

# LogicTile *Express* for ARM Cortex-R7

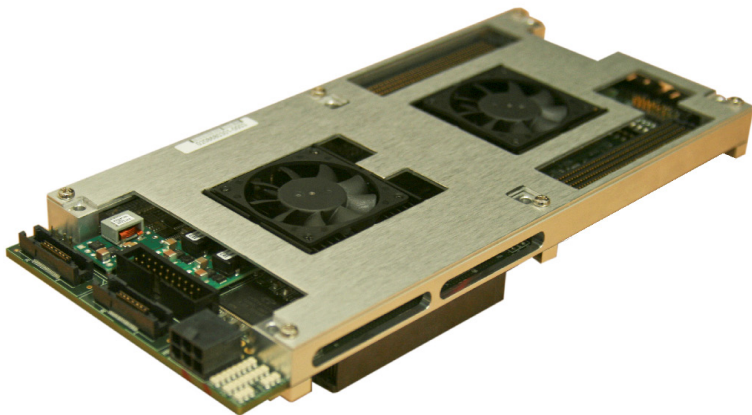
For the Versatile *Express* Family

# ARM<sup>®</sup>

The Versatile™ *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™ *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™ *Express* products.

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

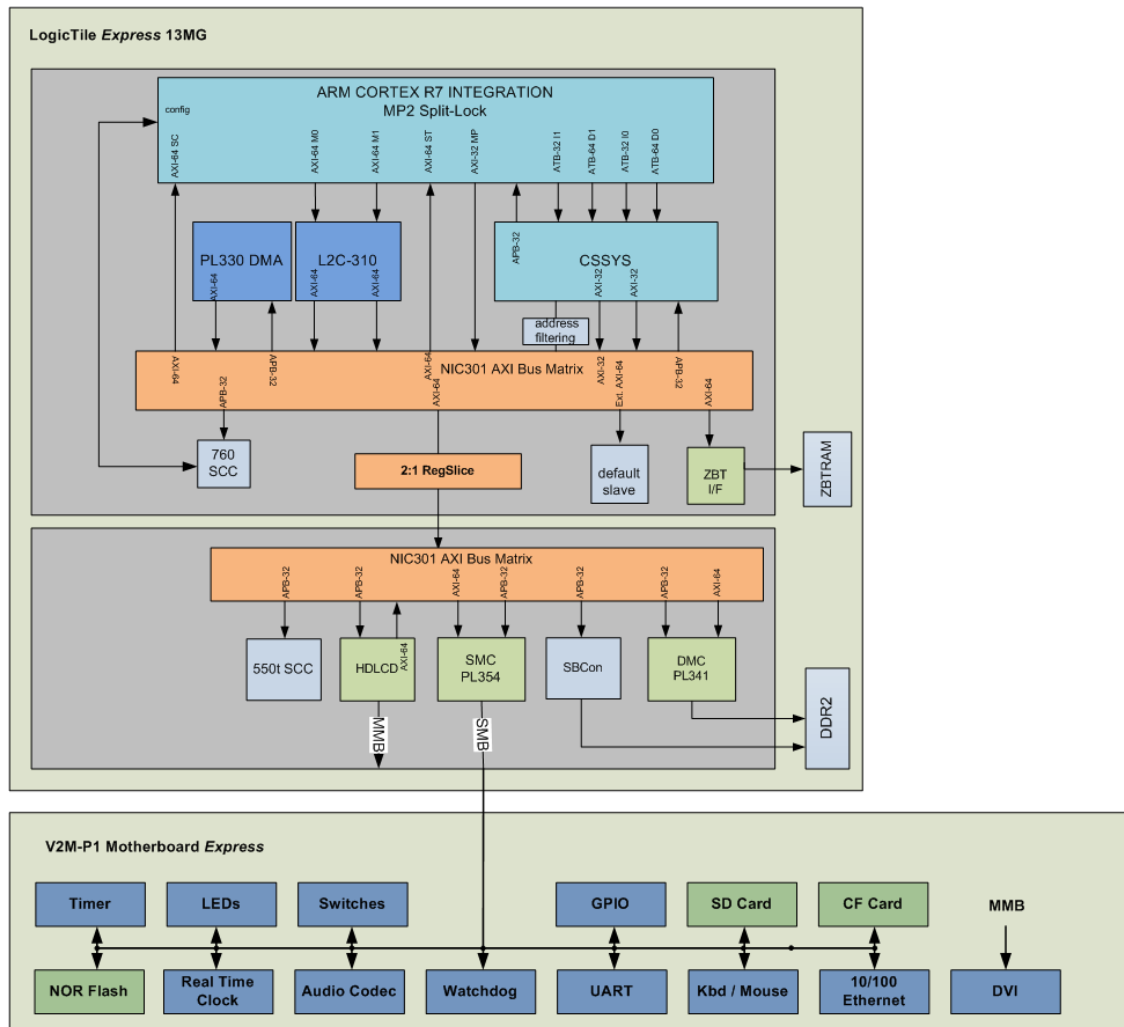
## Features

- Processor Subsystem
  - Dual Cortex-R7 with FPU r0p0
  - L1 Cache 16KB Instr and 16KB Data
  - TCM 64KB
  - CoreSight™ 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 JTAG
  - 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 daughterboard communicates to the motherboard via the static memory interface for all peripheral and flash memory accesses.

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

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ARM Ltd. [www.arm.com](http://www.arm.com)

UK  
T: +44 1223 400400

FRANCE  
T: +33 1 39 30 47 89

JAPAN  
T: +81 45 477 5260

TAIWAN  
T: +886 2 2627 1681

CHINA  
T: +86 21 62351296

SINGAPORE  
+65 6728 0950

US  
T: +1 408 576 1500

GERMANY  
T: +49 89 456040-20

KOREA  
T: +82 31 712 8234

ISRAEL  
T: +972 9 7632000

INDIA  
T: +91 80 5138 4000