Press Release

CML Microcircuits brings advanced voice codec capability to Raspberry Pi users to enable easy evaluation and development

Maldon, Essex - 9 January 2020 - CML Microcircuits is pleased to announce the EV6550DHAT, a Raspberry Pi Hardware Attached on Top (HAT) compatible evaluation and development board that makes the features and benefits of its CMX655D ultra-low power voice codec available to hobbyists, developers and product manufacturers.

The hugely popular Raspberry Pi single board computer is widely recognised by makers, enthusiasts and professional developers as the platform of choice for rapid hardware and software development. The EV6550DHAT builds on this growing ecosystem by bringing the advanced features of the CMX655D voice codec to the Raspberry Pi community.

The CMX655D has been developed for digital voice and sensor applications. It integrates the entire signal chain, from dual matched digital MEMS microphone interfaces to a 1W Class D speaker driver, incorporating decimation, filtering, signal processing and digital gain, supported by an I2S/PCM audio interface and SPI control interface. It represents a true single-chip, ultra-low power solution to adding advanced voice coding/decoding to any application.

In order to make evaluating and developing with the CMX655D as accessible as possible, CML has created the EV6550DHAT. The HAT is compatible with any Raspberry Pi with a 40-pin extended GPIO connector and can be completely powered by the Raspberry Pi, however it also supports an external power source if other HATs or peripherals are being used and limiting the total power available from the host USB interface.

"The Raspberry Pi is the perfect platform to demonstrate the features and capabilities of the CMX655D with little or no development effort," commented David Brooke, Product Manager, CML Microcircuits. "The EV6550DHAT is our first HAT and the entire team has been excited by the prospect of bringing advanced voice codec capability to the Pi."

As well as being HAT-compliant, the EV6550DHAT open source software is accessible via many third-party apps and projects includingGTK3+. GEANIE and GLADE. This means the GUI used to access the EV6550DHAT and all of the features are easily modifiable and accessible to the engineering community.

Features include access to pre-recorded sample files, as well as the ability to record and playback audio files in the .wav format allowing users to play back the pre-recorded samples at different rates and levels, enabling easier comparison between settings and how they influence audio quality. The configurable parameters include sample rate (choose from 8, 16, 32 and 48ksample/s), volume and level (dB). The GUI allows the audio input gain to be set between -12dB to +3dB, while playback volume can be set between -90dB to 0dB. Muting and 'smoothing' is also supported.

The EV6550DHAT is available now from Digi-Key and Mouser.

For further information about the CMX655D, visit the product page here.

About CML Microcircuits

CML Microcircuits is a world-leader in the design, development and supply of low-power analogue, digital and mixed-signal semiconductors for telecommunications systems globally.

The company's wide and varied portfolio means that CML devices are used in an extensive range of industrial and commercial products for licensed and unlicensed wireless voice and data systems.

Focusing on narrowband communications, CML's ICs are found in digital/analogue PMR/LMR, wireless data, satellite communications and marine radio applications, such as TETRA, DMR, dPMR, SCADA systems and Marine communications. The CML portfolio provides components supporting both RF and baseband functionality, encompassing both leading edge digital and legacy analogue systems.

In addition to our established range of devices, we are able to offer bespoke solutions to customers. This service includes design assistance, advice and first-class technical support.
Our *FirmASIC*® approach enables us to produce the optimum solution to a given design requirement. The outcome is a product offering that embraces a number of key technologies and delivers the result cost-effectively with fast time to market, ultimate flexibility and low risk.

CML Microcircuits is a member of the CML Microsystems Plc. Group of companies.

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