

# Transmeta™ Crusoe™ TM5800 System Development Kit

## Small Micro-ATX Form Factor Design

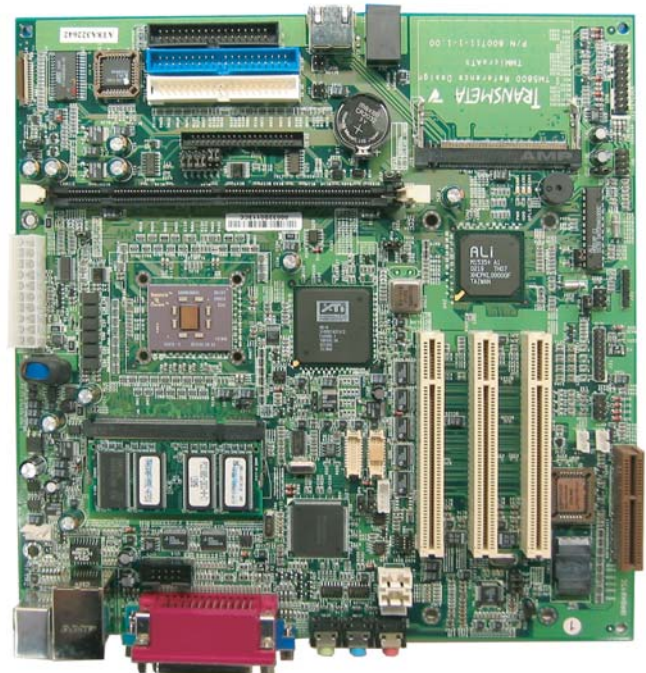
### Product Overview

Transmeta, the leader in efficient computing, provides a total system solution for developing very fast and highly integrated x86 devices. The Transmeta Crusoe TM5800 System Development Kit is a cost-effective platform that enables developers to easily design many different products including PCs, mobile PCs, POS devices, smart displays, thin clients, industrial automation, and full-featured embedded devices.

The System Development Kit features the Transmeta Crusoe TM5800 1GHz or Crusoe SE TM5800 800MHz processor with Code Morphing™ Software providing high-performance for demanding applications, high energy efficiency for long battery life, low power dissipation and heat generation, and LongRun™ power and thermal management.

### Development Kit Specifications

<b>Processors Supported</b>	Transmeta Crusoe TM5800 1GHz processor or Crusoe SE model TM5800 800MHz processor
<b>Chipset</b>	Northbridge: Integrated into TM5800 processor Southbridge: ALI® M1535+
<b>BIOS</b>	Phoenix Technologies™ BIOS, supports ACPI, DMI, PnP
<b>System Memory</b>	1 x DDR socket with 256MB DDR-266 module 1 x DIMM socket for SDRAM memory modules
<b>Bus Master ATA</b>	ALI M1535+ built-in two IDE interfaces for up to 4 devices: Supports PIO mode 3/4 or Ultra DMA/33/66/100 IDE HDD, and ATAPI CD-ROM
<b>On-board VGA</b>	ATI® M6 VGA controller with 8MB VGA memory Supports CRT, Svideo, TV-out, DVI, LVDS
<b>On-board Audio</b>	ALI M1535+ built in audio controller AC97 Codec STAC9721T Connectors for line-in, line-out, microphone, CD-In, Aux-In
<b>On-board Ethernet</b>	NS DP83815 single chip Ethernet controller 10/100 BaseT support, full duplex, Wake-On-LAN RJ-45 connector (rear side)
<b>Expansion Slots</b>	3 x PCI slots 1 x MiniPCI slot 1 x CNR slot
<b>I/O Features</b>	1 x FDD (up to 2.88MB, 3 Mode) 1 x Parallel port (EPP, ECP Port) 2 x Serial ports (RS232)
<b>USB</b>	2 x USB port connectors plus pin header for two additional USB ports
<b>Thermal Sensor</b>	Maxim 1617
<b>IrDA</b>	Pin header
<b>Keyboard / Mouse</b>	1 x PS/2 mouse connector 1 x PS/2 Keyboard connector
<b>Form Factor</b>	Standard MicroATX motherboard 9.6-inch x 9.6-inch (243.8mm x 243.8mm)



The kit also includes Hitachi's H8 Mobile Daughterboard that provides the included TM5800 MicroATX motherboard with the capability to run in a battery-powered mobile configuration with a matrix keyboard and touch pad.

## Evaluation Software

The Crusoe System Development Kit has board support packages for the following operating systems: Microsoft Windows XP®, Microsoft CE.NET®, Lynux Works™ BlueCat Linux® and LynxOS, MontaVista™ Linux Professional Edition, QNX® Neutrino®, and Wind River® VxWorks®.

## Transmeta Software Tools

LongRun™ Monitor is a graphical tool displaying the LongRun power management performance (MHz and voltage) of the Transmeta Crusoe and Crusoe SE processor over time. This utility provides flexible management of system performance and battery life. An additional suite of Transmeta software tools is also available.

## Development Kit Contents

The Transmeta Crusoe TM5800 System Development Kit comes with a full complement of accessories including:

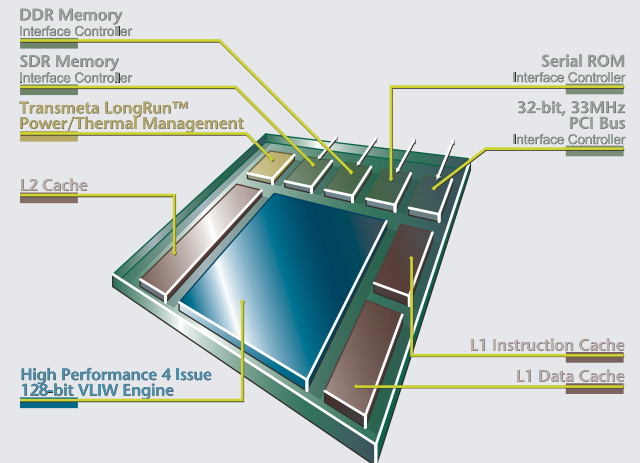
- MicroATX motherboard and Hitachi H8 controller board
- Video connector bracket adapters
- LCD panel power/control cables
- CD-ROM drive inverter & power cable
- IDE and floppy drive cables
- USB 1.1 connector and COM cables
- Matrix keyboard with integrated flex cable
- Touchpad and flex cable
- Lithium Ion battery
- AC power adapter and power cord
- Complete documentation on CD-ROM
- Board schematics in OrCAD and PDF formats
- 6 month warranty

## BIOS Support

Transmeta Crusoe and Crusoe SE processors are compatible with the major BIOS manufacturers including Phoenix Technologies™, American Megatrends Inc., Insyde Software, Inc.™, and General Software™.

## Transmeta™ Crusoe™ Processor

Block Diagram



L1 Data Cache: 64KB

L1 Instruction Cache: 64KB

L2 Cache: 512KB

DDR Memory Support: DDR-SDRAM 100-133MHz

SDR Memory Support: SDR-SDRAM 66-133MHz

Processor Package: Compact 474-pin Ceramic BGA



Side-view of the Transmeta Crusoe TM5800 Reference Board

For more information, visit [www.transmeta.com](http://www.transmeta.com)

**Embedded Development Kit part number:**

5800-800-800810 for 800 MHz

**Embedded Development Kit part number:**

5800-1000-800792 for 1 GHz

**Transmeta**  
CORPORATION

QUALITY MANAGEMENT SYSTEM  
CERTIFIED BY DNV  
ISO 9001:2000

### UNITED STATES

Transmeta Corporation  
World Headquarters  
3990 Freedom Circle  
Santa Clara, CA 95054  
USA  
Tel: (408) 919-3000  
sales@transmeta.com

### JAPAN

Transmeta Japan  
KDDI Bldg Annex 3F  
S2-3-3 Nishi-Shinjuku  
Shinjuku-ku Tokyo 160-0023  
Japan  
Tel: +81-3-5325-9580  
sales-jp@transmeta.com

### ASIA-PACIFIC

Transmeta Taiwan  
7F-1, No.167,  
Fu-Hsing North Road  
Taipei, Taiwan  
R.O.C. 105  
Tel: 886-2-2718-0999  
sales-tw@transmeta.com

### EUROPE

Transmeta Europe  
9 Eglinton Road  
Bray  
County Wicklow  
Ireland  
Tel: +353-87-6838295  
sales-eur@transmeta.com

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**Crusoe**  
PROCESSOR