New integrated chip enables next generation of DAB enabled digital audio products

London: Frontier Silicon, the market leader in semiconductor solutions for mobile TV and digital radio, has launched a new advanced and highly integrated system-on-chip IC which will enable the next generation of DAB digital radio-based products. The Chorus 2 FS1020 chip is a new programmable DAB baseband receiver providing significant space, cost and power savings on a typical radio or mobile handheld devices. The chip is now in mass production and products using the chip will appear in the market early 2007.

The key benefit of the new improved Chorus 2 IC is the level of integration - providing up to 40 percent space savings on the board real-estate and 35 percent cost savings on the system bill-of-material. Chorus 2 has 640Kbytes of integrated memory, enabling it to run value added features without requiring external memory. The advanced chip architecture also provides up to 50 percent power consumption savings compared to other integrated DAB baseband receivers currently available.

The significant increase in processing power available on the chip allows manufacturers to create new 'convergence' products at lower cost than is possible at present. Typical of the new products that will be enabled with Chorus 2 are DAB radios merged with other audio functionality - such as combined DAB/ FM/ MP3/ WMA/ AAC digital music players, DAB radios with USB 2.0 OTG connectivity for high speed file transfer and firmware upgrade, Internet radios, digital music servers and jukeboxes, and multimedia-enhanced PDAs.

Chorus 2 will supersede the successful Chorus processor found in over 80 percent of DAB digital radios on the market. The new baseband receiver covers a number of physical layer standards, particularly those utilizing COFDM modulation. The IC uses a Meta122 CPU with extensive DSP (digital signal processor) capabilities, which is based on a multi-threaded architecture capable of executing multiple DSP tasks on the same core without cross-task interference.
Many of the components which were previously outside the chip are now incorporated on-chip including a switched mode power supply which eliminates the need for external regulators, power-on-reset, digital clock (DCXO) and integrated memory to provide full ensemble 1.8Mbps decoding in a Eureka-147 DAB receiver. The use of a hardware-assisted DSP architecture on the Chorus 2 chip ensures that the DSP has additional capacity to run other embedded applications such as software FM, audio decoders, digital rights management, graphics and audio equalisers.

Unique to Chorus 2 is the integration of peripheral features on-chip, such as the USB 2.0 OTG interface, support for TFT and LCD displays, ATA/ATAPI interface for hard-disk storage, and NAND Flash, memory stick and SD interfaces.

Chorus 2 is available now in a package with small footprint of just 13mm(l) x 13mm(w) x 1.7mm(h).

**About Frontier Silicon**

Frontier Silicon is the leading supplier of digital and RF integrated circuits and modules for mobile TV and DAB digital radio products. Frontier is supplying solutions for leading products such as the Samsung B2300 and SGH-P900 T-DMB mobile phones and has over 80 percent market share for DAB receiver solutions. Frontier Silicon's products include solutions for DAB digital radio, T-DMB and DAB-IP and a multi-standard receiver solution for mobile TV reception combining DVB-H, T-DMB and DAB-IP.

Customers include Bang & Olufsen, Denon, Grundig, JVC, Philips, PURE Digital, Roberts Radio, Samsung, Sharp, Sony and TEAC. Frontier Silicon has operations in UK, Ireland, China, South Korea and Japan. For more information, visit [www.frontier-silicon.com](http://www.frontier-silicon.com).

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