

24GHz RF FRONT END FOR ISM APPLICATIONS

24GHz Multi-Channel solutions



Drones U.A.V.



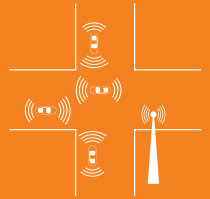
Level sensors



Security, Sport & Industrial

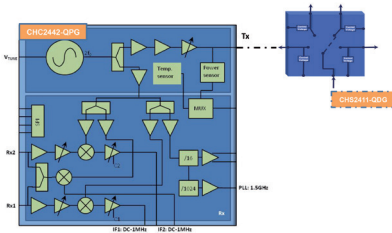


Car sensors



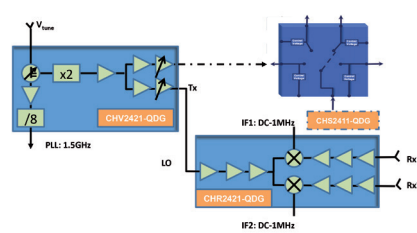
Intelligent infrastructure

Best in Class Signal/Noise Ratio offering Widest Detection Range
High output power • Low phase noise • Low consumption
Single Front-End • Automotive Qualified products



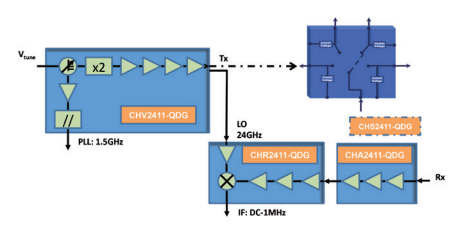
Front-End SiP Tx/Dual Rx & Tx/Quad Rx

- High Output Power 13dBm
- Low NF SSB 11.5dB@100kHz
- Controlled by SPI
- DC power: 3.3V@220/315mA
- -40 to +125°C operation



Dual Tx VCO & Dual Rx chipset

- High Output Power 16dBm
- Embedded functionality
- +5V supply voltage
- -40 to +105°C operation



Flexible sensor chipset

- Tx VCO + Rx + LNA in QFN
- High Output Power 16dBm
- LNA 2dB NF in ISM band
- +5V supply Voltage
- -40 to +105°C operation

Up to 4 transmit channels with CHS2411-QDG low loss high isolation fast switching SP4T

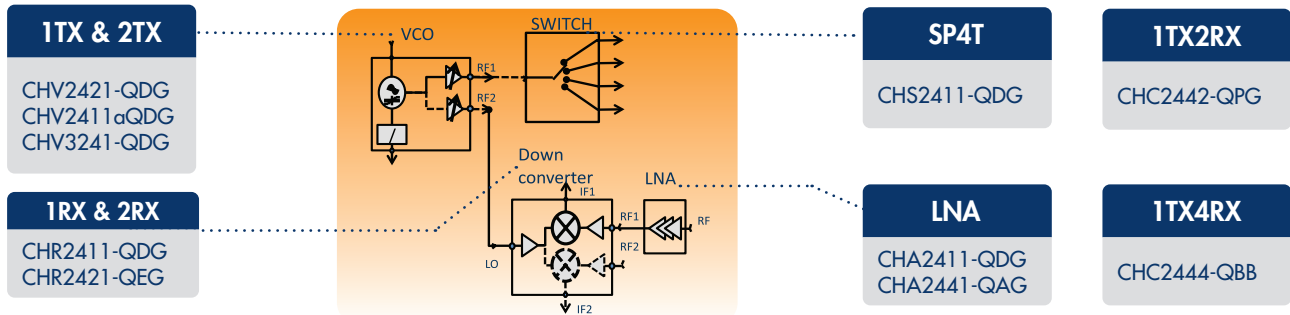


Build your own solution with UMS

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Building blocks for Wide Detection Range



AMPLIFIER – LNA

Part Number	RF Bandwidth (GHz)	Gain (dB)	Gain Flatness (+/-dB)	Noise Figure (dB)	P-1dB OUT (dBm)	Bias (mA)	Bias (V)	Case
CHA2411-QDG	20-25	26	0.5	2.5	-	43	5	QFN
CHA2441-QAG	22-26	25.5	+/- 0.25	2.5	12	50	3.3	QFN

TRANSCEIVER – TRX: 1TR2

Part Number	RF Bandwidth (GHz)	Gain RX (dB)	Gain TX (dB)	Pout TX (dBm)	NF RX (dB)	Number of Bit Atten.	Bias (mA)	Bias (V)	Case	
CHC2442-QPG	24-24.5	37	VCO incl.	13.5	11.5	5	225	3.3	QFN	
• Rx section	RF Bandwidth (GHz)	LO Bandwidth (GHz)	IF Bandwidth (GHz)	Conv. Gain (dB)	Noise Figure (dB)	P-1dB IN (dBm)	LO Input Power (dBm)	Bias (mA)	Bias (V)	Case
	24.5	24.5	DC-0.001	37	11.5	-18	-8	90	3.3	-
• Tx section	Central Output Freq (GHz)	Tuning Bandwidth (GHz)		Noise @ 100KHz (dBc/Hz)	Output Power (dBm)	Bias (mA)	Bias (V)	Case		
	24.125	2		-90	13.5	135	3.3	-		

TRANSCEIVER – TRX : 1TR4

Part Number	RF Bandwidth (GHz)	Gain RX (dB)	Gain TX (dB)	Pout TX (dBm)	NF RX (dB)	Number of Bit Atten.	Bias (mA)	Bias (V)	Case
CHC2444-QBB	24.25-24.5	37	VCO incl.	13	11.5	5	315	3.3	QFN

RECEIVER – RX: R1 & R2

Part Number	RF Bandwidth (GHz)	LO Bandwidth (GHz)	IF Bandwidth (GHz)	Conv. Gain (dB)	Noise Figure (dB)	P-1dB IN (dBm)	LO Input Power (dBm)	Bias (mA)	Bias (V)	Case
CHR2411-QDG	22-24.5	22-24.5	DC-0.001	23	7	-21	5	60	5	QFN
CHR2421-QEG	23.75-24.5	23.75-24.5	DC-0.001	22	7	-20	2	165	5	QFN

TRANSMITTER - TX: 1T & 2T

Part Number	Central Output Freq (GHz)	Tuning Bandwidth (GHz)	Noise @ 100KHz (dBc/Hz)	Output Power (dBm)	Bias (mA)	Bias (V)	Case
CHV2411aQDG	24.125	2	-90	16	220	5	QFN
CHV3241-QDG	24.125	2	-94	16	225	5	QFN
CHV2421-QDG	24.25	2	-90	15	233	5	QFN

SWITCH – SP4T

Part Number	RF Bandwidth (GHz)	Loss (dB)	P-1dB IN (dBm)	Isolation (dB)	Type	Case
CHS2411-QDG	23-26	2.9	23.5	35	reflective	QFN

Automotive qualified product



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