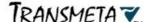The H8/mobile daughterboard is a battery power supply adapter/charger and H8 keyboard/touch-pad micro-controller designed to operate in conjunction with Transmeta's Crusoe™ processor-based model TM5800 MicroATX motherboard. The H8/mobile daughterboard provides the TM5800 MicroATX motherboard with the capability to run in a battery-powered mobile configuration with a matrix keyboard and touch-pad. This provides a typical notebook PC system configuration and allows evaluation of the Crusoe™ processor's mobile PC performance and battery life characteristics. The H8/mobile daughterboard, in combination with the TM5800 MicroATX motherboard, provides a complete mobile PC reference design, including schematics, design guides, processor specifications, and everything else needed to jump-start new product design efforts with a fully-functional and fully-documented real-world system design.

The H8/mobile daughterboard, in combination with the TM5800 MicroATX motherboard, provides the following system-level features:

- Crusoe™ model TM5800 processor with Code Morphing™ software provides a combination of high performance for demanding applications, high energy efficiency for long battery life in portable products, low power dissipation and heat generation requiring minimal thermal solutions, and advanced adaptive power and thermal management capabilities:

    - LongRun™ power management intelligently adapts processor operating frequency and voltage to application workload and energy requirements,

    - LongRun™ thermal management intelligently adapts processor operation to system thermal environments.

- The H8/mobile daughterboard provides a battery-powered mobile-style operating environment for demonstrating the advanced mobile system capabilities and long battery life possible with Crusoe™ processor-based designs.

- The H8/mobile daughterboard also provides notebook PC-style H8 microcontroller-based matrix keypad and pointer touch-pad functions, creating with the TM5800 MicroATX motherboard a complete notebook computer reference design.

## *H8/Mobile Daughterboard Features*

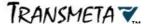| | |
|---|---|
| **Motherboard Supported** | Transmeta Crusoe™ TM5800 MicroATX |
| **Microcontroller** | Hitachi H8<br>Supports mobile matrix keyboard and touch-pad features |
| **H8 Microcode** | Phoenix H8 mobile microcontroller microcode<br>Supports mobile matrix keyboard and touch-pad features |
| **Keyboard** | Mobile-style matrix keyboard<br>4.0" x 9.75" (102 mm x 248 mm) |
| **Keypad** | Four button keypad<br>(on H8/mobile daughterboard) |
| **Touch-Pad** | Mobile-style touch-pad pointer<br>1.94" x 2.56" (49.3 mm x 65.0 mm) |
| **LEDs** | Standard keyboard status LEDs: Num Lock, Caps Lock, Scroll Lock (all green)<br>Power LED (red), Battery Charge LED (red) |
| **AC Wall Power Adapter** | Notebook PC type "power brick"<br>Input: 100-240 V, 2 A, 50/60 Hz<br>Output: 19 VDC, 3.2 A, 60 W max. |
| **Power Supply** | AC wall powered notebook PC type DC-DC converter power supply<br>Provides power to TM5800 MicroATX motherboard |
| **Battery Charger** | AC wall powered notebook PC type smart-battery charger |
| **Battery** | Lithium Ion rechargeable smart-battery pack<br>11.1 V, 5400 mAH |
| **Form Factor** | Custom stand-alone daughterboard<br>3.937" x 7.874" (100.0 mm x 200.0 mm) |

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# H8/Mobile Daughterboard Accessories

The H8/mobile daughterboard comes with a full complement of accessories, including a rechargeable battery, AC wall power supply, keyboard, touch pad, and cables. Accessories included with TM5800 MicroATX mother-board are listed below, followed by a figure showing these accessories.

- • Rechargeable Lithium Ion battery

- • AC wall power adapter and AC power cord

- • Notebook PC-style matrix keyboard with integrated flex cable

- • Notebook PC-style touch pad and flex cable

- • H8/mobile daughterboard-to-MicroATX power cable

- • H8/mobile daughterboard-to-MicroATX control cable

**Accessories Included with H8/Mobile Daughterboard**

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