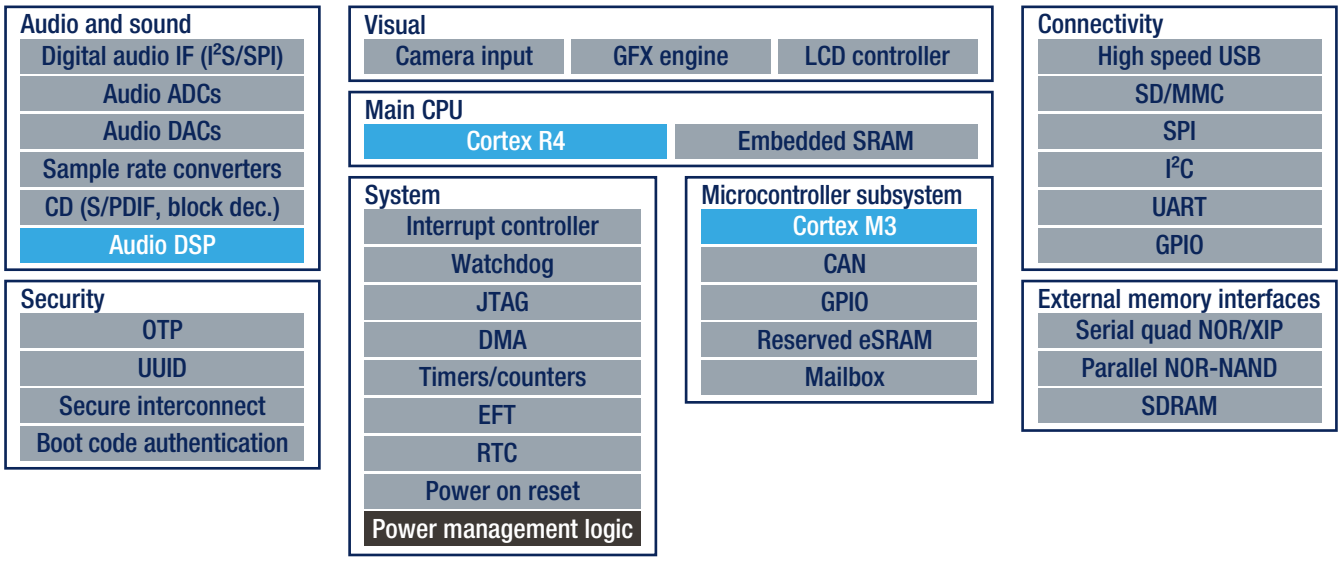
Processor for car radios and display audio



Car radio and display audio markets require a combination of audio handling, connectivity support and smartphone mirroring features. ST's Accordo2 processor offers compact, innovative, cost-effective solutions for these markets, as well as automotive sound systems.
Accordo2 offers a smart combination of processing efficiency, fully-integrated audio capabilities and secure coprocessor for real-time automotive network tasks.

KEY FEATURES

- Cortex-R4 core at 450+ MHz, with integrated eSRAM for infotainment and connectivity tasks
- Secure Cortex-M3 coprocessor for CAN management
- Large integrated eSRAM bank for DRAM-less operation (XIP with SQI)
- Powerful audio subsystem
  - 450+ MIPs DSP capability
  - Analog inputs (ADCs) and outputs (DACs)
  - Hardware sample rate converters
  - Flexible hardware audio routing
- Visual interfaces
  - 2D accelerator graphics engine
  - Video input port (ITU601/656)
  - LCD display + touchscreen controllers
- Fully-integrated connectivity set: HS USB 2.0 Host and Device, SD/SDIO, CAN, SPI, I²C, UART, and more
- Integrated power management

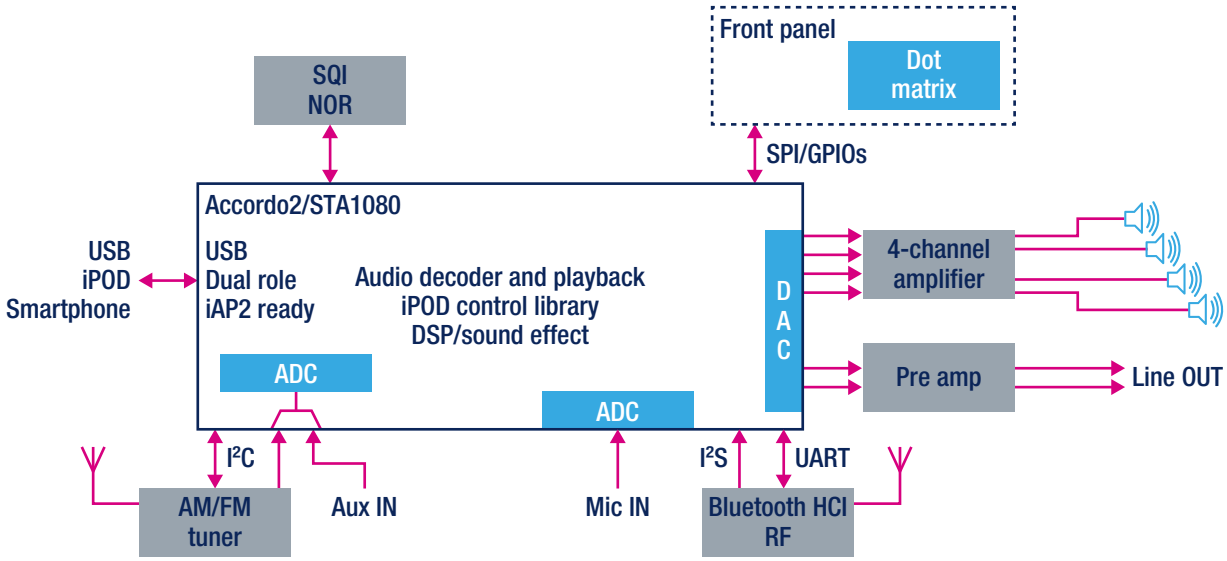
KEY BENEFITS

- "One chip solution" for BT car radio and display audio
- Optimized bill of materials
- Reduced system complexity
- Powerful system architecture resulting in minimal CPU load
- Support of smartphone mirroring feature for safe and smooth in-car operation
- Several pin-to-pin compatible versions for scalability with single PCB design
- Booting from multiple sources for flexibility of implementation and ease of firmware upgrades

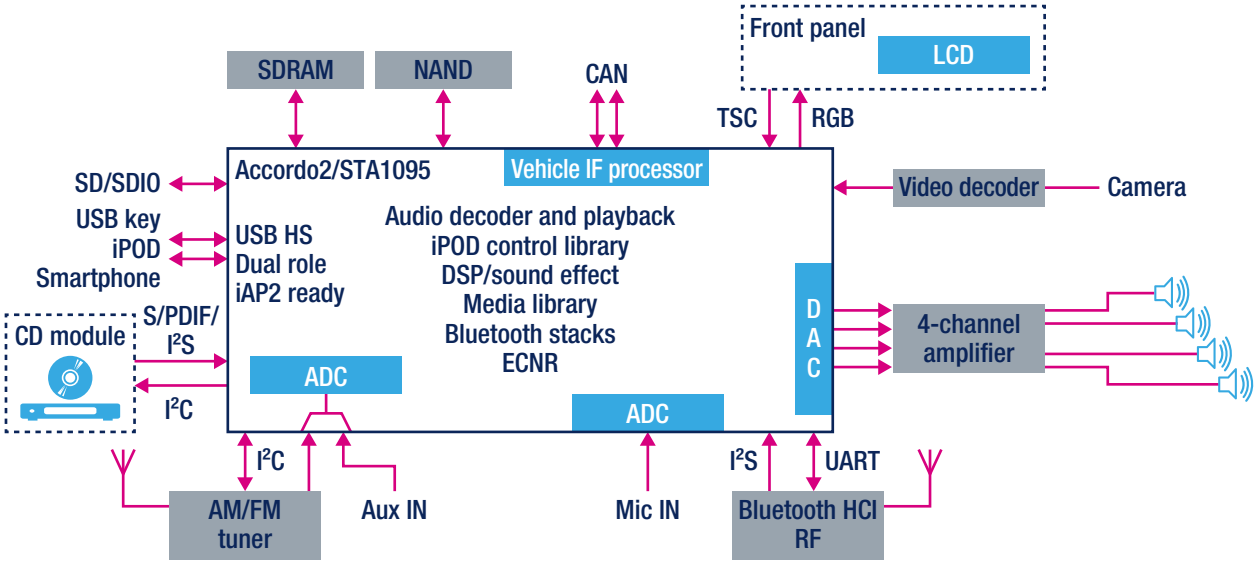
SOFTWARE OFFERING

- Complete turnkey software offering T-Kernel support for fast, robust, small footprint operations
  - Sound effects
  - Audio Codecs
  - Media Player
  - Media Library
  - iPOD Control Library
  - Tuner Control Library
- Linux support for open-source ecosystem benefits

EXAMPLE OF AFTER MARKET MECHALESS CAR RADIO IMPLEMENTATION



EXAMPLE OF OEM DISPLAY AUDIO IMPLEMENTATION



DEVICE SUMMARY

Part number	CAN microcontroller support	Visual interfaces
STA1080	No	No
STA1085	Yes	No
STA1090	No	Yes
STA1095	Yes	Yes

PACKAGE INFORMATION

LFBGA 361 balls, 16 x 16 x 1.7 mm,
0.8 mm pitch

OPERATING CONDITIONS

VDD: 1.14 V - 1.26 V
VDDIO: 3.3 V ±10%
VDDIOON: 3.3 V ±10%,
Operating temperature range: -40/+85 °C
Automotive Grade