

FOCIS™ Sensor Interface Unit v2 (SIU v2)

Laser/Detector System



The FOCIS™ Sensor Interface Unit (SIU) includes the laser and detector instrumentation to operate up to 8 FOCIS™ BTT probes or, with the optional FOCIS™ Data Capture hardware, up to 4 FOCIS™ BTC probes. The FOCIS™ SIU provides an independent analog output for each probe that may be acquired using standard DAQ hardware or the optional FOCIS™ Data Capture Card (DCC) and PXIe chassis for a fully integrated data acquisition and blade tip timing data solution.

Features

- DC - 5 MHz bandwidth, low noise
- User-configurable amplifier gain and AC/DC coupling
- Hard-wired interlock for laser eye safety
- Completely remote controllable via Ethernet using web-based user interface

Channels

- Up to 8 FOCIS™ optical blade tip timing (BTT) probes
- Up to 4 FOCIS™ optical blade tip clearance (BTC) probes
- A combination of BTT & BTC probes (eg. 2 BTC Probes and 4 BTT Probes)

Optical Output

- 635nm up to 400 mW (standard)
- 445 nm up to 350 mW
- 635nm up to 160mW (allows up to 16 lasers per SIU for BTT applications)
- Other wavelengths available upon request

Data and Communications

- -5V to 5V analog out, coaxial cable lengths of up to 300 ft. (100m)
- Ethernet interface for remote control of lasers, amplifier gains and other settings

Physical and Environmental

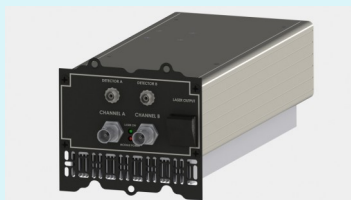
- Operating temperature: 30 °F - 120 °F (0 - 50 °C)
- Full 5U SIU: 14" x 17" x 8.7" (356 mm x 432 mm x 221 mm), Weight: 32lbs. (14.5kg)

Power Requirement

- 110 VAC standard, 28 VDC option available

Optical Connector Options

- FC, ST, MT, SMA, others on request



FOCIS™ SIU Module

FOCIS™ SIU Web Interface

The screenshot shows the 'FOCIS SIU Controller' web interface. It features a navigation menu on the left with options like 'SIU Control', 'Settings', 'Advanced', and 'Network Configuration'. The main area displays a grid of 8 modules (Module 1 to Module 8). Each module has two channels (Chan A and Chan B) and includes controls for 'Laser Off', 'Laser Power', 'Gain Control', and 'Current Gain'. The interface also shows system status like 'SIU Identifier: TestSIU', 'INTERLOCK: CLOSED', and 'KEY: ON'. At the bottom, it indicates 'Firmware version: 1.0.0' and 'SIU S/N: 0001'.

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