



Intel® IXDP465 Development Platform

A Comprehensive Development Environment to Help Speed Designs with the Intel® IXP46X Product Line of Network Processors

Product Highlights

- Provides system-level test bed for prototyping and integration of designs using Intel® IXP46X product line of network processors
- Provides a modular platform, including a baseboard, network processor subsystem, and optional modules for flexible I/O configuration
- Enables initial processor and system-level performance evaluation
- Supports integration of customers' operating systems and application stacks
- Includes hardware, software, development tools, application software, and documentation

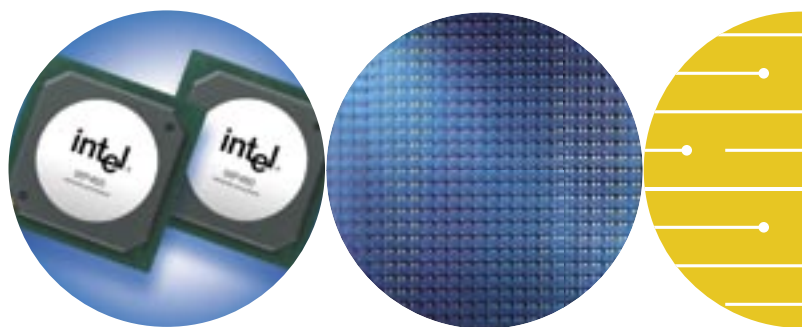
Product Overview

The Intel® IXDP465 Development Platform is a flexible development system that enables rapid design, testing, and integration of a broad range of products based on Intel® IXP460 and Intel®

IXP465 network processors. The platform's modular hardware architecture enables developers to quickly build a solution that meets their application requirements. It also enables OEMs to differentiate their products by easily integrating their own intellectual property.

Combined with operating system software and tools from Intel and third-party providers, the Intel IXDP465 Development Platform forms the foundation of a total development environment. The platform's power and flexibility help developers and OEMs to design and prototype a wide variety of communications and embedded networking products such as modular routers, security appliances, line cards for telecommunications infrastructure, industrial control and automation applications, interactive clients, test and instrumentation, RFID readers and networked print imaging applications.

www.intel.com/go/networkprocessors



Hardware Platform

The Intel® IXDP465 Development Platform includes the following hardware components:

- A baseboard supporting PCI, USB, and 10/100 Mbps Ethernet interconnects
- A network processor subsystem incorporating the 533 MHz Intel® IXP465 network processor and DDR1-266 SDRAM
- Optional modules for a choice of LAN and WAN connectivity

The platform is ideal for developing and verifying the hardware and software used with the Intel IXP46X product line. This is because it provides easy access to the various processor interfaces through independent connectors. Developers can use these interfaces to conduct rapid initial chip assessment, performance evaluation, prototyping and product development. Developers can then use the platform to test value-added expansion cards before building their own solution.

Hardware specifications for Intel® IXDP465 Development Platform

- Baseboard:
 - Two USB connectors (one host, one device)
 - Two UART connectors
 - Four PCI host slots
 - One PCI option connector
 - I²C EEPROM
 - 32 MB Intel StrataFlash®
 - Six 10/100 Mb Ethernet ports (via RJ45)**
 - LCD display
 - Power Supply
- 533 MHz Intel® IXP465 network processor-based CPU subsystem with DDR1-266 SDRAM and a JTAG connector
- One Ethernet MII** module
- Optional modules:
 - HSS** analog (4-FXS, 1-FXO) voice module
 - HSS** quad T1/E1 module
 - One ADSL or UTOPIA-2** module
 - Two additional Ethernet MII** modules

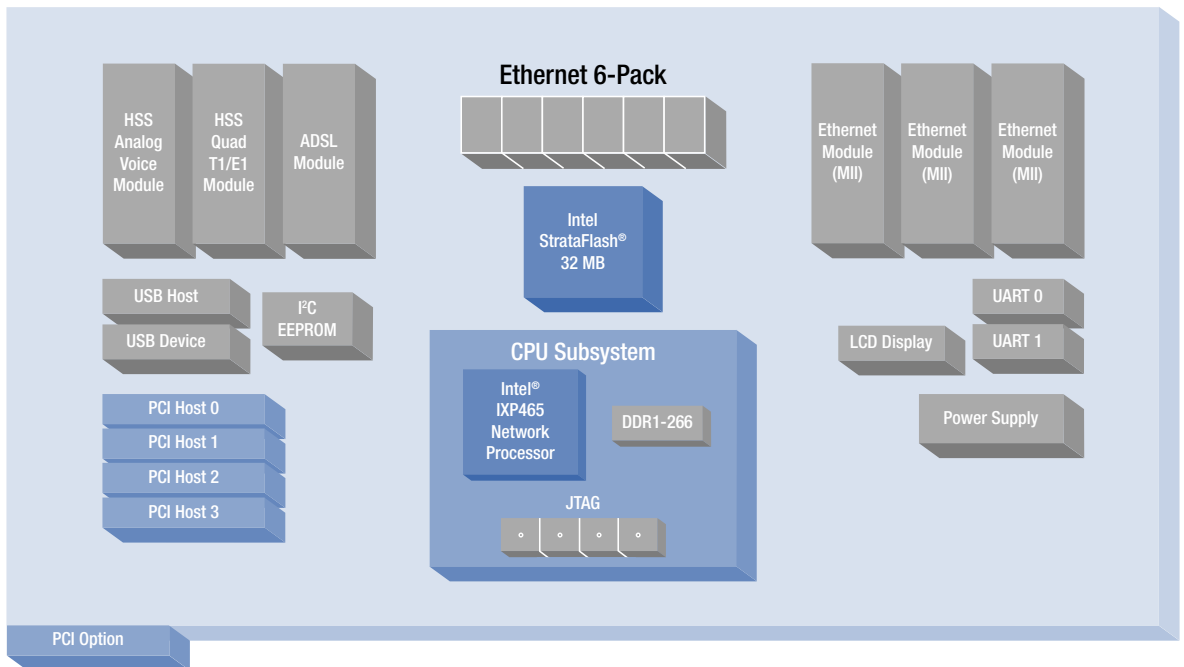


Figure 1: Intel® IXDP465 Development Platform Block Diagram

**Requires Intel® IXP400 software

Intel® IXP46X Product Line Overview

The Intel® IXP46X product line consists of the Intel® IXP460 and the Intel® IXP465 network processors. The single-chip design of these network processors combines a high-performance Intel XScale® core with additional network processor engines (NPEs) to achieve wire-speed packet processing performance. The variety of built-in communications features support requirements for small-to-medium enterprise communications and embedded networking applications. Designed using Intel® 0.18-micron process technology, the Intel XScale core delivers a high MIPS/power consumption ratio and provides ample processing headroom for value-added software features.

Operating Systems, Tools, Software, and Driver Support

The Intel® IXDP465 Development Platform includes a set of software development tools for writing, assembling, debugging, optimizing, and verifying software for systems based on the Intel IXP46X product line. These tools are available on the Intel and third-party Web sites.

The extensive hardware capabilities of the NPEs within the IXP465 network processor are under the control of micro-coded algorithms that are accessed via application programming interfaces (APIs). The APIs are provided in the Intel® IXP400 software releases available on the Intel Web site. Customer applications configure and interact with the NPEs through the high-performance API layer running on the Intel XScale core. Sample “codelets” demonstrate how to use each service or function provided by the Intel XScale core library and the underlying hardware.

To help speed time-to-market and reduce development costs, developers using the Intel IXDP465 Development Platform also have access to a wide

selection of third-party tools, including compilers, linkers, debuggers, and board support packages.

The Wind River* VxWorks* Board Support Package (BSP) and MontaVista* Linux* Support Package (LSP) software releases include drivers for some system peripherals and expansion cards. (BSP and LSP are available through third parties).

Operating systems supported:

- Wind River VxWorks
- MontaVista Linux

Development environments supported:

- Wind River VxWorks Developers Toolkit (VDT) 2.2.1
- Wind River Platform for Network Equipment (PNE) 2.1
- MontaVista Linux Professional Edition 3.1
- Red Hat* RedBoot* and Tool Chain v2.0

Available software:

- Intel IXP400 software releases
- BSP for VxWorks
- LSP for Linux

Intel® Communications Alliance

With Intel development platforms, developers can design comprehensive systems combining products from Intel and third-party vendors to accelerate time-to-market and reduce development costs. For more information on third parties in the Intel® Communications Alliance who support Intel network processors and their development environment, visit: www.intel.com/go/ica

Intel Access

Intel® Network Processors Web page	www.intel.com/go/networkprocessors
Intel® Communications Alliance	www.intel.com/go/ica
Intel in Communications	http://intel.com/communications
Other Intel Support:	
Intel® Technical Document Center	http://intel.com/go/techdoc (800) 548-4725 7 a.m. to 7 p.m. CST (U.S. and Canada) International locations please contact your local sales office.
General Information Hotline	(800) 628-8686 or (916) 356-3104 5 a.m. to 5 p.m. PST

For more information, visit the Intel web site at: developer.intel.com

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