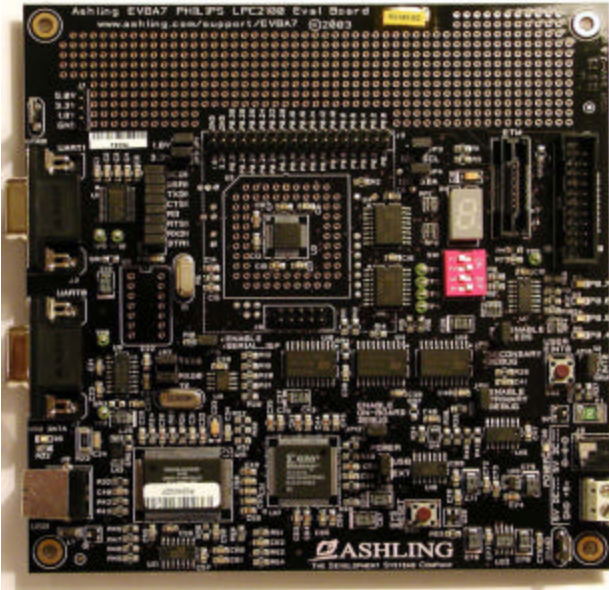


Evaluation and Development Kits for Philips LPC2000 ARM7-core Microcontrollers

Complete Development Environment for Philips LPC2xxx Single-chip ARM7 Flash Microcontroller, with real-time JTAG Emulator, Evaluation Board, I/O, Flash Programming, IDE, Compiler and Source Debugger



The Philips LPC2xxx-series is a powerful Low Power Microcontroller device family that combines the ARM7 core with on-chip SRAM, high-density Flash memory and a wealth of highly integrated on-chip peripheral circuits.

The Ashling Development Kits for LPC2000, developed in cooperation with Philips Semiconductors, exercise and demonstrate all of the Philips device's functionality on a low-cost, easy to use development platform.

With a full-function on-board EmbeddedICE-RT™ Emulator for LPC2xxx real-time debugging, the Ashling Evaluation Kits include a high-speed EmbeddedICE JTAG Emulator with USB debug connection to the host PC, together with Ashling's PathFinder-2000 Source Debugger software and AsIDE-ARM IDE, Editor, Compiler and Linker software chain for developing of LPC2000 code.

The Development Kits also feature an easy-to-use Programming Package to program the LPC2000's on-chip Flash memory.

Philips LPC2000 family ARM7-core 32-bit Microcontroller features

Processing unit

- ARM7TDMI-S core (up to 60MHz), with full Thumb 16-bit support

Memory

- 32/64/128/256/512KBytes full-speed on-chip Flash memory
- 16/32/64KBytes on-chip SRAM memory
- Memory Accelerator Module

Debug

- EmbeddedICE-RT real-time debug port
- DCC Debug Communication Channel
- ETM (Embedded Trace Macrocell) real-time Program Trace

Package

- LQFP48 7 x 7mm or LQFP64 10 x 10mm or LQFP144 20 x 20mm packages

Peripherals

- 2 UARTs, one with full modem interface
- I²C multi-master bus interface
- SPI interface
- 2 Timer Units
- 6 Pulse Width Modulator outputs
- Real Time Clock
- Watchdog Timer
- General Purpose I/O lines
- CAN interfaces (LPC2119/29/94, LPC2290/92/94)
- 10-bit ADC (LPC211x, LPC212x, LPC213x, LPC22xx)

Pin Connect Block

- User-specified alternate functions select between on-chip peripheral pins or general-purpose I/O

Interrupts

- Vectored Interrupt Controller (ARM PrimeCell)

DEVELOPMENT-KIT CONTENTS

- Ashling LPC2000 Evaluation Board
- On-board JTAG EmbeddedICE-RT Emulator
- GNU GCC Compiler tools for ARM
- AsIDE IDE for ARM, invokes/configures GNU ARM compile tools (Evaluation or full-function version)
- JTAG Flash Programming
- Ashling PathFinder debugger for LPC2000 (Code-size-limited Evaluation version, or full unlimited version)
- USB cable
- DC power supply
- Full documentation on CD
- Getting Started guide

Ashling EVBA7 LPC2000 Evaluation Board with On-Board JTAG Emulator

- Supports Philips LPC2xxx-series ARM7-core Microcontrollers
- On-board EmbeddedICE-RT JTAG Emulator
- 2 x 9-pin D-type Serial communications ports
- 4 indicator LEDs, 7-segment character display
- 4-way DIP switch
- External interrupt switch, Reset switch
- Plated-through-hole prototyping matrix
- Expansion and Pin-test connector
- Includes Universal Power Supply

Debug Support

- On-board EmbeddedICE-RT™ debug controller with USB1.1 connection to host PC; no external debug tools are needed
- Full EmbeddedICE-RT™ real-time debugging: Code download, run control, read/write memory, read/write registers, breakpoints, semi-hosting, Debug Comms Channel and RealMonitor™ (Non-Stop Debugging)
- Programming for LPC2xxx on-chip Flash memory
- Options to connect external debug tools using 20-way EmbeddedICE and 38-way MICTOR Embedded Trace Macrocell (ETM) trace connectors
- Optional Adapter Sockets for 64-pin and 144-pin LPC2000 devices

Ashling PathFinder-2000 Source Debugger

Debugger: PATHFINDER Source Debugger for C and Assembly. User-controlled multi-window debug control system.

Compiler support: Kits include ASIDE-ARM Integrated Development Environment with GNU ARM Compiler/Linker.

PATHFINDER-2000 supports all popular ARM compilers, including ASIDE, GNU, ARM Ltd., Green Hills Software, IAR, ARC-MetaWare, Metrowerks, WRS (Diab Data).

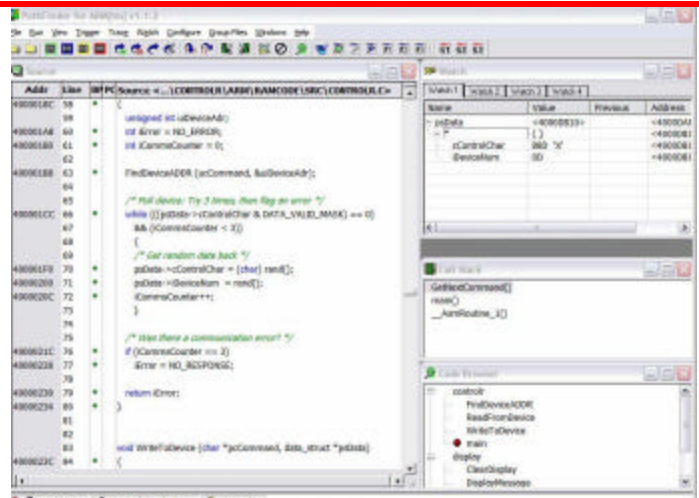
Host: PC with Windows XP/2000/Me/9x/NT. USB 1.1 debug connection to host PC

Script language: Powerful macro language to control, monitor and log all On-Board Emulator functions.

Device Support: Philips PC2104/05/06, LPC2114/19, LPC2124/29/94, LPC213x, LPC2210/12/14, LPC2290/92/94

Display/read/write of target system memory, peripheral registers and IO space

Support for all on-chip **hardware breakpoints**; unlimited **software breakpoints**.



The PathFinder Source Debugger for the LPC2000 Development Kits

ORDER CODES FOR ASHLING LPC2000 DEVELOPMENT KITS AND OPTIONAL ADAPTERS

Product	Order Code
ASK-2000 STARTER KIT: includes LPC2000 Evaluation Board with LPC2106, on-board JTAG Emulator, evaluation ASIDE Integrated Development Environment (Editor, GNU ARM Compiler, Linker), evaluation PATHFINDER Source Debugger (32KB code size limit)	ASK-2000
APK-2000 APPLICATION KIT: includes LPC2000 Evaluation Board kit with LPC2106 device, on-board JTAG Emulator, full-function ASIDE Integrated Development Environment, full-function PATHFINDER Source Debugger (no code size limit)	APK-2000
DEVK-2000 DEVELOPMENT KIT: includes LPC2000 Evaluation Board kit with LPC2106 device, on-board JTAG Emulator, OPELLA-USB-ARM stand-alone EmbeddedICE JTAG Emulator for any ARM7/9 target board, full-function ASIDE Integrated Development Environment, full-function PATHFINDER Source Debugger (no code size limit)	DEVK-2000
Adapters fit onto EVBA7 Board in place of LPC2106 device. When ordering any Adapter also add -NP suffix (No Processor) to Kit part-number.	
Optional 48-PIN PROGRAMMING SOCKET ADAPTER , supplied with socketed LPC2106 device in LQFP48 (SOT313-2) package. Allows removal and reinsertion of devices.	PA-EVBA7-48
Optional LP2129 64-PIN DEVICE ADAPTER , supplied with soldered-on LPC2129 device	FA-EVBA7-64
Optional LP2138 SINGLE-RAIL 64-PIN DEVICE ADAPTER , supplied with soldered-on LPC2138 device	FA-EVBA7-64-SR
Optional LP2294 DUAL-RAIL 144-PIN DEVICE ADAPTER , supplied with soldered-on LPC2294 device. Includes 8Mb SRAM	FA-EVBA7-144-DR

DS266 V9U

Ashling Microsystems Ltd. is Certified to EN ISO 9001:2000, NSAI Registration 19.09069

Ashling Microsystems Inc.
18612 Devon Avenue
Saratoga, CA 95070-4646
USA
Tel: (408) 884 3020
Fax: (408) 884 3026
Email: sales.usa@ashling.com

Ashling Microsystèmes
2, rue Alexis de Tocqueville
Parc de Haute Technologie
92183 Antony Cedex, France
Tel: 01.46.66.27.50
Fax: 01.46.74.99.88
sales.fr@ashling.com

Ashling Microsystems Ltd
Intec 2, Wade Road
Basingstoke
Hants. RG24 8NE, U.K.
Tel: (0870) 240 5209
Fax: (01256) 811761
sales.uk@ashling.com

Ashling Microsystems Ltd
National Technology Park
Limerick
Ireland
Tel: +353-61-334466
Fax: +353-61-334477
sales.ie@ashling.com

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