

FPGA DEVELOPMENT SYSTEMS

Spartan-3 Micromodule

Introduction

The Micromodule series are OEM modules, based on Xilinx Spartan-3 platform FPGA. Many components like USB 2.0 transceiver, configuration Flash, power supply and optionally SDRAM are available on a tiny footprint of only 50,7 x 43,6 mm. A large number of configurable I/Os are provided via B2B mini-connectors. Designed as a ready-to-use plug-in module for carrier boards, they integrate perfectly in battery-powered, hand-held or USB-powered applications.

The Micromodules can easily be modified on customer request and are available in versions with and without SDRAM and with different FPGA sizes.

Features

- High-density plug-in Spartan-3 module
- USB 2.0 interface
- Platform Flash for in-system configuration
- 16 Kbit serial EEPROM
- Power supply via USB or external 5 Volt input
- Low cost and flexible
- Multiple micromodules are stackable
- Flexible expansion via high-density board-to-board connectors
- Prototyping-Carrier board available for evaluation

Applications

- USB 2.0 Device development
- IP development
- Digital signal processing
- General-purpose prototyping platform
- OEM Module on custom Hardware

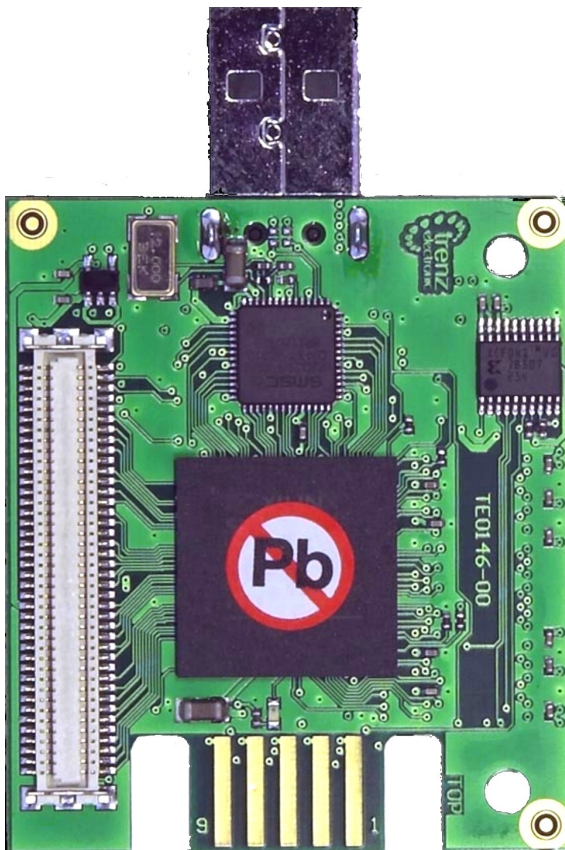


Figure 2: Micromodule with SDRAM



Figure 1: Micromodule without SDRAM

FPGA DEVELOPMENT SYSTEMS

Spartan-3 Micromodule

Available Support

- High Speed USB 2.0 Core available for purchase
- High Speed USB 2.0 demo available for download
- Xilinx ISE WebPACK™ FPGA design environment, including design entry, simulation and synthesis
- VHDL example project with source code
- Board schematic
- CAD libraries for custom carrier board design
- Data sheets of major components

All documentation is provided in English.

Overview

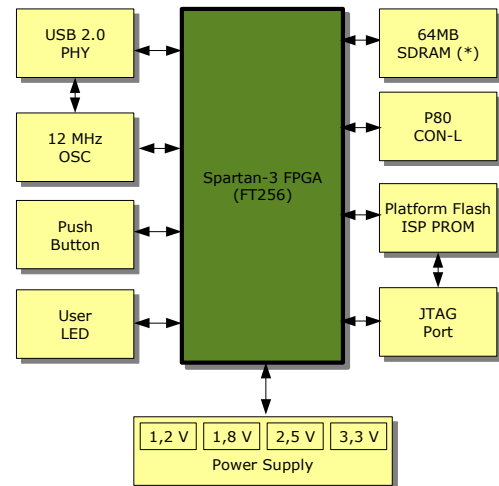


Figure 3: FPGA Micromodule Board Overview

(*): For the micromodule without SDRAM: B2B connector (P80 CON-R) instead of SDRAM

Specifications

Product	TE0140-04L	TE0140-04	TE0140-04B	TE0146-00
FGPA	XC3S200-4FT256C	XC3S400-4FT256C	XC3S1000-4FT256C	XC3S1000-4FT256C
SDRAM	No SDRAM			MT48LC2M32B2P-7, 64 Mbit
Syst. Gates	200K	400K	1000K	1000K
Platform Flash	1 Mbit	2 Mbit	4 Mbit	4 Mbit
EEPROM	16 Kbit	16 Kbit	16 Kbit	16 Kbit
Block RAM	216 Kbit	288 Kbit	432 Kbit	432 Kbit
Buttons	1 x LED, 1 x push button			1 x LED
Free IO's	120			55
External connectors	2 x 80 pin high-density B2B connectors			80pin B2B connector
Clock	30MHz or 60MHz via USB PHY			
USB Interface	USB 2.0 USB 3250 from SMSC			
Power Supply	3.7 to 5 Volt input via B2B or USB			
Dimensions	50,7mm x 43,6mm			



Trenz Electronic GmbH
 Borriesstr. 61 | 32257 Bünde|Germany
 CEO: Thorsten Trenz
 Local Court:
 Amtsgericht Bad Oeynhausen | HRB7185
 fon+49 (0) 5223 / 41652
 fax+49 (0) 5223 / 48945
 e-mail info@trenz-electronic.de
<http://www.trenz-electronic.de>

Trenz Electronic GmbH hereby disclaims any representations or warranty that this product is compatible with any particular 3rd party software and/or hardware except those mentioned in this document. Purchasers must determine for themselves the suitability and compatibility of the hardware and software in each and every particular instance.
 ©2008 Trenz Electronic GmbH. All rights reserved. Reproduction in whole or in part without written permission is prohibited. All trademarks are the property of their respective companies. Features and specifications are subject to change without notice.
 Document: PB-TE014X, Rev. 1.07 as of 2008-01-21