

BASEBAND CONTROLLER MODULE (BBCTL) FOR RADIO APPLICATIONS

Overview

Cyient's baseband controller module based on SITARA AM5728 processor can be used any radio applications. This module helps in generating Analog and Digital waveforms. With onboard mod/demod chips, baseband modulation and demodulation are achieved. This module controls all other modules in the radio i.e. Transceiver module, Display, Power amplifier, Frontend module, Harmonic filter and an external secure module.

Key Features

- The processor in BBCTL module, AM5728 has dual ARM cores with integrated DSP and integrated USB and Ethernet and crypto accelerators
- Module has GNSS & IRNSS devices for location identification, 1PPS timing synchronization
- Audio codec TLV320AIC3007 is part of BBCTL module
- Interfaces with a 3.5" color and touch display
- Hosts SW for controlling Power Amplifier, harmonic filters, Front-end Modules
- Signal processing SW supports Waveform generation
- PCIe protocol implemented for high speed data transfers

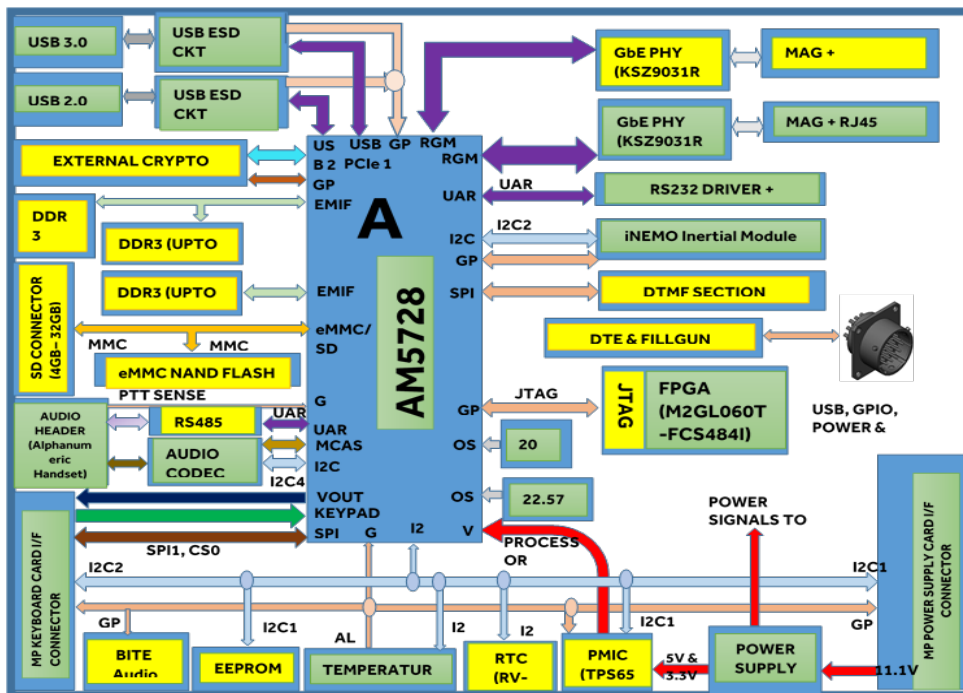
Technical Specifications

- Power consumption: 26.5W
- Power Supply input: 12V, 5V (Core voltages are generated by onboard LDOs)
- **Interfaces:**
 - 2W Audio power output into 8 ohm speaker
 - One port GbE with Rj45 connector
 - One USB 3.0 and one USB 2.0 ports
 - Two PCIe ports (single lane with 2.5Gbps)

Drivers

- Display (RGB- touch)
- SPI, I2C, Gigabit Ethernet
- PCIe (single channel)

Block Diagram



Benefits

- Flexible HW design with possibility of future expansion
- Both Analog and Digital waveforms generation
- Linux based SW and hence cheaper to develop and own

Our USP

Compact sized module with state of the art features.

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