

### DISCOVER EVENT DRIVEN PROCESSORS

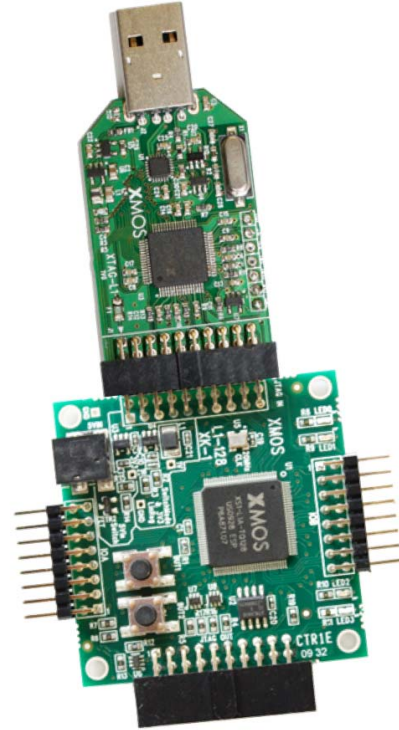
The XK-1 Development Kit provides a simple and cost effective way of trying out your design ideas on the XS1-L1 event-driven processor.

The kit includes the XK-1 board featuring the low-power XS1-L1 TQ128 device and an XTAG-2 debug adapter. The XTAG-2 utilises an XS1-L1 device programmed to provide bridge functionality from USB to JTAG.

### RAPID DEVELOPMENT OF YOUR SYSTEM

Thanks to an embedded software design flow, development cycles with XMOS event-driven processors are extremely short. The XK-1 kit is supported by a complete suite of free design tools, and to accelerate your learning a set of tutorials, demonstration projects and quick start guide is available.

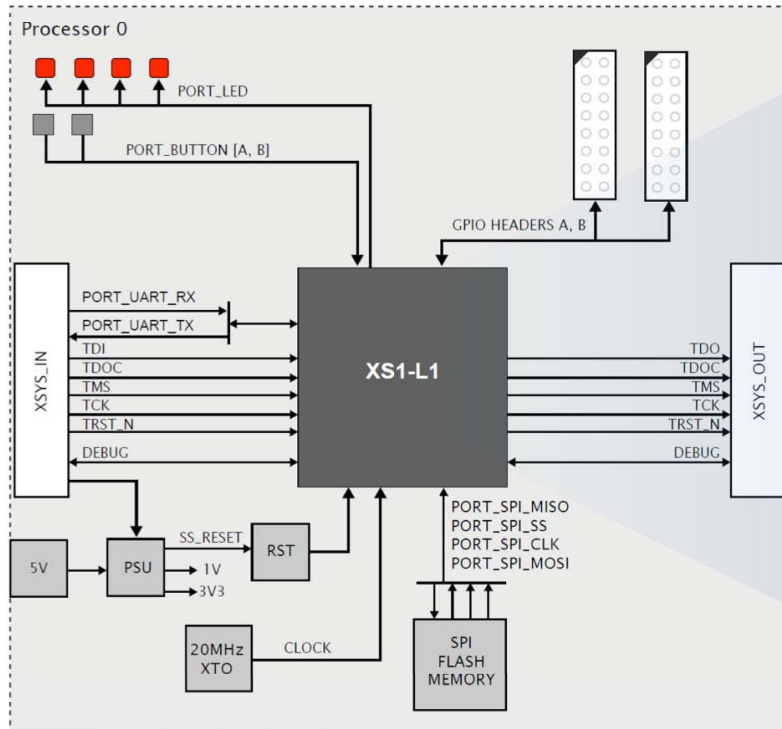
The board offers 24 pins of I/O and programs can be debugged from a host workstation or run standalone, making the board ideal for integration into your prototype system. The XK-1 Development Kit provides everything required to start developing your application.



### XK-1 DEVELOPMENT BOARD AT A GLANCE

- XS1-L1 single-XCore™ 400MHz device: eight threads, 400 MIPS, 64KB RAM, 8KB OTP
- 128KBytes SPI FLASH for program and data storage
- Two push-button switches and four user LEDs
- 24 pins user I/O expansion via 0.1" IDC right-angle male connectors
- USB powered or external 5V standalone power option
- Cascadable to a multi-core system using multiple XK-1s and XSYS connectors
- Complete development tool suite
  - C++, C and XC compilers, linker and mapper for use with or without an IDE
  - Simulator, timing tools and in-circuit visual debugger
- Tutorial suite with examples
  - XC I/O and multithreading software exercises
  - XK-1 add-on card hardware examples featuring analogue I/O, servo outputs, SD card storage, Bluetooth and LEDs

## XK-1 BOARD BLOCK DIAGRAM



### XS1-L1 Features

- 32-bit XCore™ event-driven processor
  - 400MIPS performance
  - 64KBytes single-cycle SRAM
  - Eight concurrent threads
  - 100M events per second
- Up to 64 input/output pins
  - 10ns timing resolution
  - Serialisation and logic functions
- Compact 16/32bit ISA
  - Single cycle operation
  - 32 x 32 → 64bit MAC
- 32 communication channel ends
  - Scalable and deterministic on and off-chip communication

## SOFTWARE DEVELOPMENT TOOLS

The XK-1 Development Kit is supported by an integrated development environment that includes compilers, simulator, static timing analyser, visualisation tools, debugger and a flash memory programming utility.

Applications can be written in C, C++ and XC. XC includes extensions to C that support concurrent, real-time programming using channel-based communications and event driven control.

For more information about XMOS or our products, to purchase an XK-1 kit, or to download the free development tools, please visit:

[www.xmos.com/xk1](http://www.xmos.com/xk1)

