Network Search Engine Development Board for the Intel® IXDP2400 Development Platform

Product Brief
75KTA062134-200

Introduction

IDT provides proven, industry-leading network search engines (NSEs) and a comprehensive suite of software that enable and accelerate the intelligent processing of network services in communications equipment. As a part of the complete IDT classification subsystem that includes content inspection engines, the IDT family of NSEs delivers high-performance, feature-rich, easy-to-use, integrated search accelerators.
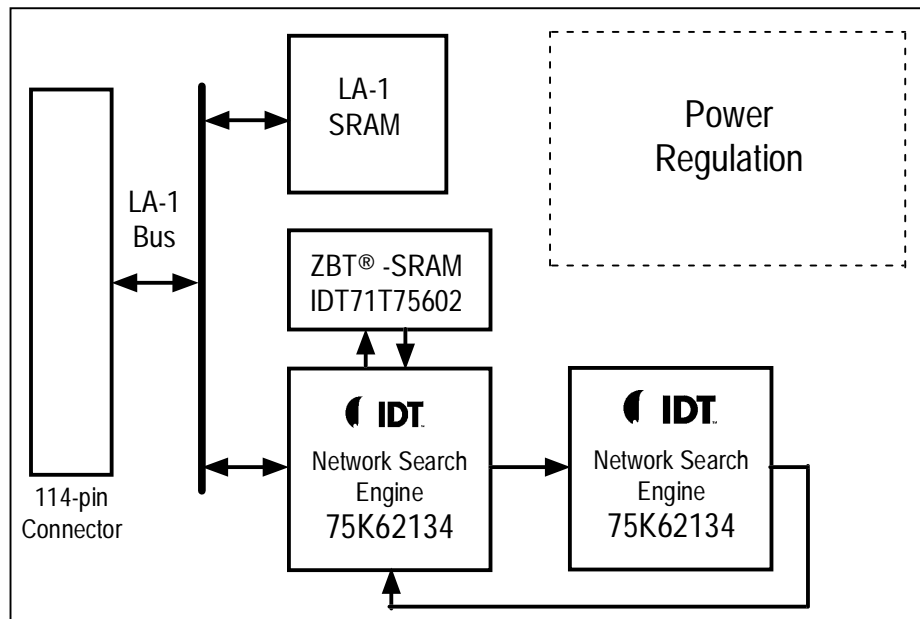
Development Board Description

IDT provides the IDT75KTA062134-200 development board to further accelerate your application software development. The 75KTA062134-200 compliments the Intel IXDP2400 development platform to provide a complete hardware search accelerated network processing development platform. Utilizing the IDT 9M NSE with a LA-1 interface (IDT75K62134), the 75KTA062134-200 enables your Intel IXDP2400 development platform to achieve the highest search performance speed in the industry: 100 million searches per second (MSPS) using a 200 MHz QDR II bus frequency. Additionally, resources on the module include an onboard ZBT® SRAM allows for the storage of NSE associated data, and a QDR SRAM is integrated for auxiliary NPU memory.

The 75KTA062134-200 is bundled with a comprehensive software suite that consists of control plane, data plane, diagnostic, and development software, including the System Level Architecture Model (SLAM™). The complete software package is fully integrated with the Intel IXA Microengine and control plane software development environments, enabling customers to enjoy lower development costs and improved time-to-market.

Both the 75KTA062134-200 and its accompanying software are easy to install. The 75KTA062134-200 directly plugs into the QDR II memory slot via a 114-pin Mictor connector on the Intel IXDP2400 development platform.
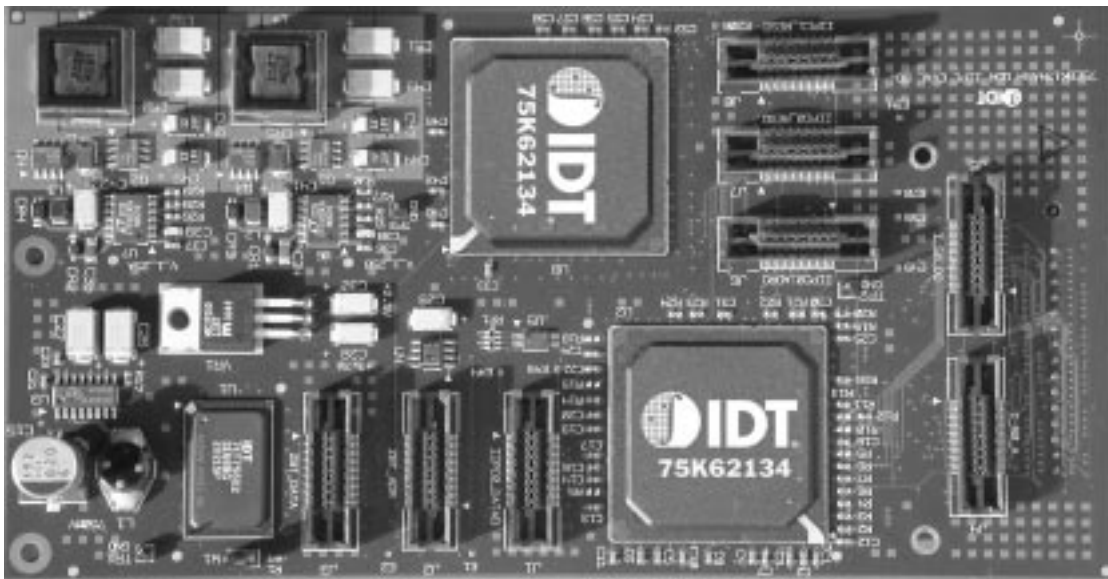
IDT75KTA062134-200 Block Diagram

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Features

- 100 MSPS at 200 MHz QDR™ II
- 512Kx36 entries of full ternary content addressable memory (TCAM)
- Two 75K62134 NSE devices
- 512K x 32 associated data memory on board (ZBT® and/or QDR II SRAM)
- Supports entry widths up to 576 bits
- 16 independently controlled databases
    - Independent width selection
    - Independent depth selection
    - Independent aging
    - Dynamic Database Management™ for up to 70% power savings

- Bundled IDT software for the Intel IXDP2400 development platform, including:
    - Initialization, Management, and Search (IMS) Software Library – A set of software components that operate in the network processing control plane to support NSE component initialization, advanced database configuration, associated data management, and Global Mask Register (GMR) management.
    - Data Plane Macros (DPM) Library – Data plane macros for each NSE instruction.
    - Intel Lookup Library – Additional control plane and data plane software support that conforms to the Intel Internet Exchange Architecture (IXA) Portability Framework.
    - Diagnostic software for testing the NSE-QDR device.
    - System Level Architecture Model (SLAM) – A cycle- and data-accurate simulation model that allows customers to evaluate packet-processing solutions prior to system availability.

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