(intel®)

A Blueprint for Development

Intel Media Phone Reference Design Breathes New Life into Voice Service

Design Brief Overview

Among the most frequently used features of the cell phone, the home phone, the TV, and the PC lies a tremendous opportunity for both OEMs and service providers. An opportunity to consolidate and deliver entertainment, information, directory services, and household organizational tools through a single, convenient, easy-to-use device. An opportunity to breathe new life into voice service. An opportunity that Intel describes with the term: "media phone."

OEMs can build their own version of a media phone quickly and easily using either the Intel® Atom™ processor-based media phone reference design (see Figure 1 on page 2) or one of the commercially available Intel® architecture-based media phone systems. Either solution gives both OEMs and service providers a way to bring out the new telephony experience quickly and with low risk.

The Intel media phone reference design is based on the low-power Intel Atom processor – Intel's smallest processor built with the world's smallest transistors. When paired with the Intel® System Controller Hub US15W, the Intel Atom processor delivers compelling Internet experiences, advanced graphics and a rich set of multimedia services at very low power.

Since most Internet applications are built for Intel architecture-based PCs, they work seamlessly on the Intel Atom processor. This means OEMs can take advantage of innovation in the PC software and hardware ecosystem to deliver devices that provide high utility to consumers. Also, software engineers can write their application on a standard Intel architecture-based PC and then drop their code onto the target platform with the confidence that it will perform well with minimal tweaking required. And because Intel® processors are supported by a broad ecosystem of software, hardware and tool developers, it will be easier to maintain software code for a media phone built with Intel components.

The Intel Atom processor family, with multiple speeds and long life component support, allows OEMs to develop multiple platforms to meet diverse market needs. OEMs can quickly design a system using a media phone reference design from Intel, which significantly reduces the development effort, and the Intel Atom processor roadmap will provide them with continuous performance improvements and competitive price/performance.

Features of the Intel Media Phone Reference Design include:

- Engineered for low power consumption in a fanless, small form factor

- Low pin-count bus supports a firmware hub, trusted platform module and super I/O chip for maximum versatility in a small design

- Wide variety of connectivity options to enable delivery of services from a variety of input sources, including handsets, headsets, microphones, video, USB, Internet, cameras, etc.

Figure 1 shows the technical features of the Intel Media Phone Reference Design. A complete build-of-materials list is included under technical specs on the next page.

Breathing New Life into Voice Service

The ready availability of these pre-developed designs enables OEMs to quickly deliver flexible solutions that are easily adaptable for local markets. This helps minimize development risk and accelerate the production timeline. From the available platforms, OEMs can deliver customized solutions that support a family of products, with each product price/performance optimized for the types of services they provide.

Such versatility gives service providers an accelerated path toward new revenue sources and renewed life in their voice services business. The flexibility in platform design gives service providers the ability to tailor solutions according to geography, demographics, and/or consumer service preferences. And because OEMs can easily develop customized variations of the media phone, service providers can distinguish themselves from the ever-increasing barrage of competitors with new services, value-added features for existing service packages, and new advertising and messaging opportunities.
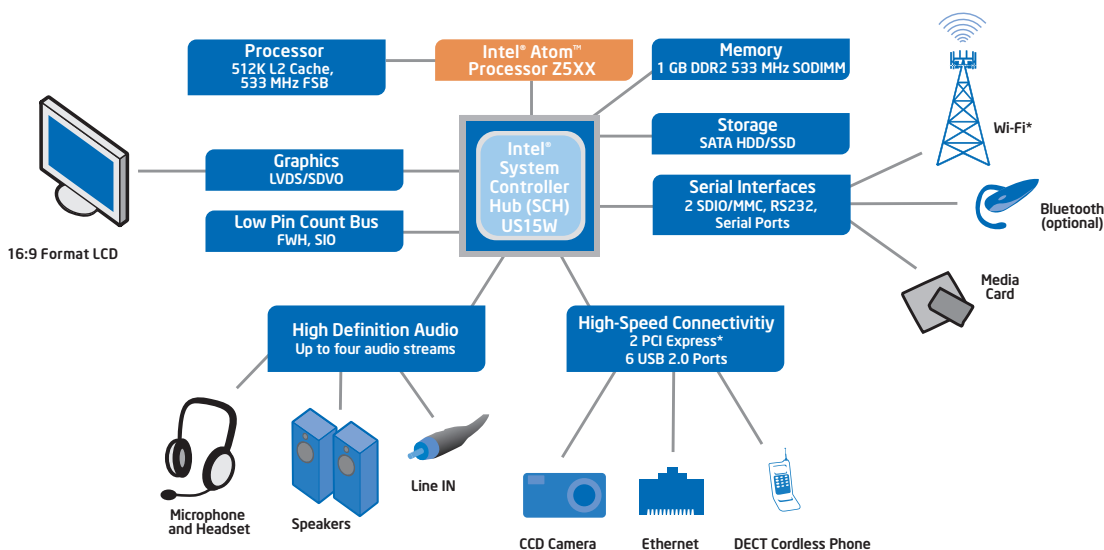

Figure 1. Intel® media phone reference design

Specifications: Intel® Media Phone Reference Design

Dimensions	• 5.4 inch x 9.6 inch – 137.3 mm x 243.7 mm
Processor	• Intel® Atom™ processor Z5XX 533 MHz FSB
Chipset	• Intel® System Controller Hub (SCH) US15W
Supported operating systems	• Moblin – www.moblin.org
Memory	• 1 GB DDR2 533 MHz SODIMM
Storage	• 8 GB Compact Flash • 1 SATA optional
Display/Video/Graphics	• 8.9-inch resistant-touch LCD (16:9 aspect ratio LVDS)
Audio	• HD audio, up to 4 audio streams
I/O connectivity	• 2 SDIO/MMC serial interfaces • RS232 • 1 PCI Express* port • 6 USB (5 external, 1 internal) • 2X RJ45 (LAN and PC) • 1 HDMI • 1 RJ22 • 3.0 mm audio jacks – mic input headset output • 2.0 mm phone headset jack • Internal speakers and mic
Modular options	• Wi-Fi*/Bluetooth • USB port (DECT FXO) • (Camera optional) • 1 mini PCIe slot

The Phone is Fun Again

OEMs and service providers should take a close look at the opportunity presented by the media phone. It offers a convenient and natural way for everybody to get the information they need without waiting to boot up the PC. It provides a means to help consumers be more efficient and to better manage systems and utilities in our global push to conserve energy and save money. And it gives providers a much-needed vehicle for delivery of new, localized services that will encourage customers to stay loyal.

Media phones bring together a variety of rich Internet applications, traditional telephony service and local personal management tools in a unique, easy and fun-to-use device. A command center for the home that's bound to become the next big thing in telephony. You might even say the phone is fun again.