AFL-8500

High Speed Fiber Optic Link

A.A. LAB SYSTEMS LTD.

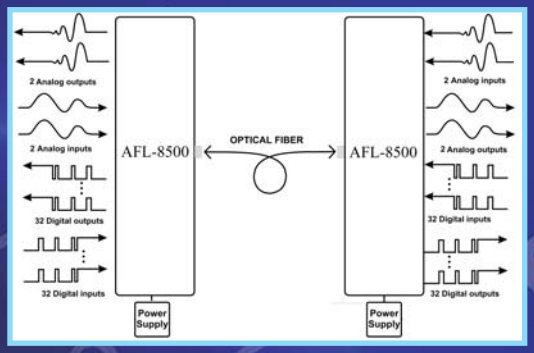
AFL-8500 High Speed Fiber Optic Link

The AFL-8500 is an enhanced Fiber Optic Transmission product family used for transferring one or two analog channels + 32 digital channels in each direction.
Each unit has Analog and Digital I/O pins. Units are connected back-to-back (i.e. 2 units of the same type, where the signals input to one unit will come out through the outputs of the other unit) using a single optical fiber for both directions .
The product is based on A/D and D/A technique, combined with a powerful 1.25 GHz transceiver, for ranges of up to 60 Km, at analog bandwidth of up to 5 MHz, at 14 bit resolution (80 dB S/N ratio) and digital I/O bandwidth of 2 MHz.

Applications:

Transmission of High Speed signals over long distance
Radar signal acquisition and control
Broadband measurements of RFI signals
High Voltage isolation
Prevention of Ground Loops
Military experiments
Signal transmission under water
Sonar
Measurements in EMI/RFI test chamber

Block Diagram



Specifications:

Analog Inputs:

Input Voltage Range: +/-10V standard, +/-5V or +/-1V optional.
Sampling resolution: 16 Bit.
Noise and hum induced in input: 5mV
Sampling method: True Simultaneous sampling.

Analog Outputs:

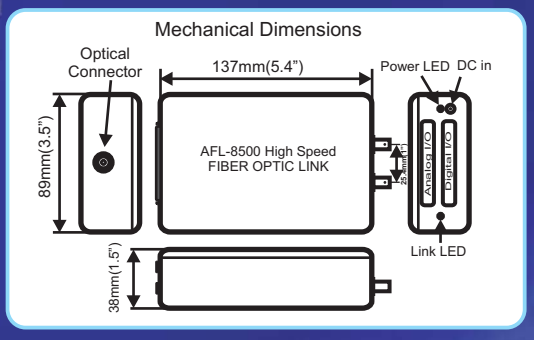
Output Voltage Range:+/-10V standard, +/-5V or +/-1V optional.
Resolution: 16 Bit.
Bandwidth: 2 channels @2.5 MHz. or 1 channel @5MHz.

Digital Inputs and outputs:

Number of I/O signals: 32 Inputs + 32 Outputs.
Sampling Rate: 10MHz. per I/O, Simultaneous sampling.
Digital I/O signals can be combined with RS-232 or RS-485 drivers for bi-directional signals.

Optical Fiber:

Up to 30 Km. of Single Mode Fiber with ST connectors.
60 Km. Range is optional.
Link Rate: 1.25Gb/Sec.
Fiber Type: Single Mode, 9/125 micron with ST connectors
Supply: 10 - 14V @1.5A max.



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