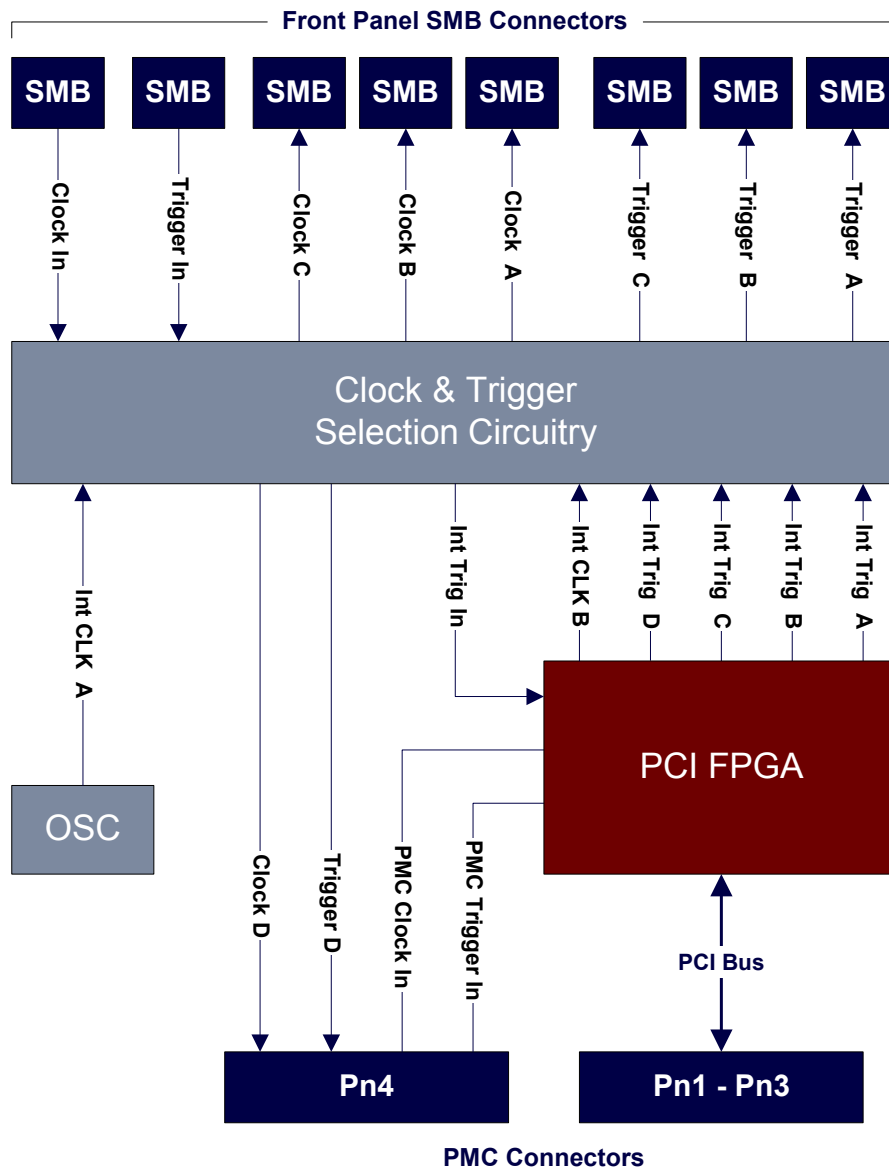


PM 440
Clock & Trigger PMC



The PM440 is a Clock and Trigger Distribution Module. It is a PMC clock and trigger module that provides multiple low jitter and low skew clock and triggering signals for synchronous systems. The module conforms to the single PMC form factor. The PM440 receives clock and trigger inputs and buffers it to produce synchronised multiple clock and trigger outputs for distribution to other systems. It is also able to generate output clocks and triggers via an onboard oscillator. If required, a trigger pattern for each individual channel can be set-up via onboard memory space, which is accessible through the PCI interface. The module is also able to produce clock output frequencies that are divisional factors of input clock frequencies.

Features

Clocks

- Input clock selectable from three sources
- External clock from SMB connector on front panel
- External clock from PMC (Pn4) connector
- Onboard clock from PECL oscillator
- Four low skew, low jitter output clocks
- Three output clocks on SMB connectors on front panel
- One output clock on PMC (Pn4) connector
- Onboard clock division
- Maximum cycle to cycle clock jitter: < 4ps (external clock source, no division)
- Maximum clock skew between output clocks: 20ps
- Maximum signal delay from input to output: 2.5ns (external clock source, no division)
- Maximum clock frequency from external clock source on SMB: 1GHz
- Maximum clock frequency from external clock source on PMC: 200MHz
- Onboard oscillator clock frequency: 100MHz

Triggers

- Input trigger selectable from three sources
- External trigger from SMB connector on front panel
- External trigger from PMC (Pn4) connector
- Onboard trigger generated by FPGA under software control
- Four low skew, low jitter output triggers
- Three output triggers on SMB connectors on front panel
- One output trigger on PMC (Pn4) connector
- Programmable pattern generation on triggers
- Maximum cycle to cycle jitter: < 4ps (external trigger source)
- Maximum skew between output triggers: 480ps
- Maximum signal delay from input to output: 4.5ns (external trigger source)
- Maximum frequency throughput from external trigger source on SMB: 1GHz
- Maximum frequency throughput from external trigger source on PMC: 200MHz
- Maximum frequency throughput from internally generated trigger: 50MHz

PCI Interface

- 32 bit, 33MHz PCI interface

I/O Interface

- One input trigger
- One output trigger
- One input clock
- One output clock

Front Panel

- SMB connectors

Power Consumption

- 2A (typical) Current Consumption at +5V
- 2A (typical) Current Consumption at +3.3V

Environmental Specification

- 0°C to +50°C (operating)
- -10°C to +70°C (storage)

Benefits

- Low jitter and low skew clocks and triggers for synchronous systems
- Programmable trigger patterns from PCI Bus
- Custom FPGA firmware and software development services available for this product
- Key parameters are set via PCI interface
- Module flexibility by means of programmable parameters

Software support

- PCI driver for Windows 2000/XP and Linux
- Documentation and sample code for driver development can be provided
- Custom driver development available upon request

Examples of Applications

- Coherent systems
- Radar
- Sonar
- Multi channel sampling systems