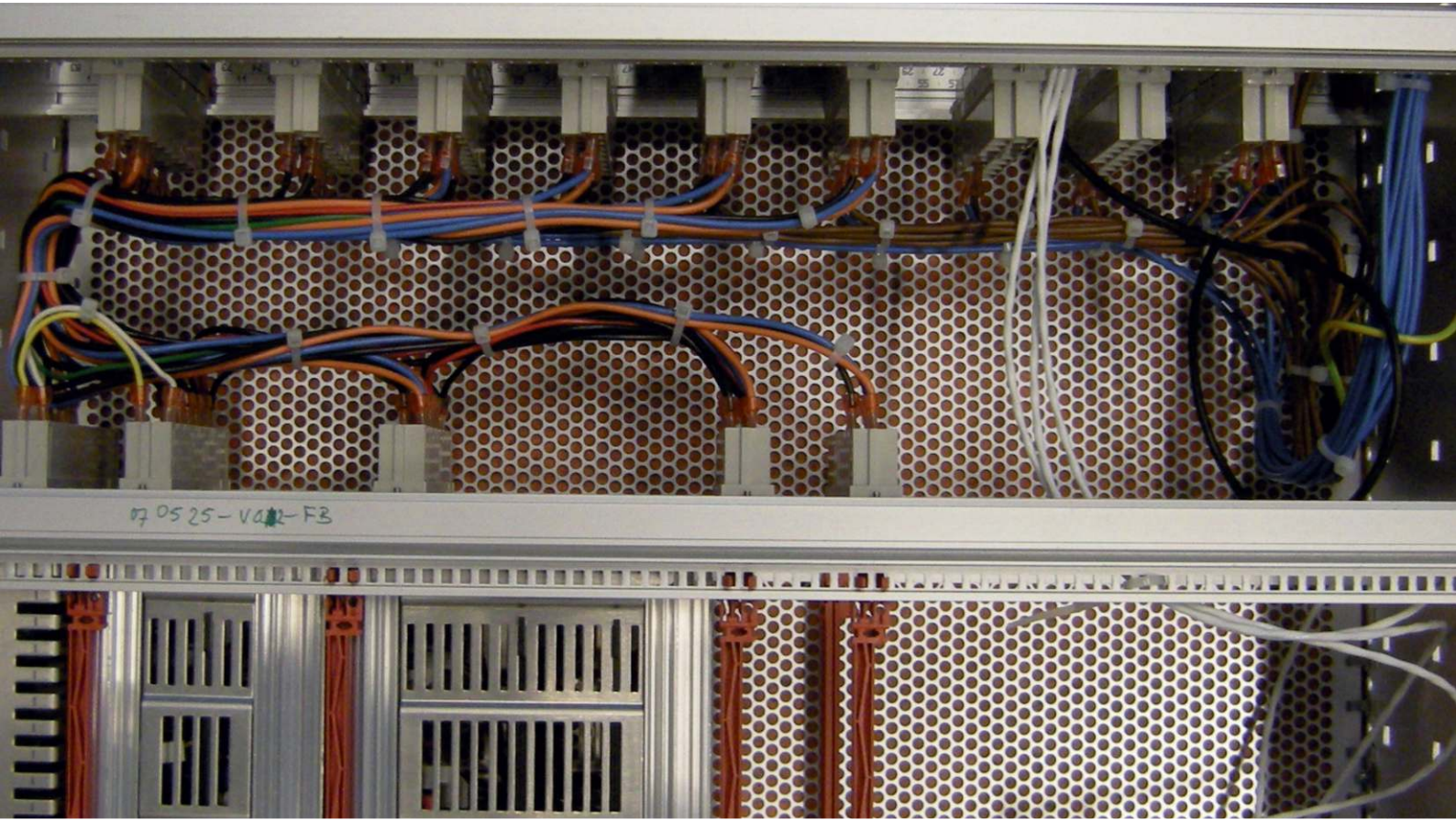




Support Equipment



Fields of Application

Fast, Low Noise, Large Bandwidth



High-speed Feedback Electronics

- Video frame rate: 25 Hz and more
- Feedback bandwidth: 1 MHz
- Versatile: adaptable to many types
- Easy retrofitting to existing SPMs
- Simultaneous recording of height and error signal

Low Noise, High Speed ADCs

- 25 Hz frame rate (at 256x256 pixels, trace and retrace)
- 'Unlimited' number of pixels/scan lines
- Fast data bus: 2 x 3.3 Msamples/s with 16 bit resolution
- Up to 8 (16) ADCs

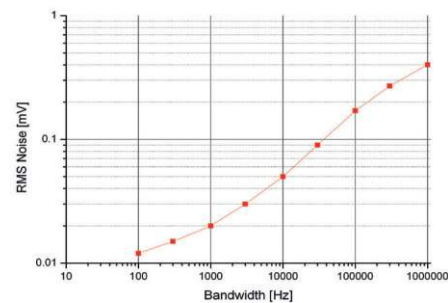
Dual Scan Generator

- Fully analog for high speed: line rates up to 10 kHz
- 'Conventional' digital mode for spectroscopy/manipulation
- Real time control of speed, zooming, panning and rotation
- Hardware background compensation

High performance Piezo Driver

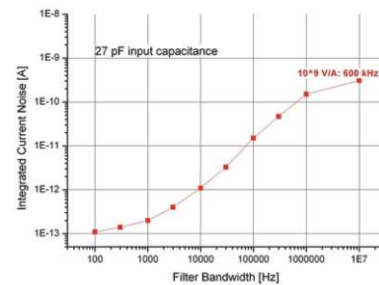
- High tip speeds: 400 (60) kHz
- Low noise and low interference: ~50µV at 10 kHz
- Full access to all I/O signals
- Modular, open system architecture

Video-rate Control Electronics



| | | | |
|-----------------------------------|---------|-------------------------------|-----------|
| Small signal bandwidth | 400 kHz | Input | ±10V |
| Full power bandwidth | 60 kHz | Output | ±190V |
| Max. average current | 110 mA | Gain (variable) | 15x – 19x |
| Slew-rate without load | 75 V/µs | Hum (50 Hz) | <3 µV RMS |
| Slew-rate with 1 nF load | 75 V/µs | Real monitor output | Yes |
| Slew-rate with 4.7 nF load | 50 V/µs | Overheating protection | Yes |

Preamplifier



| | | | |
|----------------------------|---------------------|---------------------------|---------------------------|
| Bandwidth | 600 kHz | Input connector | BNC female |
| Conversion | 10 ⁹ V/A | Output connector 1 | BNC female (single ended) |
| Input Current noise | 8 fA/√Hz | Output connector 2 | Differential |
| Input Voltage noise | 4nV/√Hz | Output voltage 1 | ±10V (single ended) |
| Power Supply | ±15V extern | Output voltage 2 | ±5V (differential) |