

# X-BAND AESA CHIPSET

GaN & GaAs  
solutions for  
Multipurpose  
Phased Array  
Radar



Defense



Air traffic



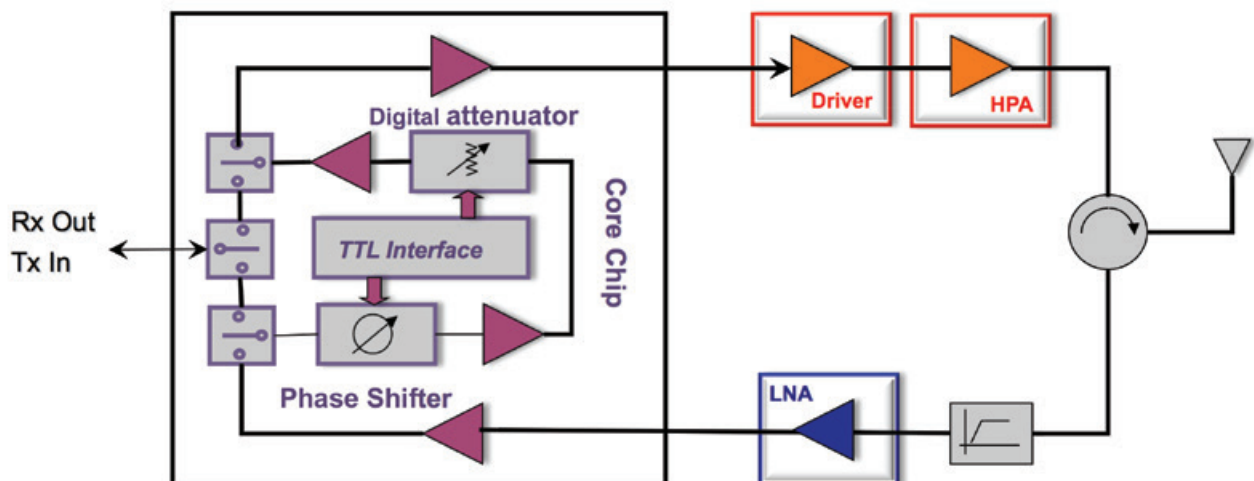
Satellites

## Field proven performance

- High efficiency
- High accuracy (on module & phase)
- Single and multichip solutions

## Reliable technologies

- In-house space evaluated technologies
- European source
- Qualified package technology



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# Full chipset for T/R modules

## LOW NOISE AMPLIFIERS

Part Number	Freq (GHz)	Gain (dB)	NF (dB)	P1dB (dBm)	Power supply
CHA1010-99F	7-11	32	1.1	5.5	30mA @ 5V
CHA2110-QDG (2)	7-12	19	1.2	10	45mA @ 4V
CHA2063a99F	7-13	19	2	8	40mA @ 4V

## DRIVER AMPLIFIERS

Part Number	Freq (GHz)	Gain (dB)	Psat (dBm)	PAE (%)	Power supply
CHA6105-99F	8-12	30	31.5	-	700mA @ 8V
CHA5115-QDG (2)	8-12	24	29	30	190mA @ 8V
CHA6005-QEG (2)	8-12	19.5	32	35	420mA @ 8V
CHA5014-99F	8.5-11	20	30	-	230mA @ 8.5V

## HIGH POWER AMPLIFIERS

Part Number	Freq (GHz)	Gain (dB)	Psat (dBm)	PAE (%)	Power supply
CHA8054-99F	7.7-8.6	27	43.6	50 (@7dBc)	900mA @ 28V
CHA6710-FAB	8-12.75	22.5	37	35 (@ Psat)	200mA @ 25V
CHA6710-99F	8-12.75	23.5	37.4	36 (@ Psat)	200mA @ 25V
CHA8710a99F	8.5-10.5	28.5	44	44 (@ Psat)	750mA @ 25V
CHA8610-99F	8.5-11	24	41.8	40 (@ Psat)	680mA @ 30V
CHA8611-99F	8.5-11	24	42.5	43 (@ Psat)	800mA @ 25V
CHA7114-99F	8.5-11.5	20	39.8	40 (@ 4dBc)	2A @ 8V
CHA7115-99F	8.5-11.5	27.5	39	37 (@ 4dBc)	2.2A @ 8V
CHA7215-99F	8.5-11.5	28	39.5	34 (@ 4dBc)	2.3A @ 8V
CHA8100-99F (1)	9-10.5	18	41	40 (@3dBc)	2.1A @ 9V

## GAN HEMT TRANSISTOR DIE

Part Number	Operating Frequency (GHz)	Glin (dB)@Freq (GHz)	Saturated Power (W)	PAE (%) @ Freq (GHz)	Power supply
CHK9014-99F	Up to 13	13 @ 12	60	50 @ 12	0.7A @ 30V
CHK8015-99F	Up to 18	12 @ 15	20	50 @ 15	0.2A @ 30V

## CORE CHIP

Part Number	Freq (GHz)	Gain Rx-Tx (dB)	Rx NF (dB)	Rx P1dB (dBm)	Tx Psat (dBm)	nb of bit	RMS phase Error (°)	RMS Att Error (°)
CHC3014-99F(*) (1)	8-12	13.5-25	5.8	16.5	20	6	2	0.3

(\*) A 6-bit phase shifter, a 6-bit attenuator, an additional 2-bit attenuator for tuning, buffer amplifiers and switches.

## ATTENUATORS

Part Number	Freq (GHz)	Number of bits	Amplitude Control (dB)	Insertion Loss (dB)	Att. Error (dB)	P-1dB IN (dBm)	Control Voltage (V)
CHT3029-QEG (1)(2)	DC-30	4	15	5	+/-0.5	20	0/3.3 or 5
CHT4016-QEG (1)(2)	4-14	6	31.5	7	+/-0.8	23	-5/0

## PHASE SHIFTERS

Part Number	Freq (GHz)	Number of bits	Phase range (°)	Insertion Loss (dB)	Phase error (°p-p)	P-1dB IN (dBm)	Control Voltage (V)
CHP3015-QDG (1)(2)	8.5-10.5	6	360	8	-2/+8	23.5	3.3 or 5

## REFLECTIVE SPDT SWITCHES

Part Number	Freq (GHz)	Loss (dB)	P-1dB IN (dBm)	Isolation (dB)	Control voltage
CHS7012-99F	DC-12	1.4	40.5	35	-25/0
CHS5100-99F	DC-20	2.1	20	30	-6/0
CHS8618-99F	6-18	1.3	42	34	-25/0

(1) Including TTL compatible interfaces - (2) Also available in bare die



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