

Product Brief

Converged Application Platforms

Embedded Computing



Converged Application Platforms for the Distributed Enterprise

Intel® reference design delivers scalable, high-quality customer premise solutions

Product Overview

Converged application platforms, integrating and delivering voice, data, and video over a single IP network, provide cost-effective integrated customer premise solutions for small offices to multiple, geographically dispersed enterprise offices connected to a central business network. These multi-function devices simplify installation and operation while providing over-the-wire manageability.

Converged application platforms, based on high-performance, flexible Intel® building blocks, offer the following advantages:

- A rich user experience delivering superior-quality voice, data and video
- Remote management, diagnosis and provisioning
- Reduced footprint appliances for small-to-medium businesses and distributed enterprise environments where branch offices might have as few as eight or as many as 120 employees
- Protected voice, data networking and video streaming
- Headroom to enable new services
- Freedom to distribute anywhere on the network

Intel's reference designs for converged application platforms in the distributed enterprise help Telecom Equipment Manufacturers (TEMs) and Original Design Manufacturers (ODMs) introduce simple-to-use, affordable converged network solutions more quickly, with the scalability to configure and design multiple platform architectures to meet a wide range of application requirements.

This combination of media and network processing allows service providers and IT managers to integrate multiple features such as routing, firewall, wireless LAN, and VPN support—along with value-added business applications—in a single, multi-function appliance. At the same time, a common network topology simplifies quality of service (QoS), maintenance and upgrades. As a result, more powerful platforms can be deployed that continue to deliver and

support the latest integrated collaboration and network management applications. Services enabled by converged application platforms can include:

- High-definition audio, enabling high-fidelity Voice over IP (VoIP) with virtual surround sound, audio conferencing and voice mail
- Desktop video telephony (peer-to-peer) with video conferencing
- Intelligent automated attendant/context-based call routing
- Data routing/packet forwarding to LAN and WAN
- Firewall and data stream security
- Network Address Translation (NAT) traversal
- QoS management for multiple data traffic classes
- High-speed Internet and intranet access
- Next-generation collaboration applications
- Data backup, redundancy and storage

Highlights

- Validated with the Intel® Pentium® M processor on 90nm process/Mobile Intel® 915GM Express chipset, and Intel® Celeron® M processor/Intel® 852GM chipset
 - Ideal for low-power, small-footprint appliances
 - Scalable with future performance and power variations of the Intel Pentium M processor and Intel Celeron M processor
- Based on the Intel® IXP46X product line of network processors; optimized for home, small-to-medium enterprise, and networked embedded applications
 - Packet inspection, stateful packet inspection, security and voice/data encryption with high data rates
 - NAT support for one IP address that can be shared among many PCs and Session Initiation Protocol (SIP) clients
 - Integrated hardware for popular cryptography algorithms. Up to 40 Mb/s throughput provides excellent bandwidth to encrypt voice channels that link the main enterprise office with distributed offices.

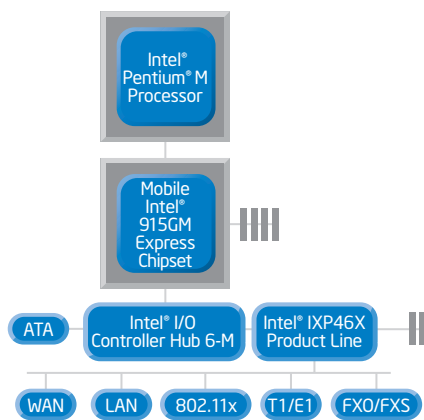
- Media Processing: Intel NetStructure® Host Media Processing Software
 - Performs media processing tasks on general-purpose servers based on Intel® architecture without the use of specialized hardware
 - Flexible, bit exact voice and video codec support, fax, and conferencing
- Dedicated voice processing
 - Digital Signal Processor (DSP) as a co-processor provides voice processing acceleration for cost-constrained designs
 - Synchronous control on DSP performed by Intel architecture processors
- Support for analog and IP telephony
 - POTS interface offers analog phone support, enabling re-use of legacy handsets
 - Support for SIP as well as standard PC connectivity

Benefits for Developers

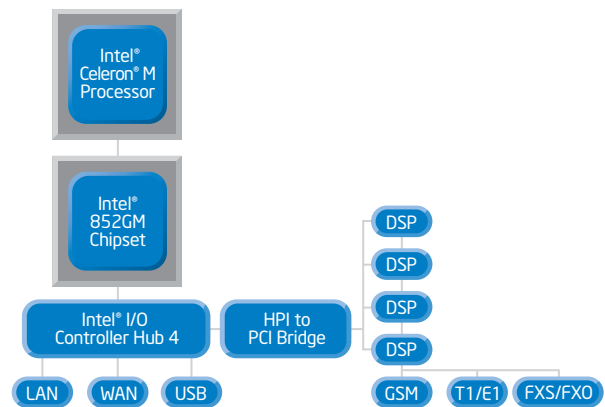
This Intel® reference design, supporting converged application platforms for the distributed enterprise, offers significant advantages for developers:

- Reduced Time-to-Market:** Complete, turnkey reference design helps reduce development time and minimize risk in platform adoption.
- Optimal Appliance Form Factor:** Ideal for low-power, small-footprint appliances required by small-to-medium businesses and branch offices in distributed enterprises.
- Scalability and Flexibility:** Support for the Intel Pentium M processor on 90nm process, Intel Celeron M processor and the Intel IXP46X product line of network processors allows developers to customize designs for specific performance needs, use a single, high-quality silicon supplier, and improve interoperability among silicon components.
- Broad Range of Solutions:** Intel reference designs are supported and enriched by a strong ecosystem of hardware and software providers, including members of the Intel® Communications Alliance. www.intel.com/go/ica

For further information on Intel's Converged Application Platforms for the Distributed Enterprise, please visit: intel.com/go/cap



Intel® Reference Design for Converged Application Platforms



Intel® Reference Design for Converged Applications Platforms with Acceleration

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