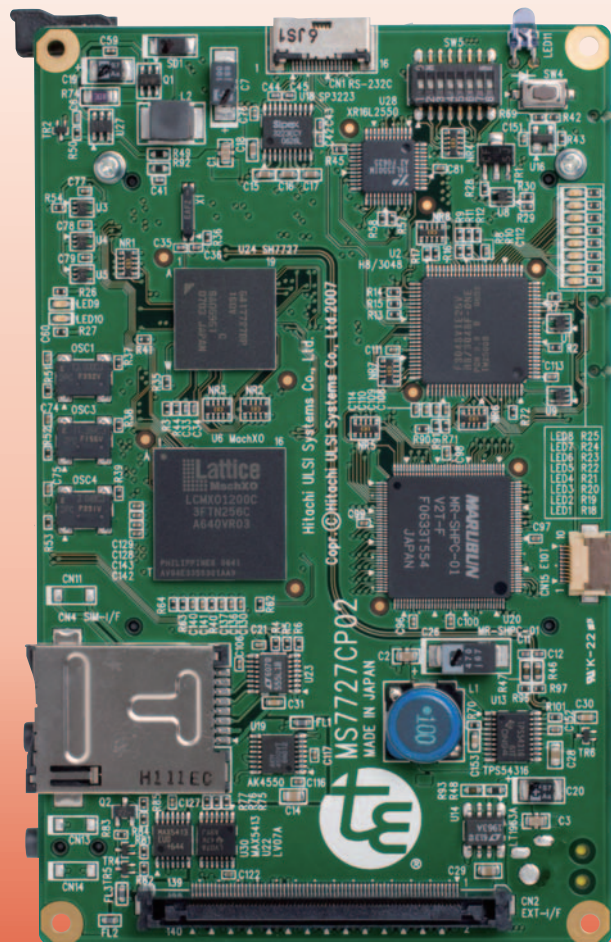


T-Engine/SH7727 Development Kit

An Open Development Platform for Embedded Systems



The CPU Board of the T-Engine/SH7727 Development kit (in full-scale)

CPU	Renesas Technology SH7727(SH3-DSP, internal clock 96MHz / External clock 48MHz)	
Flash Memory	8 MB	
SDRAM	64 MB	
LCD	TFT, 240 x 320 dot, 256K Colors, with touch panel	
Input/Output I/F	USB (host), PCMCIA slot, Serial port, eTRON chip I/F, Headphone output, Microphone input, Expansion bus, Infrared remote controller, key switches(3)	
Others	RTC, H8 power controller	
Power Supply	AC adapter	
Dimensions	CPU board	120 x 75 mm (4.724 x 2.953 inch, excluding protrusions)
	LCD board	120 x 75 mm (4.724 x 2.953 inch, excluding protrusions)
	Debugging board	101 x 75 mm (3.976 x 2.953 inch)



photo1: T-Engine/SH7727 Development Kit

PRODUCT SPECIFICATION

Supplied Software

For T-Engine target board

- PMC T-Monitor
- PMC T-Kernel
T-Kernel/OS, T-Kernel/SM, T-Kernel/DS
- PMC T-Kernel Extension(BASIC Middleware)
File management functions, CLI (Command Line Interpreter), PC card manager (bus driver), USB manager (bus driver)
- Device drivers: Source code included
Clock (RTC), console (serial), system disk (ATA card, USB), KB/PD (Keyboard, Touch panel, Mouse), Screen (CRT, Optional LCD)
- Sample applications: Source code included
Simple Hard Disk Partitioner (hdpatt), Disk Format (format), Compare Files (cmp), Disk Dump (dd), Simple Editor (ed)

Note:

- Customers are allowed to execute the above software on T-Engine/SH7727 Development Kit only. If the above software are executed on another hardware (or embedded in a final product), a separate license is required. Please contact us for further information.
- Among software shown above, the copyright to T-Kernel, the standard real-time OS for T-Engine, is held by the T-Engine Forum (<http://www.t-engine.org/>).
The T-Kernel program, including source code, has been made open to the public by the T-Engine Forum. Anyone who agrees to the conditions set forth in the T-License is free to use it, including incorporation in end products. Note, however, that the T-Kernel offered by the T-Engine Forum lacks MMU support. The addition of MMU support is necessary in order to run the PMC T-Kernel Extension, for realizing file management and virtual memory, or in order to run other middleware such as the PMC T-Shell with its GUI functionality. Personal Media offers the PMC T-Kernel with these and other enhancements.

For development machine

- GNU development environment with source code
GNU based development environment running on PC-based Linux and Windows (Cygwin), including GDB source debugger.
- GUI integrated development environment: Eclipse for PMC T-Kernel
(Free download for the registered user)

Main Package Details

- Hardware
 - A standard T-Engine specification CPU board with SH7727
 - LCD board with touch panel
 - Debugging board (for writing to Flash Memory and connection to H-UDI debugger.)
 - AC adapter
 - RS232C (serial) cable
 - CD-ROM
- T-Kernel and other software and various documentation
- Others
Packing list, Software License Agreement, etc.

Optionals

T-Engine Development Bench (acrylic board +portable cover)

A dedicated acrylic board and a portable cover. An acrylic board is specially designed for stacking together T-Engine boards or multiple extension board using spacers. An acrylic cover is a portable case for T-Engine boards.

T-Engine/SH7727 LAN Extension Board

Drivers and TCP/IP software are not included, use "PMC T-Shell/SH7727 Development Kit" (shown below)

Dedicated Connectors for Extension Bus of T-Engine/μT-Engine

PMC T-Shell/SH7727 Development Kit

An assortment of GUI middleware, TCP/IP, Script Language "MicroScript", and others.

System Requirements for GNU Development Environment

- PC/AT compatible Linux
 - Confirmed package: RedHat Linux 7.1 / 7.3 / 8.0 / 9.0, Red Hat Professional Workstation.
- Windows (Cygwin)
 - Confirmed package: Cygwin on Windows XP Professional

Documentation

The following documentation are being supplied in electronic files:

- Development Kit User's Manual
- Library Manual
- Device Driver Manual
- T-Kernel Extension Manual
- GNU Development Environment Manual
- GNU Development Environment Manual (for Windows)
- T-Monitor Specification
- T-Kernel Specification
- T-Monitor/T-Kernel Implementation Specification
- Hardware User's Manual (circuit diagrams provided)

Reference Books and Related Information

- T-Kernel Kumikomi Programing Kyokasho (A Practical Guide to T-Kernel Embedded Programing), Ken Sakamura (Ed.), 4200yen.
- T-Kernel Standard Handbook, Ken Sakamura (Ed.), 3800yen.
* English documents are included as PDF files on CD-ROM.
- T-Engine, T-Engine2, T-Engine3 (TRONWARE extra edition), 1600yen (each).
- TRONWARE Vol.1-109 (TRON bimonthly magazine, scheduled to be continued), 1200yen (ordinary issue).
- μITRON 4.0 Standard Guidebook, Ken Sakamura (Ed.), 3200yen.
* The above books are published by Personal Media Corporation in Japanese. Tax is not included.
- T-Engine Forum <http://www.t-engine.org/>
- TRON Project <http://www.tron.org/>
- Personal Media Corporation (T-Engine Solution Website)
<http://www.t-engine4u.com/en/index.html>

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- For details and price, please contact us.

- TRON is an abbreviation of "The Real-time Operating System Nucleus".

- eTRON is an abbreviation of "entity and economy TRON".

- TRON, eTRON, T-Engine, μT-Engine, T-Monitor, and T-Kernel are specified terms for computers, and are not product names.

- All product names are trademarks or registered trademarks of their respective owners.

- Due to continued product upgrade or enhancement, the information in this document is subject to change without notice.

- T-Engine is an open, royalty-free specification, and not a commercial product.