IOT ELECTRONICS

MADDA34-CPCI
3U CompactPCI® Analog I/O

- CompactPCI® PICMG 2.0 Rev. 3.0
- 2 analog input channels
- 2 analog output channels
- Resolution 10-bit
- Isolation 2 kV to systemA

The MADDA34-CPCI is a standard single-width (4HP) 32 bit 3U CompactPCI® module and provides 3 channels of 10 bit analog inputs/outputs.

It supports immediate and simultaneous load. The sequencer allows update of enabled channels periodically and the sequence timer range extends from 100us to 6.5s.

The programmable input/output voltage range is 0..5V, 0...10V, 5V, 10V selectable by software. Each MADDA34-CPCI is calibrated factory. The calibration information is stored in the Identification-PROM unique of each module.

Technical Data

Compact PCI Interface
- PICMG 2.0 Rev. 3.0 compliant, 32 Bit address/data/33MHz

Analog Inputs
- Number of channels: 3
- Resolutions: 10-bit
- Maximum frequency of conversion: 21 MHz
- Basic Accuracy (INL): +/- 1 LSB
- Input Voltage Range: 0..5V, 0…10V, 5V, 10V
- Input Current Range: 0.. 20 mA
- Isolation: 2 kV to system

Analog Outputs
- Number of channels: 3
- Resolutions: 10-bit
- Maximum frequency of conversion: 21 MHz
- Basic Accuracy (INL): +/- 1 LSB
- Input Voltage Range: 0..5V, 0…10V, 5V, 10V
- Input Current Range: 0.. 5 mA
- Isolation: Isolation: 2 kV to system
- Output Protection: EMI, ESD, Short circuit Overvoltage per channel

Miscellaneous
- CompactPCI J2 are assembled for rear I/O

Electrical Specifications
- Supply voltage/power consumption:
  - +5V (-3%/+5%), 100mA max.
  - +3.3V (-3%/+5%), 300 mA max.

Mechanical Specifications
- Dimensions: conforming to CompactPCI specification for 3U boards
- Weight: 200g

Environmental Specifications
- Temperature range (operation): -40..+85°C
- Temperature range (storage): -40..+85°C
- Relative humidity (operation): max. 95% non-condensing
- Relative humidity (storage): max. 95% non-condensing
- Altitude: -300m to + 3,000m
- Shock: 15g/11ms
- Bump: 10g/16ms
- Vibration (sinusoidal): 2g/10..200Hz
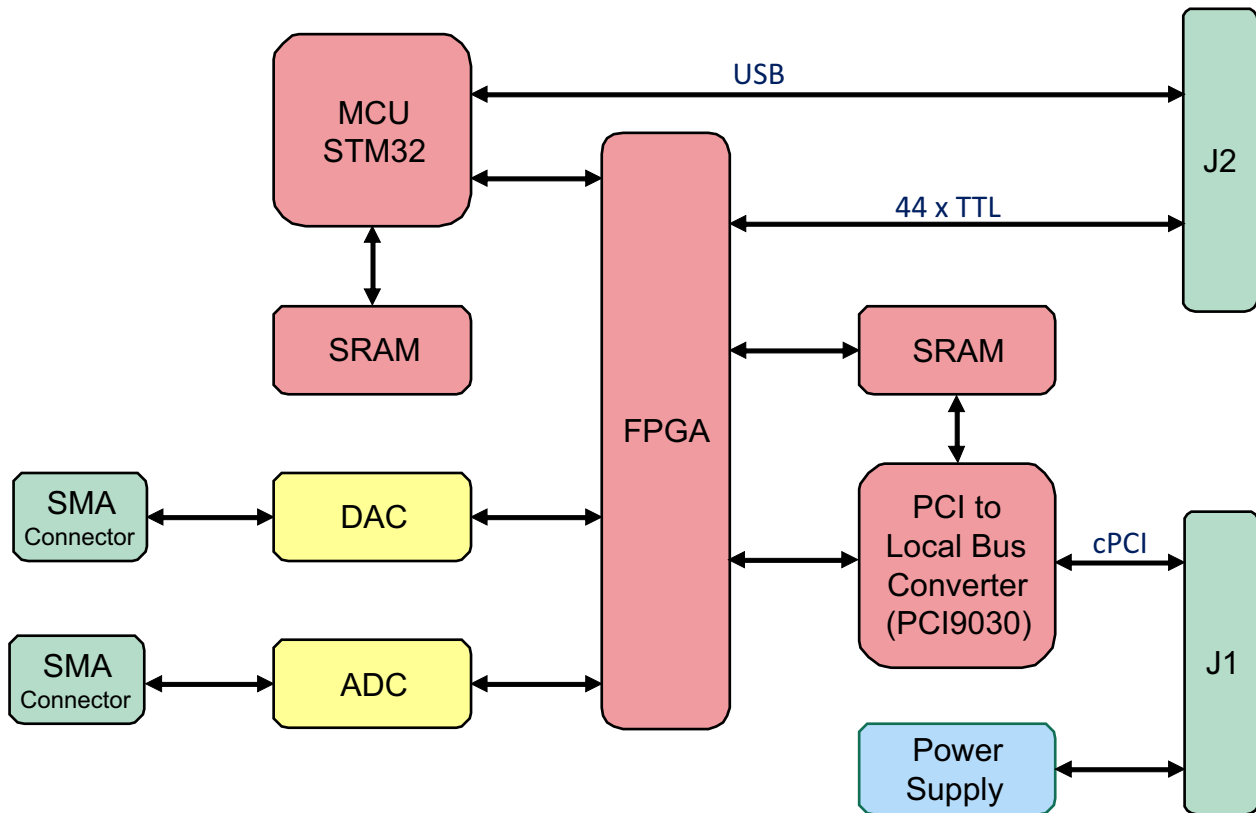- Conformal coating on request

MTBF
300 000 h @ 40°C (derived from MIL-HDBK-217F)

Software Support
- Windows® (Windows® XP, Windows® 7), Linux

Block Diagram

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┌──────────┐                    USB                      ┌────┐
│   MCU    │◄──────────────────────────────────────────►│    │
│  STM32   │                                             │    │
│          │◄──►┌──────┐        44 x TTL                 │ J2 │
└────┬─────┘    │      │◄───────────────────────────────►│    │
     │          │      │                                 │    │
     ▼          │      │                                 └────┘
┌──────────┐    │      │        ┌──────────┐
│   SRAM   │    │ FPGA │◄──────►│   SRAM   │
└──────────┘    │      │        └────┬─────┘
                │      │             │
┌─────────┐┌────┴───┐  │        ┌────┴──────────┐
│ SMA     ││  DAC   │◄─┤      ┌─►│  PCI to       │   cPCI   ┌────┐
│Connector│◄─────────►│      │ │  Local Bus     │◄────────►│    │
└─────────┘└────────┘  │      │ │  Converter     │         │ J1 │
                       │      │ │  (PCI9030)     │          │    │
┌─────────┐┌────────┐  │      │ └───────────────┘          │    │
│ SMA     ││  ADC   │◄─┴──────┘  ┌──────────┐              │    │
│Connector│◄─────────►          │  Power   │◄────────────►│    │
└─────────┘└────────┘           │  Supply  │              └────┘
                                └──────────┘
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Pin Assignment - I/O Connector

in the process of development

Oder Information

MADDA34-CPCI
DAC/ADC with programmable operation logic.

3U 4HP Compact PCI

MADDA34-CPCIS
DAC/ADC with programmable operation logic.

3U 4HP CompactPCI Serial.

Contact Information

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