Samsung developed new digital TV receiver chip

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Samsung Electronics announced that it has completed development of a new digital TV receiver chip, the S5H1406, establishing a new standard for terrestrial (VSB) and cable (QAM) digital TV broadcasting performance. Samsung's new chip enables digital TV receivers to acquire and track signals in harsh environments such as multi-path channel conditions, dynamic conditions with multiple signal variations and where the overall receiving capability is weak.

Digital Television (DTV) is a new type of broadcasting technology that will transform your television viewing experience. DTV enables broadcasters to offer television with movie-quality picture and sound. It also offers greater multicasting and interactive capabilities. Converting to DTV will also free up parts of the scarce and valuable broadcast airwaves. Those portions of the airwaves can then be used for other important services, such as advanced wireless and public safety services (police, fire departments, rescue squads, etc.).

By implementing the company's proprietary algorithm, the S5H1406 offers quick access to signals that reduce transmission interference. The S5H1406 also offers an advanced demodulator and synchronization detector, high performance equalizer and Forward Error Correction (FEC).

Last July, Samsung announced its completion of development of a SoC device S5H2200 that integrates a dual MPEG-2 decoder, CPU and the company's proprietary image improvement function known as the DNIe, or "Digital Natural Image engine."

"With the highly-integrated SoC device for digital TV we introduced last year, Samsung now offers a total solution in the digital TV area, from broadcast reception to image playback and image quality enhancement," said Dojun Rhee, vice president of Samsung Electronics' SoC R&D Center.

In independent field tests, the S5H1406 succeeded in acquiring and tracking the signals of five domestic terrestrial digital TV broadcasts. Based on the overall evaluation, Samsung's advanced receiver chip exceeds current levels of reception performance in the marketplace today.

Samsung's S5H1406 digital TV receiver chip will be made available to customers in Asia in the first quarter of 2005.

Notes:

Vestigial Side Band (VSB): This, the US standard for terrestrial digital TV, has wide frequency band utilization, maximizing the viewing region and minimizing interference form analog signals. It is well suited for high-definition television and has been selected for use not only in the US but also in Canada and Korea.

Quadrature Amplitude Modulation (QAM): This method is used for varying the amplitude of cable broadcast signals. Data is differentiated from 4QAM to 256QAM depending on transmission volume. At 64QAM, the data transmission rate is about 26.97Mbps.