

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from, Europe, America and south Asia, supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



## Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China







# LogicTile Express for ARM Cortex-R7 For the Versatile Express Family



The Versatile<sup>™</sup> Express family development boards provide an excellent environment for prototyping the next generation of system-on-chip designs. Through a range of plug-in options, hardware and software application can be developed and debugged.

The Soft Macro Model for the ARM® Cortex™-R7 processor is an encrypted FPGA image for use on the LogicTile<sup>™</sup> Express (LTE) 13MG. It offers:

- Early Access to the Cortex-R7 processor
- Benchmarking capability
- Early device driver and software development
- User IP proving via second FPGA board
- ARM JTAG and Trace connectors for debug support



LogicTile Express 13MG with ARM Cortex-R7 SMM

The implementation uses standard ARM PrimeCell® and fabric components to implement a basic SoC design to mimic the TestChip developments of our CoreTile<sup>™</sup> Express products.

A simple click through EULA allows access to the latest processor technology from ARM.

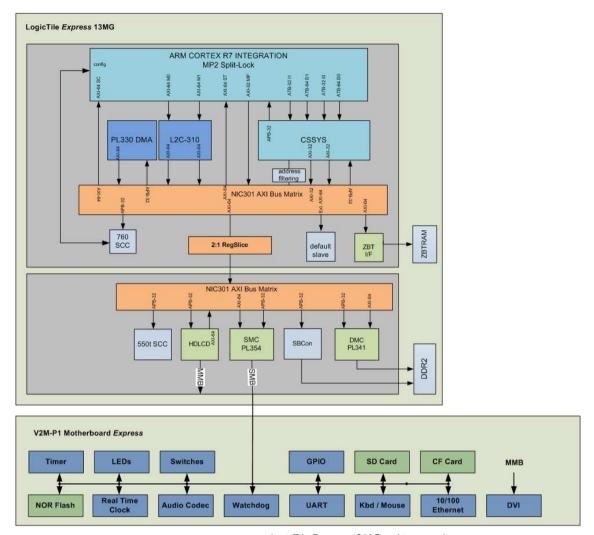
### **Features**

- **Processor Subsystem** 
  - Dual Cortex-R7 with FPU r0p0
  - LI Cache 16KB Instr and 16KB Data
  - TCM 64KB
  - CoreSight<sup>™</sup> support ETM
- AMBA® AXI™ Subsystem
  - PL341 DDR2 memory interface
    - SODIMM 2GB 64bit @ 125MHz
  - PL354 Static Memory Bus Interface
    - 32bit 48MHz to motherboard
  - Boot from NOR Flash on motherboard
  - HDCLD video controller
- Peripheral set compatible with Versatile family
- Debug
  - ARM ITAG
  - ARM 32-bit parallel trace
- Simplified Configuration
  - USB flash drive to PC
  - Fast programming and configuration
  - Configuration files for system settings
  - Automated/remote operation

### **Deliverables**

- LTE 13MG with encryption key
- Encrypted SMM image for LTE 13MG
- 4GB DDR2 SODIMM
- Versatile Express SMM support CD/DVD
- Example AMBA AXI design
- SelfTest Software

## LogicTile Express for ARM Cortex-R7 Architecture



LogicTile Express 13MG architecture diagram

When connected to a Versatile Express motherboard the configuration system enables programming and updating of the SMM Express R7x2. Configuration and operation parameters of the daughterboard are defined in a configuration file stored on the motherboard.

The daugherboard communicates to the motherboard via the static memory interface for all peripheral and flash memory accesses.

#### PART NUMBER: V2S-CR7-1000A

### www.arm.com/ve

All brand names or product names are the property of their respective holders. Neither the whole nor any part of the information contained in, or the product described in, this document may be adapted or reproduced in any material form except with the prior written permission of the copyright holder. The product described in this document is subject to continuous developments and improvements. All particulars of the product and its use contained in this document are given in good faith. All warranties implied or expressed, including but not limited to implied warranties of satisfactory quality or fitness for purpose are excluded. This document is intended only to provide information to the reader about the product. To the extent permitted by local laws ARM shall not be liable for any loss or damage arising from the use of any information in this document or any error or omission in such information. Copyright © 2012 ARM Ltd.

#### ARM Ltd. www.arm.com **FRANCE IAPAN TAIWAN** CHINA SINGAPORE T: +44 1223 400400 T: +33 1 39 30 47 89 T: +81 45 477 5260 T: +886 2 2627 1681 T: +86 21 62351296 +65 6728 0950 **GERMANY** T: +1 408 576 1500 T: +49 89 456040-20 T: +82 31 712 8234 T: +972 9 7632000 T: +91 80 5138 4000