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

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[Accordo2 Processor Diagram]

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[www.st.com/car-radio]
EXAMPLE OF AFTER MARKET MECHELESS CAR RADIO IMPLEMENTATION

EXAMPLE OF OEM DISPLAY AUDIO IMPLEMENTATION

DEVICE SUMMARY

<table>
<thead>
<tr>
<th>Part number</th>
<th>CAN microcontroller support</th>
<th>Visual interfaces</th>
</tr>
</thead>
<tbody>
<tr>
<td>STA1080</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>STA1085</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>STA1090</td>
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<td>Yes</td>
</tr>
<tr>
<td>STA1095</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

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