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Accordo2
2 wheelers digital cockpit

September 2020

Accordo

Preamble

Accordo : Scalability for Digital Instrument clusters

ST Accordo2 is an Automotive Quality processors, with display and graphical capabilities, media and audio features, and vehicle and mobility devices connectivity.

The Accordo2 device is extremely well suited for Digital Instrument Cluster applications for 2-wheelers and can handle

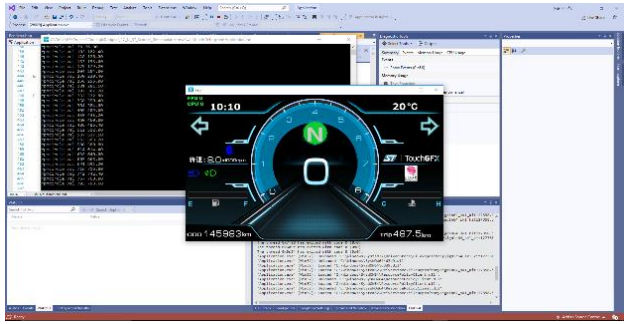
- the visual HMIs
- connectivity with mobile devices
- interface with the vehicle (motorbike)

Accordo2 2 wheelers demo

Hardware

- Compact and fully integrated Demo kit which allow to quickly evaluate
  - Graphic performances
  - Connectivity features
  - Audio

Software



- Complete Cluster Application
  - TouchGFX UI
  - Integrated Graphic HW acceleration
  - CAN support
  - Bluetooth Audio
  - USB and Bluetooth Navigation
  - Rear View Camera

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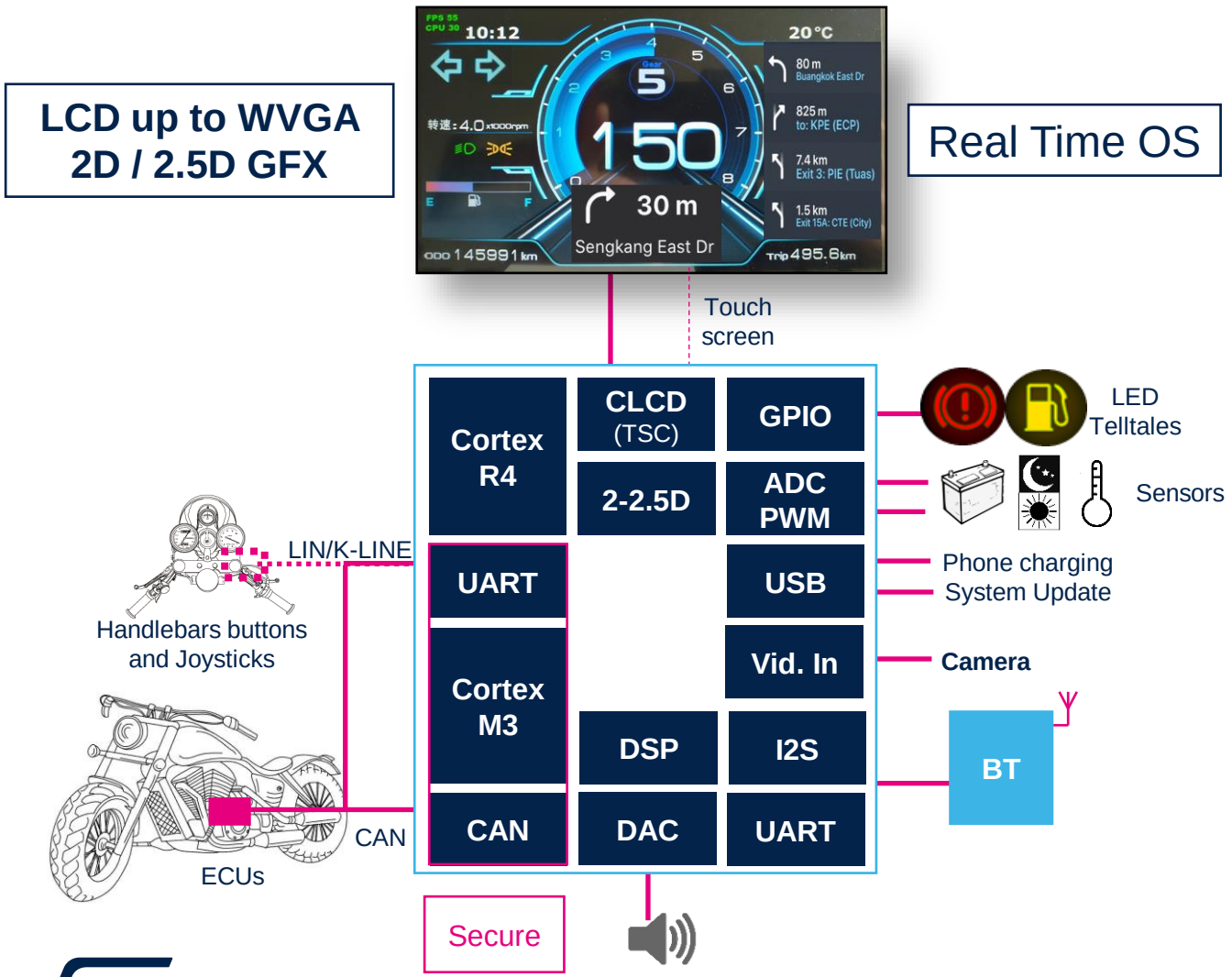
Cockpits with modern 2D UI and audio with Accordo2



- 720+ MIPS Cortex R4 main core for drawing & media tasks
- Secure 200+ MIPS Cortex M3 secondary core for real time vehicle networking tasks
- 2D GPU for drawing & composition, supported by ST TouchGFX HMI development tool
- 450 MIPS Audio DSP to handle audio effects
- Integrated power management; no need for external logic
- 2/4-layer PCB implementation

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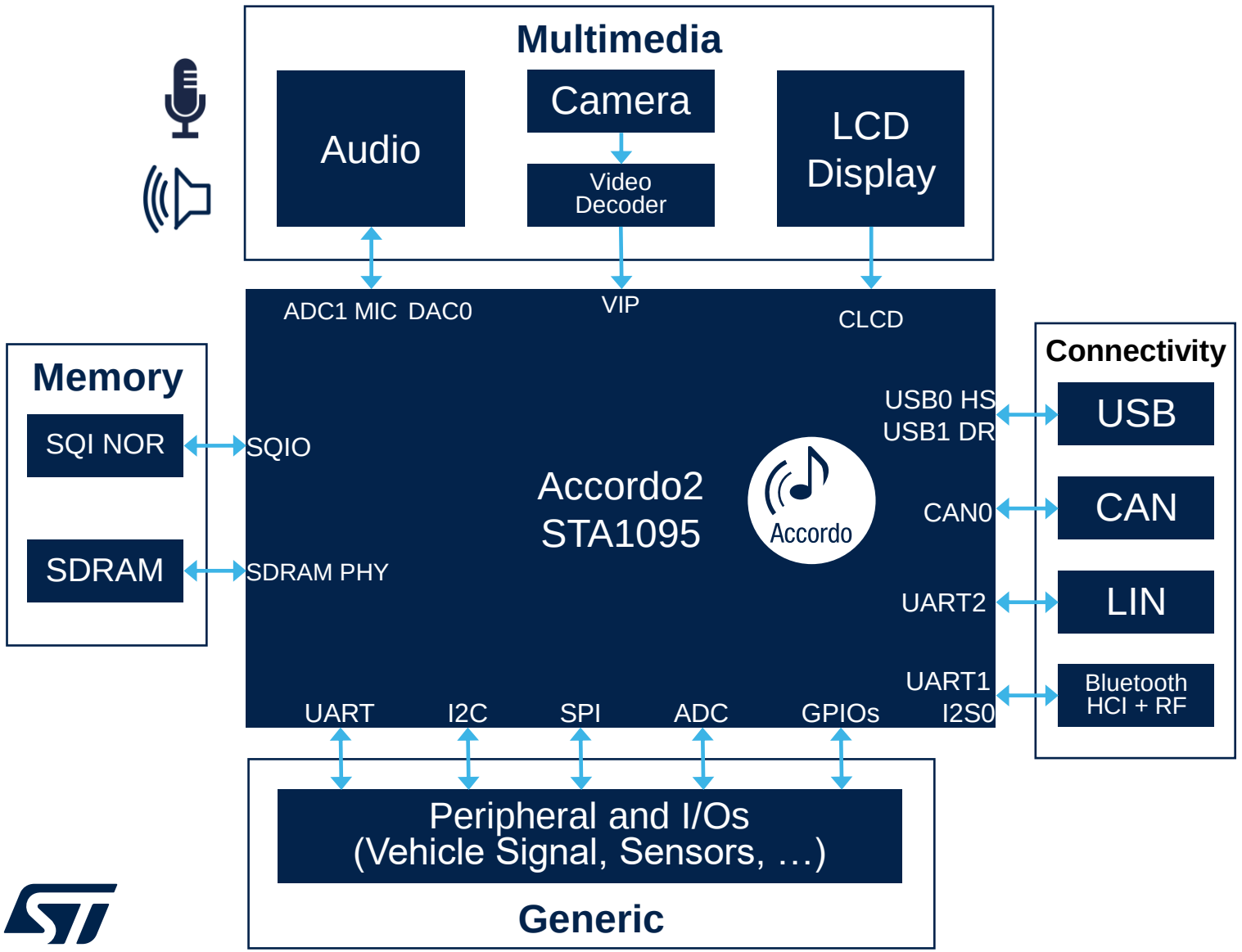
Accordo2 digital cluster kit diagram



- Generic
  - Multiples GPIOs
  - UART / I2C / SPI / ADC
  - Timers (PWM capability)
- Connectivity
  - CAN x2
  - USB x2 (x1 dual role host/device)
- Multimedia
  - RGB666 Display
  - ITU656 input for Video Input
  - Complete Audio Subsystem
    - DAC / ADC
    - Digital audio
- Power management
  - Standby mode
  - Wake sources
  - IGNKEY / ONOFF
  - Generic x8

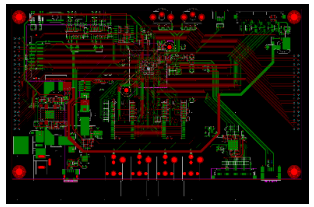
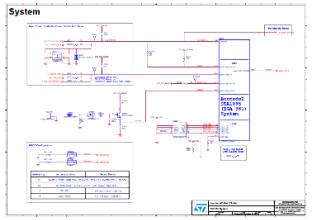
Demo package

ST HW KIT content

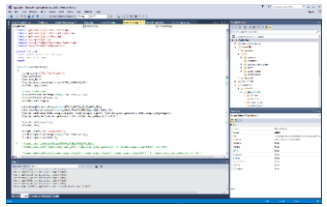
- A2 DC evaluation kit see pictures
- USB cables
- Power Supply
- JTAG adaptor

Extra development tools

- Segger J-Link JTAG Probe
- USB to UART converter (trace)
- Camera (optional)
- CAN-LIN adaptor






Embedded SW package

- R4 T-Kernel OS with
  - TouchGFX framework + Graphic Acc
  - TouchGFX Reference Cluster App
  - Drivers and middleware
  - Sample test code
- M3 Free-RTOS
  - full source
- Documentation

Thank you

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