

EAD-M1

General Description:

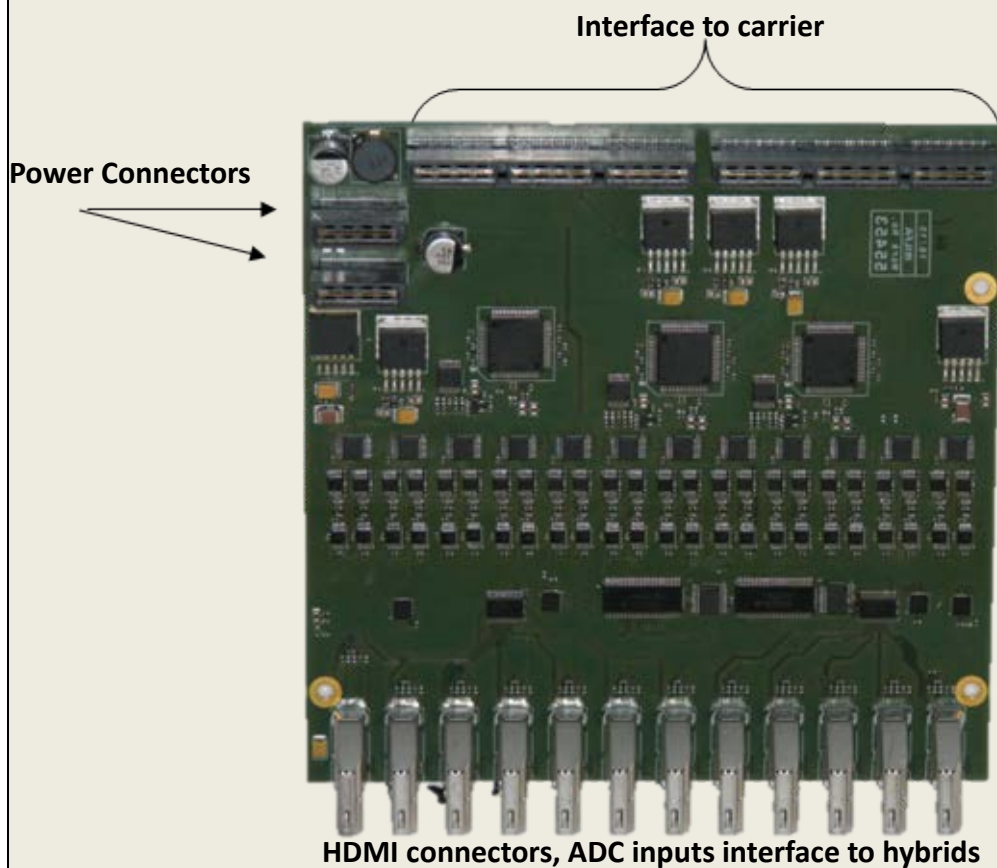
EAD-M1 mezzanine board is designed to acquire data from a front-end electronics module according to the requirements. It was designed to be installed in EATCA-100 and EATCA-101 carrier board and interface front-end electronics using HDMI cable on the front panel. The selection of maximum ADC sampling rate can be done during an order.

The input stage used for each out of 24 analog channels. It consists of two amplifiers/buffers connected in series. They provide proper common mode voltage matching, amplification and also introduce preemphasis filtering if required. The behavior of input stage can be adjusted by external controls.

The board accommodates 3 ADC chips (ADS5282). Each chip is equipped with 8 analog inputs and serial interface for fast data readout. The maximum sampling frequency is 80 MHz. The functionality of the ADC can be controlled via serial interface connected to carrier board via QSE connector. This includes test modes, output data format and standard, gain etc. For the full list of functions please refer to vendor's datasheet. In addition each ADC has two input Signals: RST and PD, which are also connected to carrier board.

Each ADC is equipped with local VREF generation sub-circuits, which can be configured on an assembly stage with OR resistors.

Picture:



Specification is subject to change without further notice

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Description			
Physical		Customized Board fit to connect on ATCA Blade EATCA-100; EATCA-101	
Standards	SRS ATCA	Customized mezzanine card	
Combatibility	SRS	EATCA-101; EATCA-100	
Configuration			
Electrical properties	Power consumption	<25Watt	
Chipset	ADS 5282	Frequence: 65MHz, 12bits, Bandwith 550 MHz	
Connectivity			
Frontpanel	12 Interfaces	HDMI Standard	
	Debug Interface	Front panel channel, Connector type Data throughput	3 booth FPGAs and MMC Micro USB 3 Mbps
Input	24 analog channels	2V pp	53 differential pairs LVDS < 10 ¹⁴ bit ⁻¹
Power	Input	12V DC	
	Output	5V	12 A
		-5V	1 A
		6V	6 A
6V	1 A		
Other features			
Environmental	Operating temperature		0– 50°C
	Storage temperature		-40 – 90°C
	Relative humidity		5 - 90%, non-condensing
	Dimensions		Width: 145,33 mm Depth: 146,41 mm
	Weight		0.4 kg

Datasheet – 14.08.2015, Rev. 1.2

Developed at eicSys, in collaboration with CERN,
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