Product Flyer

SIGNALION

SRRM-Family
SDR Wide Range Radio Frequency AMC card

General Description

The Signalion SDR Wide Range RF module SRRM combines a complete tunable RF transceiver with digital base band interface for realization of different wireless communication systems. This standard compliant AMC module rev2.0 consists of:

- RF frontend module (FEM) for field & laboratory use,
- the RF transceiver part, and
- a digital frontend which offers different standard network interfaces.

The transceiver is seamless tunable in the range between 200MHz up to 2.7GHz. Variable channel band-widths up to 20MHz are supported. As base band interfaces GbE, PCIe and sRIO can be used. Additional base band interfaces are CPRI or OBSAI and accessible via either SFP-modules at front panel or serial high speed ports in the extended options region of the AMC-connector.

Application

Single module full size AMC SDR radio card which supports different communication standards (LTE, UMTS, GSM, DVB, V/UHF …) and different frequency bands.

Customer Benefit

One universal SDR RF platform for different wireless communication systems with Multi band and MIMO support. The form factor which is AMC Rev2.0 compliant enables complete wireless system integration using the large variety of AMC & µTCA modules that are available.

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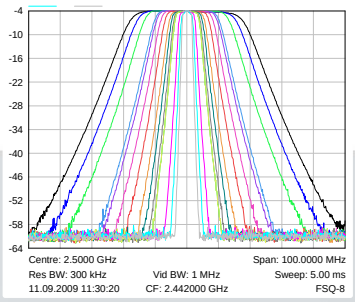
Front End Module (FEM) section



- Configurable for Lab or Field device
- Low out of band noise density
- Low system noise figure down to 3dB
- Wide TX/RX dynamic range
- Precise System dependent TX output power
- TX output power up to 30dBm (1W) CW
- TX/ RX power detection and calibration

RF transceiver section

- Seamless tunable RF frequency bands (lab use)
- 200MHz .. 2.7GHz or multi band (field use)
- Support of variable RF bandwidth (1.25MHz .. 20MHz)
- Modulation schemes up to 64QAM enable data rates of 150Mbps in LTE
- Support of FDD and TDD
- RF loop back functionality possibility
- High channel switching speed
- Usage of internal & external reference frequencies

BB transceiver section

Standard network interfaces

- GbE for IP and control plane
- CPRI / OBSAI for digital base band interface (master / slave configuration with line bit rates up to 3.072Gbps)
- sRIO / PCIe / XAUI as alternative digital base band interface

Digital Frontend Functionality

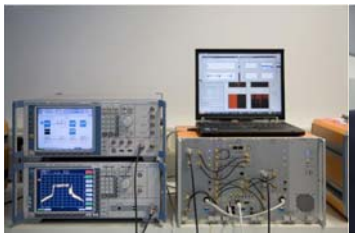
- custom digital base band interface
- base band filter, digital up- and down sampling (DUC, DDC)
- ADC and DAC interfaces
- RF AGC, PGC
- (self) calibration algorithms (quadrature modulation correction, Rx-, Tx-power)
- (optional) TDD switching (depends on FEM option)
- (optional) digital pre-distortion
- (optional) crest factor reduction
- (optional) envelope tracking

Control Functionality

- hardware auto detection
- RF status control (Tx/Rx, lock detect, module status …)
- Clockmanagement
- interaction with MMC

Availability

Q1/ 2011



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