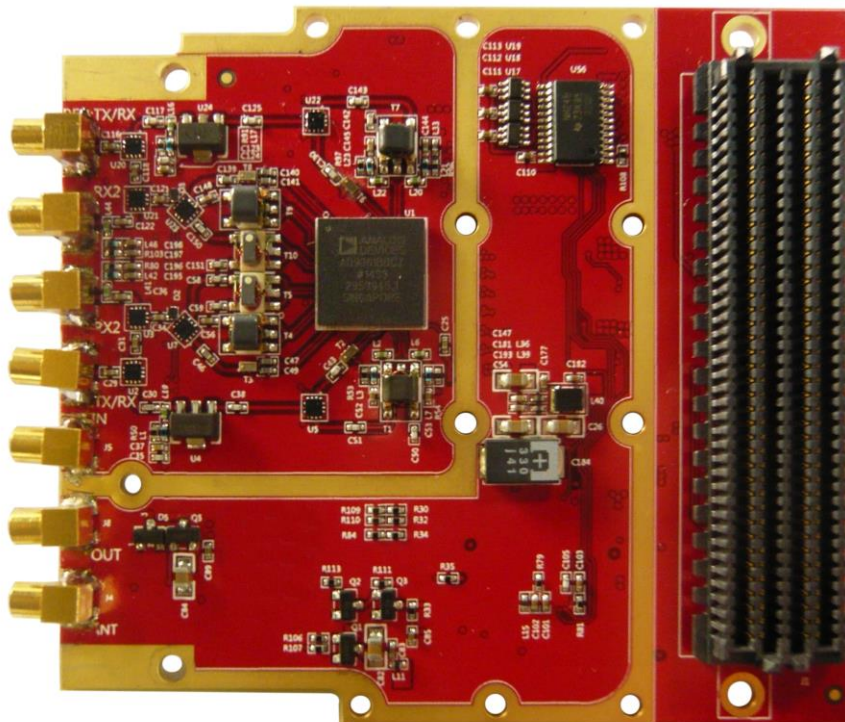


## FEATURES:

- ◆ Coverage from 70MHz ~ 6GHz RF
- ◆ Flexible rate 12 bit ADC/DAC
- ◆ 2 Tx, 2 Rx, Half or Full Duplex
- ◆ Fully-coherent 2x2 MIMO capability
- ◆ RF ports: 50Ω Matched
- ◆ Up to 56 MHz of real-time bandwidth
- ◆ Includes DC power supply
- ◆ GPS Option
- ◆ Dimensions: Standard FMC daughter Board

## APPLICATIONS:

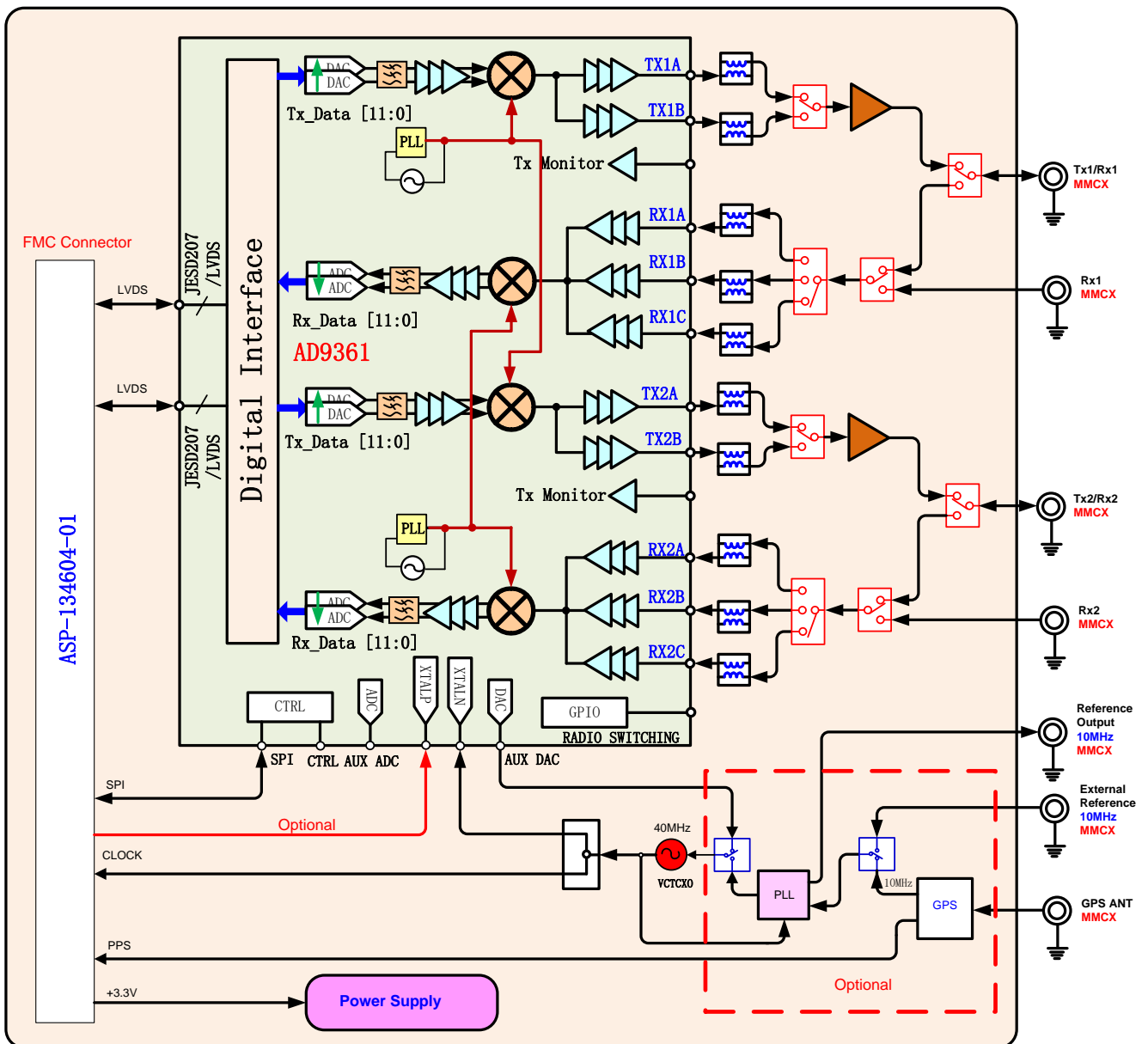
- ◆ SDR
- ◆ Cellular, e.g.: Femto-cells, Pico-cells, Small-cells, Micro-cell & etc.
- ◆ WiFi
- ◆ WiMAX
- ◆ ISM
- ◆ Proprietary & General Purpose Radios



**GENERAL DESCRIPTIONS:**

The FMC-RF6G is an ear-to-use RF module covering 70MHz ~ 6GHz with integrated RFIC technology and FMC interface. The RF module features two receive and two transmit channels by using an Analog Devices RFIC, AD9361 to deliver a cost-effective experimentation platform with up to 56 MHz of instantaneous bandwidth, higher sensitivity, dynamic range, and IP3 performance, which is suitable for wide range of applications including SDR, cellular, WiFi, ISM, proprietary or general purpose radios and so on. With the FMC-RF6G, designers can prototype with the AD9361 quickly and easily.

**BLOCK DIAGRAM:**



**CHARACTERISTICS:**

	No.	Items	Specifications	Remark
Tx	1	Frequency	70~6000MHz	
	2	Bandwidth	Up to 56 MHz	real-time bandwidth, tunable
	3	Transmission	>5dBm	CW
	4	EVM	<1.5%	Typical:5dBm @20MHz bandwidth
	5	Gain Control Range	>80dB	
	6	Gain Step	0.25 dB	
	7	ACLR	< -45dBc	@ 0dBm LTE output
	8	Spurious	TBD	
	9	SSB Suppression	35dBc	
	10	LO Suppression	50dBc	
	11	DAC Sample Rate (max)	61.44 MS/s	
	12	DAC Resolution	12bits	
Rx	1	Frequency	70~6000MHz	
	2	Bandwidth	Up to 56 MHz	real-time bandwidth, tunable
	3	Sensitivity:	-90dBm@20MHz	Noise Figure < 5dB
	4	EVM	<1.5%	@ -30dBm input
	5	Gain Control Range	>60dB	
	6	Gain Step	1dB	
	7	Blocking	TBD	
	8	Noise Figure	<8dB	Maximum RX gain
	9	IIP3 (@ typ NF)	-25dBm	
	10	ADC Sample Rate (max)	61.44MS/s	
	11	ADC Resolution	12bits	
	12	ADC Wideband SFDR	78dBc	
	1	Voltage	3.3V	
	2	ON/OFF TIME	<6uS	For TDD model
	3	Duplexing Model	TDD or FDD	
	4	W/ GPSDO Reference	0.01ppb	

**FMC INTERFACE DEFINITION**

**(Compatible with ADI AD-FMCOMMS2-EBZ, Red Pin is Additional Function Pins):**

PIN_No.	Net_Name	PIN_No.	Net_Name	PIN_No.	Net_Name	PIN_No.	Net_Name
H1	NC	G1	GND	D1	PG_FMC	C1	GND
H2	GND	G2	NC	D2	GND	C2	PPS
H3	GND	G3	NC	D3	GND	C3	CLOCK_IN
H4	CLK_OUT	G4	GND	D4	NC	C4	GND
H5	NC	G5	GND	D5	NC	C5	GND
H6	GND	G6	DATA_CLK_P	D6	GND	C6	NC
H7	RX_D0_P	G7	DATA_CLK_N	D7	GND	C7	NC
H8	RX_D0_N	G8	GND	D8	RX_FRAME_P	C8	GND
H9	GND	G9	RX_D1_P	D9	RX_FRAME_N	C9	GND
H10	RX_D2_P	G10	RX_D1_N	D10	GND	C10	RX_D4_P
H11	RX_D2_N	G11	GND	D11	RX_D3_P	C11	RX_D4_N
H12	GND	G12	FB_CLK_P	D12	RX_D3_N	C12	GND
H13	RX_D5_P	G13	FB_CLK_N	D13	GND	C13	GND
H14	RX_D5_N	G14	GND	D14	TX_FRAME_P	C14	TX_D3_P
H15	GND	G15	TX_D1_P	D15	TX_FRAME_N	C15	TX_D3_N
H16	TX_D0_P	G16	TX_D1_N	D16	GND	C16	GND
H17	TX_D0_N	G17	GND	D17	TX_D2_P	C17	GND
H18	GND	G18	ENABLE	D18	TX_D2_N	C18	TX_D4_P
H19	TX_D5_P	G19	TXNRX	D19	GND	C19	TX_D4_N
H20	TX_D5_N	G20	GND	D20	NC	C20	GND
H21	GND	G21	CTRL_OUT0	D21	NC	C21	GND
H22	EN_AGC	G22	CTRL_OUT1	D22	GND	C22	NC
H23	SYNC_IN	G23	GND	D23	CTRL_OUT6	C23	NC
H24	GND	G24	CTRL_OUT4	D24	CTRL_OUT7	C24	GND
H25	CTRL_OUT2	G25	CTRL_OUT5	D25	GND	C25	GND
H26	CTRL_OUT3	G26	GND	D26	SPI_ENB	C26	SPI_DI
H27	GND	G27	CTRL_IN2	D27	SPI_CLK	C27	SPI_DO
H28	CTRL_IN0	G28	CTRL_IN3	D28	GND	C28	GND
H29	CTRL_IN1	G29	GND	D29	NC	C29	GND
H30	GND	G30	TX_BANDSEL_A	D30	D31	C30	SCL
H31	RESETB	G31	TX_BANDSEL_B	D31	D30	C31	SDA
H32	NC	G32	GND	D32	3.3VAUX	C32	GND
H33	GND	G33	RX_BANDSEL_A	D33	NC	C33	GND
H34	NC	G34	RX_BANDSEL_B	D34	NC	C34	GA0
H35	NC	G35	GND	D35	GA1	C35	12V
H36	GND	G36	SFDX1_TX	D36	3P3V	C36	GND
H37	NC	G37	SRX1_TX	D37	GND	C37	12V
H38	NC	G38	GND	D38	3P3V	C38	GND
H39	GND	G39	VADJ	D39	GND	C39	3P3V
H40	VADJ	G40	GND	D40	3P3V	C40	GND

SDR SOLUTION BASED ON HT7600

Microsoft Sora Compact:



YunSDR Y410s/420s:

