

3816-C-PDK Product Development Kit

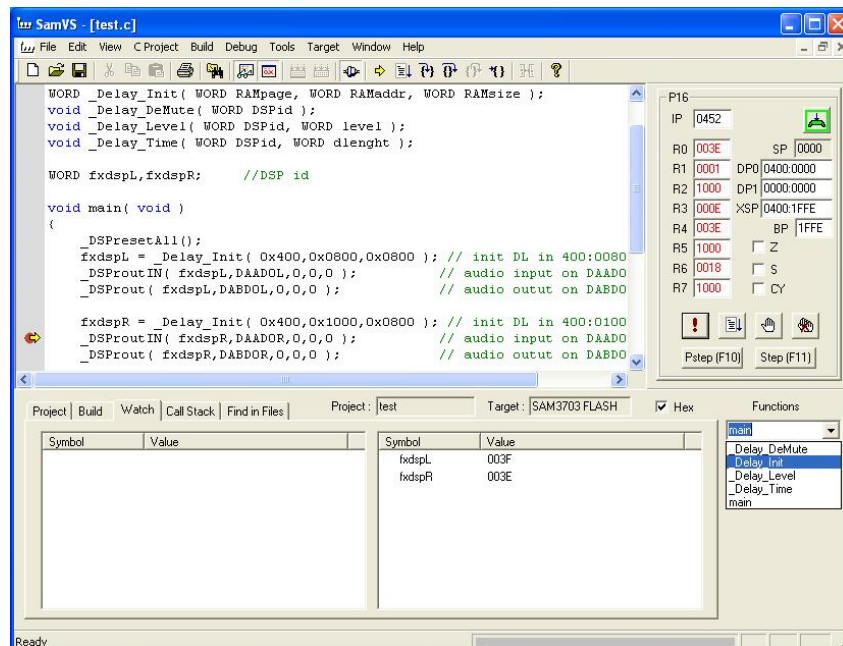
3816-C-PDK is a Product Development Kit for audio applications based on the SAM3816 IC. It consists of the development board 3816-DK_Rev1, and the development software “SamVS-C” with all DREAM system/effects library object files. It also includes some firmware examples (e.g. “3816-FW” MIDI Synthesizer with effects etc), which demonstrates the possibilities of this solution.

3816-DK Development Board

- 4 channels Audio IN / 4 channels Audio OUT. Jumpers can be used for test of other audio channels
- Debug / serial interface connector, SPI options connector, MIDI IN & OUT connectors
- Parallel Host-Port connector (DMA 16bit or 8bit, also serial slave sync pins)
- **SD-Card** connected to SPI port
- external on board memory: 256Mbit Flash (can be upgraded to 2 x 256Mbit), 256kx16 SRAM for effects, 64kx16 SRAM for debug, 1 Mbit DataFlash
- 34-pin, HE10 connector for extensions on memory bus.
- **USB Full Speed** with the on-chip FullSpeed-USB device.
- possibility to run 4 sampling rates: 48kHz/96KHz and 44.1KHz/88.2KHz. For this, appropriate xtal is mounted on xtal socket, and frequency setting is done with 2 configuration jumpers.
- LEDs for power indication, USB activity.

SamVS-C Development Software

- integrated development environment with C-Compiler
- Project oriented: multi file compilation, multiple configurations (e.g. Debug and Release versions)
- C-/Assembler source level debugging with go, step into, step out, run to cursor, run to breakpoint etc.
- Library based: DREAM provides ready to use libraries like MIDI and Effects (for 48KHz and 32KHz)
- A system library allows complete access to all low level IC portion, like I/O ports etc.



These are some of the new features of DREAM Library coming with SamVS-C V3:

- **USB** library, supporting SAM3816/SAM3516 USB device (AudioClass 1.0)
- **File IO** library, supporting FAT16/FAT32 file system
- **MP3** library, supporting Multi-channel MP3 playback possibility of SAM3x16
- **GM2-Synth** library module (GM level 2 compliant sound module with effects)
- **HQ Effect** modules, like stereo Pitch Shifter, Pitch Detector, Vocal Shifter etc.