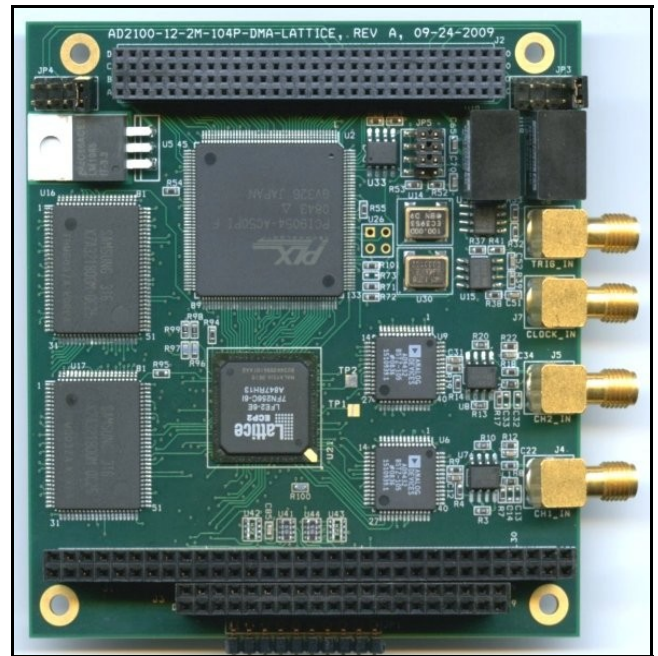


FEATURES

- (2) 100 MS/sec/chan synchronous inputs.
- 12-Bit A/D resolution, PC/104+, 5V ONLY
- 1 MegaSamples/ch standard. 2M Optional.
- Trigger on external TTL input, or software (auto-trigger, single shot).
- Fast Scatter/Gather DMA Transfer from Memory.
- Can store consecutive triggered segments until full.
- Standard +/-1.0V input range. Custom +/- 0.25 to +/-2.0V Range (option 3).
- Clock divider on-board in powers of 2. External TTL/Sinewave clock input capability.
- Software Drivers for Windows 98/NT/2000/XP, and Linux drivers (option 4).



APPLICATIONS

- Portable Test and Measurement Systems
- Ultrasonic Testing
- CCD Imaging, Infra-red Imaging
- Spectroscopy
- Cellular communications
- Industrial Radar

DESCRIPTION

The AD2100-12-104P features two (2) 12-bit, high speed, synchronous, singled ended analog input channels on a standard PC/104-Plus card. Analog inputs are connected through SMA connectors and terminated into 50 ohms. Input bandwidth is limited to 50 MHz by default for the user's convenience, although input bandwidth can be set as high as 100 MHz (see option 2).

Triggering

The board is designed to be triggered by TTL input or software. Each segment is packed into memory until the memory is full.

Timing and A/D Conversion

Timing is managed by a on-board controller referenced to a crystal oscillator. The clock frequencies available

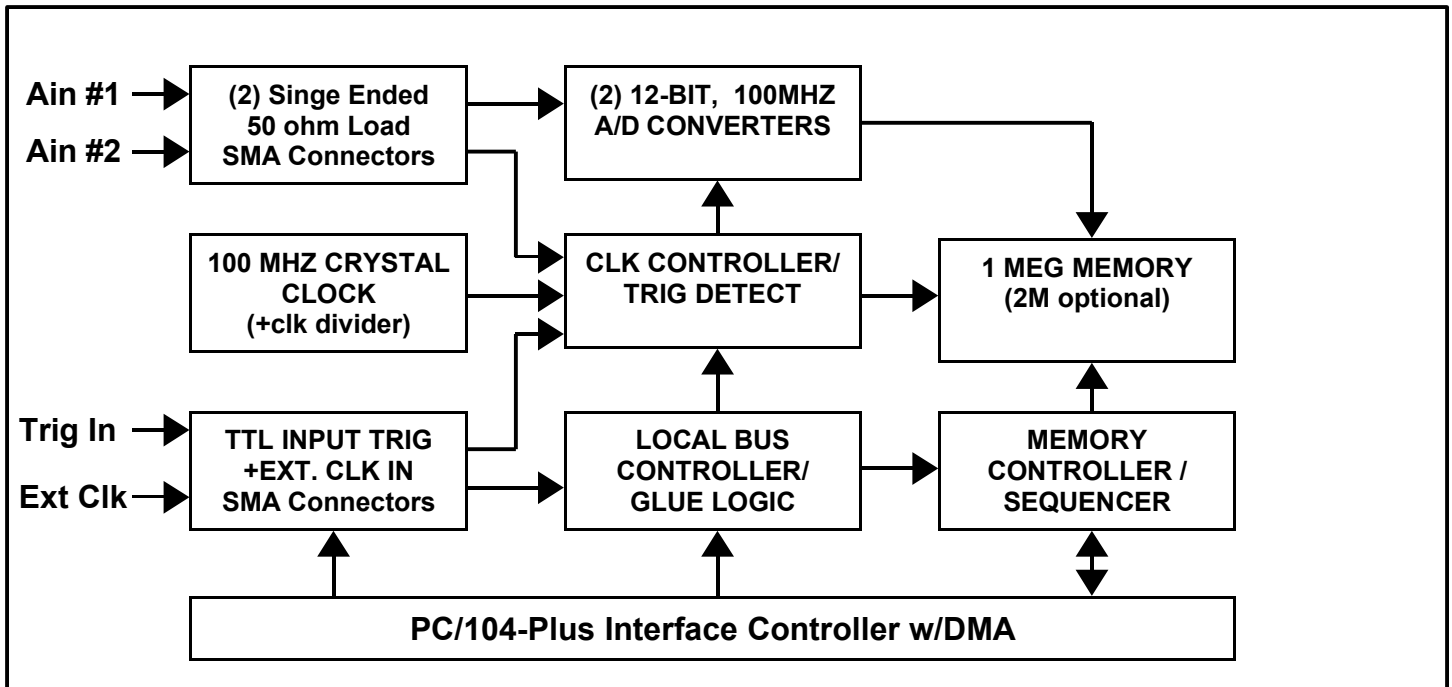
are divided down in powers of 2. External clock allows use of a more stable clock or synchronize 2 or more cards.

Memory

The AD2100-12 comes with 1MegaSamples of memory per channel with an option to go up to 2 Megasamples (if parts available). Memory can be accessed using DMA transfers at up to 20 MBytes/sec.

Software Drivers, User Interface

A universal DLL is available for Windows 98/NT/2000/XP and Linux. Call Chase Scientific for drivers for other operating systems. A simple debug Graphical User Interface (GUI) software for windows is included with the drivers for quick driver install verification and simple testing.



AD2100 BLOCK DIAGRAM

SPECIFICATIONS

Analog Inputs	(2) singled-ended into 50 ohms SMA
A/D Resolution	12-bit (1 part in 4096)
Conversion Rate	100 MS/s maximum, 1 MS/s min.
Sampling Method	Synchronous
Acquisition mode	One Shot
Input Bandwidth	50 MHz minimum
Input Ranges	
Fixed Gain	+/- 0.525 Volts
Fixed Gain Chg	User Specified (+/- 0.25V to +/-2V)
Input Coupling	DC
Input Offset	+/- 5.0 Volts Maximum
Maximum Input Voltage	+/- 6 V
Memory Size (total)	1048576 samples maximum
Segment Sizes	Software selectable segment sizes of 128, 256, 512, ... 1048576 (1M). 1024 Segments or 1M memory (whichever is lower)
Segment Number	
Timebase	
Standard	Software selectable at 100 MHz, 50 MHz, 25 Mhz, ... , 6.25 MHz.
External Clk	1 MHz <= ExtClk <= 100 MHz TTL
Trigger	
Location	Start of Segment
Sources	External TTL, Software
Slope	Positive or Negative
Coupling	DC, TTL levels

Operating Temperature	-40 to +85 degrees C Standard
Operating Humidity	5% to 95% noncondensing
Size	Standard PC/104-Plus Card
Connectors	SMA

Option Summary:

Option 1:	2 Megasamples
Option 2:	100 MHz Input Bandwidth
Option 3:	Fixed Gain Change Request
Option 4:	Linux Drivers

<i>Model Number</i>	<i>Description</i>
AD2100-12-1M-104P-DMA	Basic 2-Ch, 100 MSPS w/1MEG Memory
Option 1	2 MEG Memory
Option 2	100 MHz BW
Option 3	Fixed Gain Change Req.
Option 4	Linux Drivers

GENERAL

Power Supply	+5V @ 860mA (6.25 MSPS) +5V @ 1240mA (100 MSPS)
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