

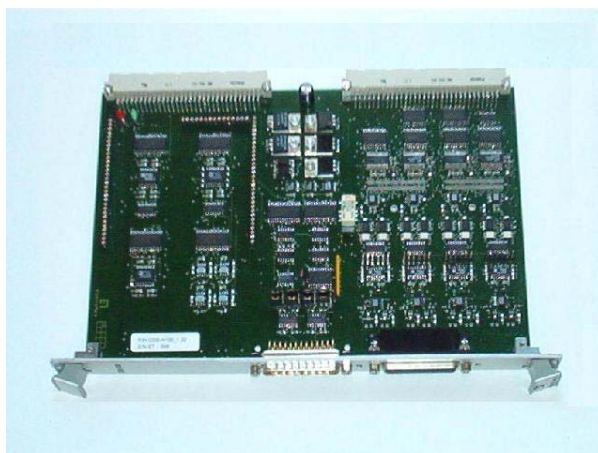
CORRELATED DOUBLE SAMPLER CDS-A100

Features

Fully synchronized image acquisition
CIA software supported
4 independent video channels
16 independent bias voltages
Bias voltage telemetry
6U standard board

Applications

Infrared CCD controllers
Astronomy
Scientific research



The CDS Correlated Double Sampler board represents the result of 10 years of experience in the field of CCD image acquisition. The CDS board is designed for input conditioning, filtering and A/D conversion of (up to) 4 independent CCD video signals. The 4 channels can be used for the simultaneous control of 4 different CCDs (arrays) or the management of 4 sections of the same CCD. All signals are generated at the same clock rate from a 20MHZ system clock, so as to provide an optimal synchronization between stimulation and output.

The CDS board provides 16 independent bias voltages rails. Bias voltage rails are individually programmable and range from $-22V$ to $+22V$. By means of the CIA software library, User can preset the characteristics of each bias voltage and pixel processing signal, in accordance with CCD requirements, actual application or personal preferences. Each bias voltage is provided with a telemetry circuit for remote control and tuning.

The Correlated double sampling circuit is available in many different configurations (contact factory). In all cases, the CDS input circuitry can be easily optimized, thanks to the following features:

- SW-programmable Clamping voltage
- SW-programmable Offset voltage
- SW-programmable Gain
- SW-programmable Bandwidth

Each input channel can be individually configured.

The CDS board is compatible with one or more SPC board. Using at least one CDS and 1 SPC board, You can build a powerful, complete and flexible CCD controller for any scientific application!

Technical Characteristics

Model	Value			Units	Notes
	min	typ	max		
Video input					
Number of independent channels	4				
Gain	5				SW programmable
Bandwidth	3.5			MHz	SW programmable
Resolution	16			Bit	
Differential input range	±200			mV	
INL	±1			LSB	
Throughput	1			MSPS	4 MSPS total, with all 4 video channels active
Offset	-2.5	+2.5		V	SW programmable
Bias Voltages					
Number of independent signals	16				
Output range	-22	+22		V	
Telemetry	Provided for each channel				

Ordering information

P/N	Description
CDS-A100 2.00	Correlated Double Sampler Board – infrared version