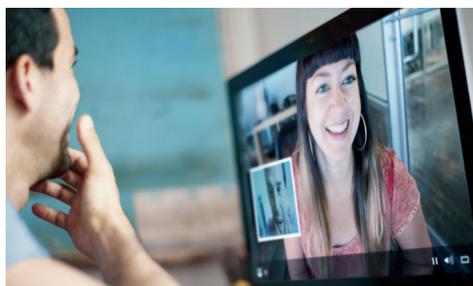




Look Inside.™

# 4K Headed Video Gateway Reference Design



## Making It Easy to Cost-Effectively Deliver High Definition Video

As 4K Ultra High Definition (UHD) becomes a reality, service providers must now consider how to economically and efficiently transmit immersive, engaging video to consumers. Intel and ViXS are collaborating on a joint reference design to create the first DOCSIS 3.0 headed video gateway/media server supporting HEVC Main 10 profile and UHD 4Kp60 content. This gives service providers the capability to cost-effectively manage and deliver UHD video, as well as easily launch new content and services.

### Two platforms in one — certification ready

With an Intel® Atom™ processor dedicated for traditional gateway traffic such as Internet, voice, and cable, along with the ViXS XCode\* 6400 SoC to deliver UHD 4K content with smoother transitions for up to 1 billion colors, the 4K Headed Video Gateway is co-engineered and co-validated. The result is one optimized reference platform that will be available from either company.

The reference design can serve as the primary home gateway. With an Intel Atom processor for the gateway functions along with the ViXS XCode 6400 SoC processing

for transcoding, providers can deliver a greater range of applications such as video-on-demand (VoD), gaming, social media and entertainment apps. In addition, the design is certification-ready so ODMs can help manufacturers accelerate time to market.

The reference design supports both headed and headless video gateway functions, as well as a persistent partition between both internal and external clients so that OEMs can preserve their engineering investments and also follow different update cadences for gateway and user experience software.

In addition, the platform is partitioned to deliver potential energy savings to its end users. With an entire home DVR (digital video recorder) partitioned into the gateway and media functions partitioned into the client, the DVR can record even when the media client is asleep. By architecting with a consistent gateway-client architecture and clean software partition, OEMs can preserve their engineering investment and reuse their existing software. The net result is a stable user experience for end users and potentially less churn for service providers.

FEATURE	BENEFIT
Intel® Atom™ Processor	Advanced processing power with low power usage for energy efficiency
Gateway Client Partition	Allows OEM to preserve their engineering investment and deliver potential energy cost savings to end users
DOCSIS 3.0	Established standard that significantly increases upstream and downstream transmission speeds
10-bit HEVC Codec	50% reduction in bandwidth consumption as well as smoother color transitions and the capability of enabling more than 1 billion colors in UHD 4K
UHD 4K	Ability to support UHD 4K and 2K decode simultaneously
802.11 A/B/G/N   802.11 A/C	Full range of wireless protocols to meet service provider's needs and eliminate consumer needs for multiple gateways
MoCA 2.0 or GbE LAN	Reliable quality of service over home wired network

For more information about the 4K Headed Video Gateway reference design, contact your Intel representative.

INFORMATION IN THIS DOCUMENT IS PROVIDED IN CONNECTION WITH INTEL® PRODUCTS. NO LICENSE, EXPRESS OR IMPLIED, BY ESTOPPEL OR OTHERWISE, TO ANY INTELLECTUAL PROPERTY RIGHTS IS GRANTED BY THIS DOCUMENT. EXCEPT AS PROVIDED IN INTEL'S TERMS AND CONDITIONS OF SALE FOR SUCH PRODUCTS, INTEL ASSUMES NO LIABILITY WHATSOEVER, AND INTEL DISCLAIMS ANY EXPRESS OR IMPLIED WARRANTY, RELATING TO SALE AND/OR USE OF INTEL PRODUCTS INCLUDING LIABILITY OR WARRANTIES RELATING TO FITNESS FOR A PARTICULAR PURPOSE, MERCHANTABILITY, OR INFRINGEMENT OF ANY PATENT, COPYRIGHT, OR OTHER INTELLECTUAL PROPERTY RIGHT.

Intel products are not intended for use in medical, life-saving, or life-sustaining applications. Intel may make changes to specifications and product descriptions at any time, without notice.

All products, dates, and figures specified are preliminary based on current expectations, and are subject to change without notice. Availability in different channels may vary.

Copyright © 2014 Intel Corporation. All rights reserved. Intel, the Intel logo, Atom, Puma, Look Inside., and the Look Inside. logo are trademarks of Intel Corporation in the U.S. and other countries.

\*Other names and brands may be claimed as the property of others.