

## Power Status LEDs

- Monitor LEDs for each voltage rail

## Available Extension Cards

- Bidirectional 8-port NIM extension
- 16 port differential input extension
- 4 channel, 12 Bit, 65 MS/s sampling ADC
- 32 channel LVDS input
- 32 channel LVDS output
- Synchronization extension
  - Master: 3 PECL over RJ45 ports
  - Client:
    - 1 PECL over RJ45 port
    - 4 ECL Output
    - 4 NIM Inputs

## Custom-Designed Extensions

- Extensions with user defined functionality on request
- Documented interface allows for extension designs by users

## Contact



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## Status LEDs

- Information about data access and FPGA state

## User LEDs

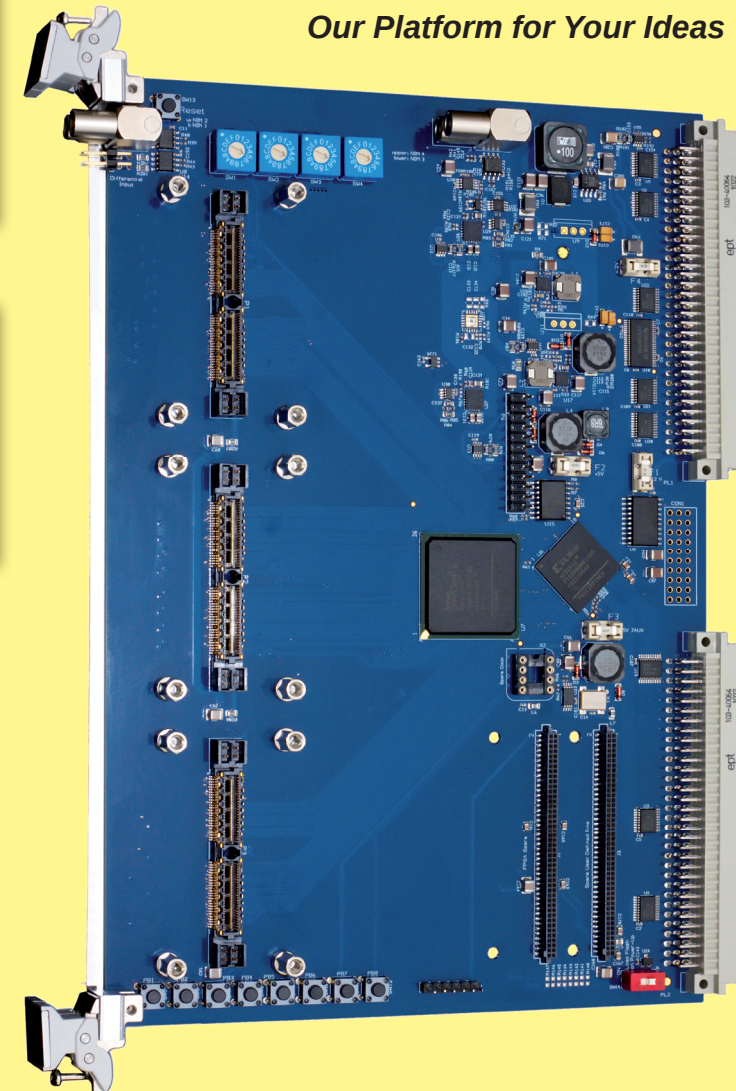
- For debug / information purpose
- 8 LEDs connected to the FPGA (only 4 for LX45 and LX75 FPGA)

# ELB

## ELB-VME-VFB6

An Extendible FPGA Board  
with VMEBus<sup>1)</sup> Interface

*Our Platform for Your Ideas*



Flyer Version 1.1

<sup>1)</sup> Compliant to the ANSI VMEbus standard ANSI/VITA 1-1994



## 4 Bidirectional NIM Ports

- Direction switchable in FPGA
- Two inputs connected to dedicated FPGA clock pins

## Universal Differential Input

- Accepts differential signals with amplitudes in the range of -4 V to +5 V<sup>\*)</sup> and 50 mV<sup>\*)</sup> differential voltage
- 100  $\Omega$  termination available
- Connected to dedicated clock pin of FPGA

## 16 Bit Base Address

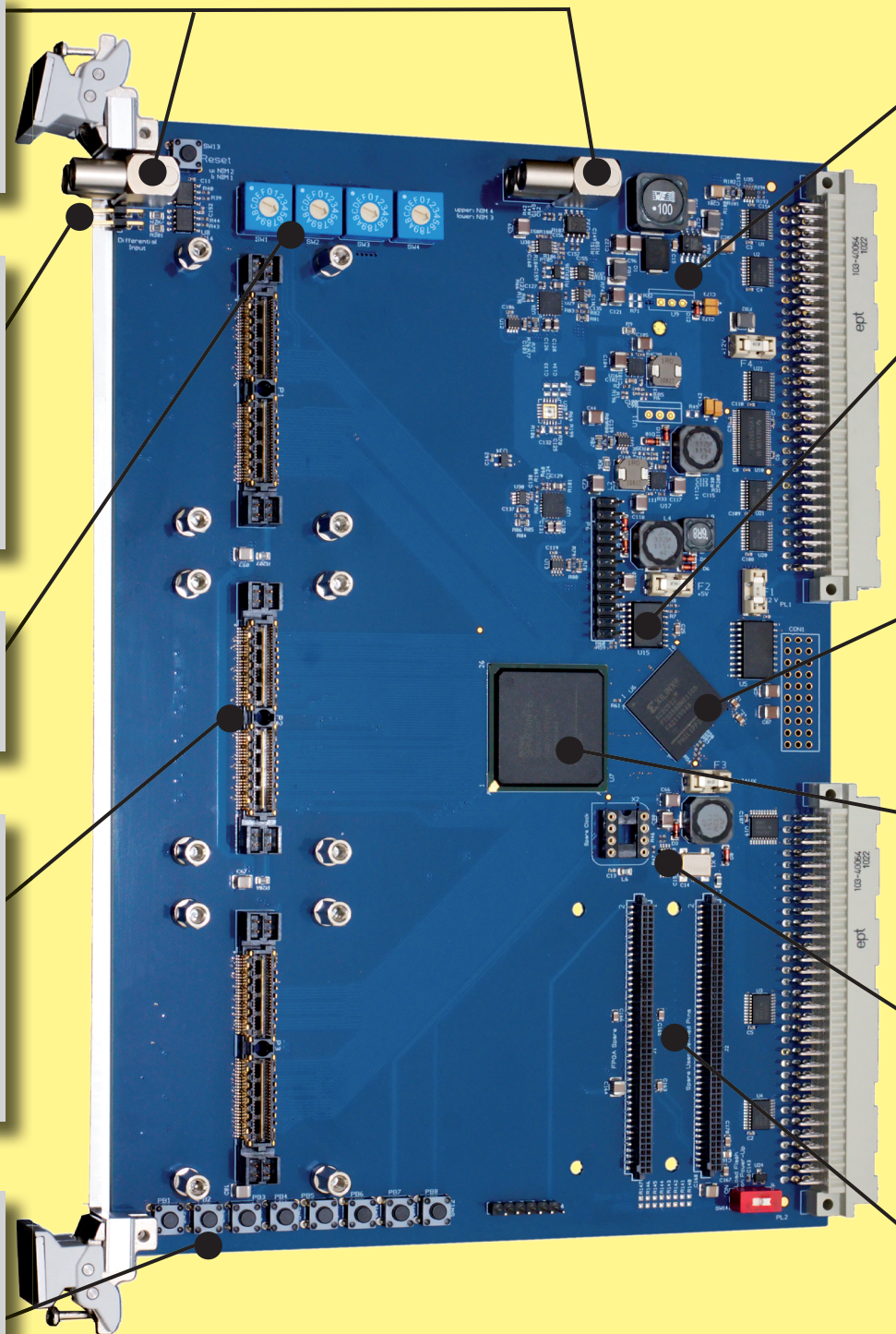
- Configurable by rotatory switches

## Three Extension Connectors

- 80 pins connected to FPGA
- 80 single ended or 40 differential connections (or any combination)
- Voltages available:  
-5 V, +3.3 V, +5 V, +12 V

## Pushbuttons

- 8 Pushbuttons connected to FPGA (only 4 for LX45 and LX75 FPGA)



## Power Supply

- Efficient switching regulators for -5 V, 3.3 V, and 1.2 V  
→ Low power consumption, low heat dissipation
- On-board voltage and current monitoring of all rails

## Flash Memory (8 MBytes)

- Firmware can be loaded to FPGA on powerup automatically
- FPGA firmware can also be loaded via VMEbus

## VMEbus Interface

- Supported access modes:  
A32D32, BLT, Interrupt
- Compliant to the ANSI VMEbus standard ANSI/VITA 1-1994

## Xilinx Spartan 6 FPGA

- Available FPGAs: LX45, LX75, LX100, and LX150

## Clocking

- 100 MHz on-board clock
- DIL socket for user specific crystal oscillator

## Internal Extension Ports

- Extension connector with 74 Pins to FPGA (single ended or differential), not with LX45
- Connections to all user defined pins of the VME P2 connector

<sup>\*)</sup> value assured by design, not tested in production