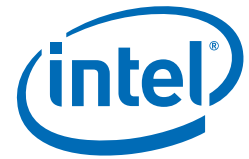


Product Brief

Development Kit

Embedded Computing



Intel® EP80579 Integrated Processor with Intel® QuickAssist Technology Development Kit

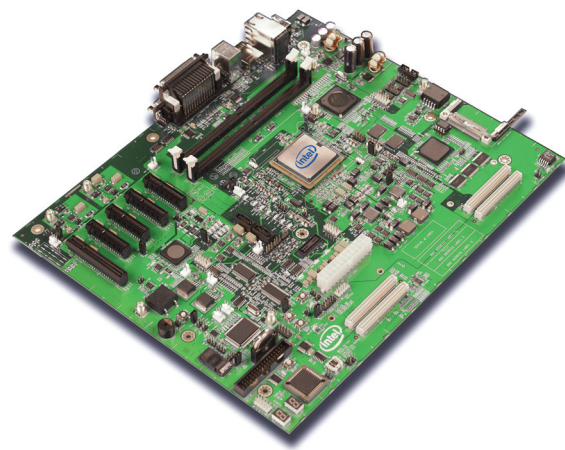
Product Overview

The Intel® EP80579 Integrated Processor with Intel® QuickAssist Technology development kit enables customers to create a new generation of embedded, storage, security and communications solutions. It utilizes a breakthrough system-on-a-chip (SOC) processor product line to deliver excellent performance-per-watt for small form factor designs. The fully pin-compatible SOC product line includes the Intel® EP80579 Integrated Processor and the Intel® EP80579 Integrated Processor with Intel® QuickAssist Technology.

This development kit is a highly configurable platform that enables evaluation of Intel® QuickAssist Technology. It can also be used to evaluate general embedded applications that don't require the effective performance boost of integrated acceleration.

This SOC product line delivers a significant leap in architectural design, with an outstanding combination of performance power efficiency, footprint savings and cost-effectiveness compared to discrete, multi-chip solutions. The single-chip design includes an Intel architecture complex based on the Intel® Pentium® M processor, integrated memory controller hub, integrated I/O controller hub, and a wide range of I/O for flexible design options. It features PCI Express*, Gigabit Ethernet, High Speed Serial (HSS)¹ ports for TDM or analog voice connectivity, security accelerators for bulk encryption, hashing and public/private key generation acceleration.

Utilizing the Intel software supporting Intel QuickAssist Technology, users can effectively boost performance by offloading key security or communications functionality and conserving valuable CPU cycles.



Board Features

System memory

- Supports two 240-pin DDR2 DIMMs
- 400/533/667/800 MHz DDR2 memory
- Dual rank or single rank
- 256 MB to 4 GB memory
- Unbuffered/registered ECC and non-ECC

Peripheral I/O interfaces

- Three (3) UART serial ports
- Three (3) Gigabit Ethernet RJ45 interfaces
- Two (2) Controller Area Network (CAN) headers
- Two (2) USB (1.1 or 2.0) interfaces
- Two (2) SATA (Gen 1 or Gen 2) interfaces
- One (1) floppy drive interface
- PS/2 mouse and keyboard connectors
- One (1) parallel port

Board Features (continued)

Expansion capabilities

- One (1) x4 PCI Express interface via x8 slot
- Four (4) x1 PCI Express interfaces via x4 slots
- Three (3) HSS/SSP/LEB mezzanine slots

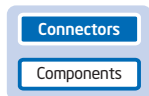
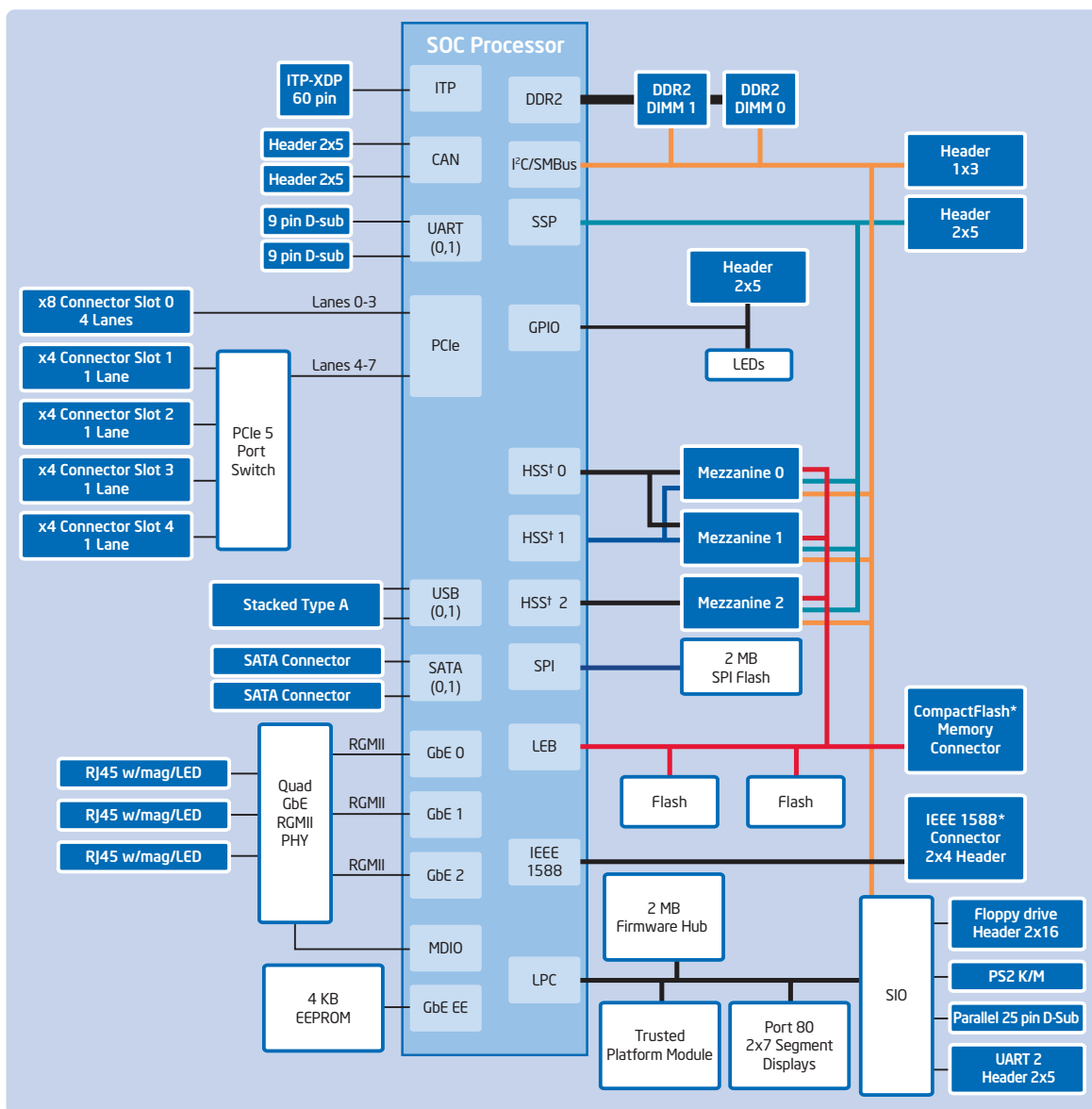
Flash

- Socketed 2 MB Serial Peripheral Interface (SPI)
- Socketed 2 MB firmware hub

Hardware control or monitor subsystem

- Voltage sensor (detects out-of-range voltage)
- Thermal sensor (detects out-of-range temperature)
- One (1) processor fan
- Three (3) AUX fan connectors
- Fan speed control
- Port 80h power on self-test codes

Block Diagram for the Development Board included in the Intel® EP80579 Integrated Processor with Intel® QuickAssist Technology Development Kit
Form factor: 13.00 inches x 10.75 inches



Included in the Kit

- Development board
- Two (2) SKUs of the Intel EP80579 Integrated Processor with Intel QuickAssist Technology:
 - 1.2 GHz (installed)
 - 600 MHz (supplied)
- Processor heat sink
- DDR2 800 MHz DIMM, installed
- PCI Express x1 graphics adapter card
- SATA hard drive with cable
- SATA DVD drive with cable
- ATX12V 460 W power supply
- Two (2) CAN/SIO UART interface adapter cables
- Pre-boot firmware, installed: EFI v1.1-compliant based on American Megatrends, Inc. (AMI) Aptio* 4.5

Mezzanine Cards for Analog Voice and T1/E1 Line Interfaces (sold separately)

- Intel® EPAVM80579 Analog Voice mezzanine card (4-port analog voice card – FXS/FXO)
- Intel® EPTM80579 T1/E1 mezzanine card (quad T1/E1 card)

These mezzanine cards are sold separately. Customers requiring POTS or T1/E1 WAN connectivity should order these mezzanine cards in addition to the development kit.

Order Information

Product Name	Product Number
Intel® EP80579 Integrated Processor with Intel® QuickAssist Technology Development Kit	EP80579TRXDK
Intel® EPAVM80579 Analog Voice mezzanine card (4-port analog voice card - FXS/FXO)	EP80579TRXVOI
Intel® EPTM80579 T1/E1 mezzanine card (quad T1/E1 card)	EP80579TRXT1E1

Software Overview

Intel provides the following software packages to meet customers' embedded, security and IP telephony needs:

- Intel® EP80579 Software Drivers for Embedded Applications contains all software drivers needed to utilize the hardware features on the integrated processor.
- Intel® EP80579 Software for Security Applications on Intel® QuickAssist Technology builds upon the software drivers for embedded and enables the acceleration of cryptographic and packet processing for applications such as VPN/firewall and Unified Threat Management, wireless and WiMax access applications, and small-to-medium business and home network attached storage.
- Intel® EP80579 Software for IP Telephony Applications on Intel® QuickAssist Technology builds upon the software for security applications by adding features important for converged IP PBX solutions, converged access platforms, IP media servers and VoIP gateways.

For most recent software package updates from Intel, visit: downloadcenter.intel.com

The development kit and the software packages from Intel provide a validated system that enables software developers to design and test Pre-Boot firmware and operating system software.

The following operating system is supported on the Intel EP80579 Integrated Processor with Intel QuickAssist Technology:

- Red Hat Enterprise Linux* 5

The following BIOS vendors support the processor:

- American Megatrends, Inc.
- Insyde Software Corp.
- Phoenix Technologies, Ltd.

Contact your preferred vendor or an Intel representative for operating system and BIOS options. For information regarding third party hardware and software application support, contact a member of the Intel® Embedded and Communications Alliance: intel.com/go/eca.

Intel Access

Intel in Embedded and Communications: intel.com/go/embedded
Developer's Site: intel.com/design
General Information Hotline: (800) 628-8686 or (916) 356-3104 5 a.m. to 5 p.m. PST
Intel® Literature Center: (800) 548-4725 7 a.m. to 7 p.m. CST (U.S. and Canada)
International locations please contact your local sales office.

¹ Requires Intel-supplied software for Intel® EP80579 Integrated Processor product line.

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