



## **PRESS RELEASE**

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### **TWO NEW MULTI-FORMAT WIRELESS IC DESIGNS FROM HANTRO ENABLE HIGHEST RESOLUTION VIDEO IN LOW COST HANDSETS.**

*SDTV Resolution Record and Play in a Feature Phone*

**3G Congress, Hong Kong – November 16th, 2005**

With handset cost and battery life primary design criteria, the challenges of incorporating video capability into volume selling mobile handsets are many. Hantro, a world leader in mobile multimedia technologies, today announced two new silicon designs that will enable the encoding and decoding of high resolution video in the most resource limited environments.

Enabling up to SDTV resolution with 30 frames per second, the 6170 decoder and 6270 encoder products provide support for MPEG-4 simple profile, H.263 profile 0 and H.264 / AVC baseline as well as JPEG still images up to 16Mpix. Optimised for integration into wireless baseband or application processors, the encoder and decoder off-load all of the computationally heavy tasks from the CPU to dedicated hardware acceleration which makes high resolutions possible without the need for a more costly processor core. When compared to a full software solution running in an ARM9, the 6170 and 6270 can deliver up to a 97% reduction in CPU load with a 50% saving in power consumption.

“Achieving high performance video in cost efficient and low powered processor ASIC designs is a fundamental requirement for bringing mobile video to the mass market” says **Eero Kaikkonen, President and CEO of Hantro** “We have been designing for wireless system on chips since 1992 and have been focused on video codec designs since 1998. It is through these 13 years of experience that we are able to deliver the most efficient designs for wireless IC’s without compromising

performance.”

The 6170 decoder incorporates a host of post-processing features that improve visual performance, simplify device integration and facilitate application development: -

- Colour conversion changes the output video to RGB format, meeting display input requirements.
- Brightness, contrast and saturation provide complete control over the visual aspects of the image.
- Alpha blending and masking simplify user interface design.
- Cropping and scaling enable higher resolution video / still images to be easily displayed on the handset screen.
- Picture in picture facilitates the implementation of applications such as: video telephony and channel preview for mobile TV.

6270 benefits from Hantro’s extremely efficient patented indexed full search motion estimation algorithm. By utilising all block sizes from 4x4 through to 16x16 with ¼ pixel accuracy the algorithm delivers a 4x speed increase over more complex full search algorithms without a loss in visual quality. The speed increase enables VGA/D1 resolution encoding with 100-166MHz clock frequency in AHB/OCP bus based SoCs; a traditional full search algorithm would require a 400-600Mhz clock which would result in excessive power consumption and unrealistic SoC design requirements.

Both encoder and decoder utilise Hantro's common API making it easy to migrate existing applications, developed for previous generation hardware or software codecs, over to the 6170 and 6270 products.

6170 and 6270 will be available for delivery during the first quarter of 2006.

### **About Hantro**

Hantro is a world leader in multimedia technology for mobile handsets. Provided as intellectual property and delivering optimal value and performance, Hantro's product portfolio includes: -

- A complete range of hardware and software video codec designs that support MPEG-4, H.263, H.264/AVC and VC-1 formats up to SDTV resolutions
- JPEG still-image codecs supporting up to 16MP
- AMR and aacPlus™ audio codecs
- A comprehensive suite of pre- and post-processing technologies
- Streaming protocols
- File format module for .mp4 /.3gp
- Multimedia application development platform that simplifies handset integration, shortens lead times and reduces development costs.
- A full range of integration and support services for OS and device porting.

With proprietary algorithms, patented technology and a continual product development program, Hantro is focused on enabling a more compelling user experience by delivering better quality video with reduced power consumption and CPU load. Extensive participation in the IMTC and M4IF testing programs guarantees compliance with 3GPP standards ensuring the full interoperability of applications such as: Camcorder, Video Player, Video Telephony and Mobile TV. For more information please visit [www.hantro.com](http://www.hantro.com).

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