

- CESIGN -

Gyro Accelerate AFE-IC Preliminary Datasheet Brief

1.1 CAS101D (ADC/DAC)

1.1.1 Block Diagram

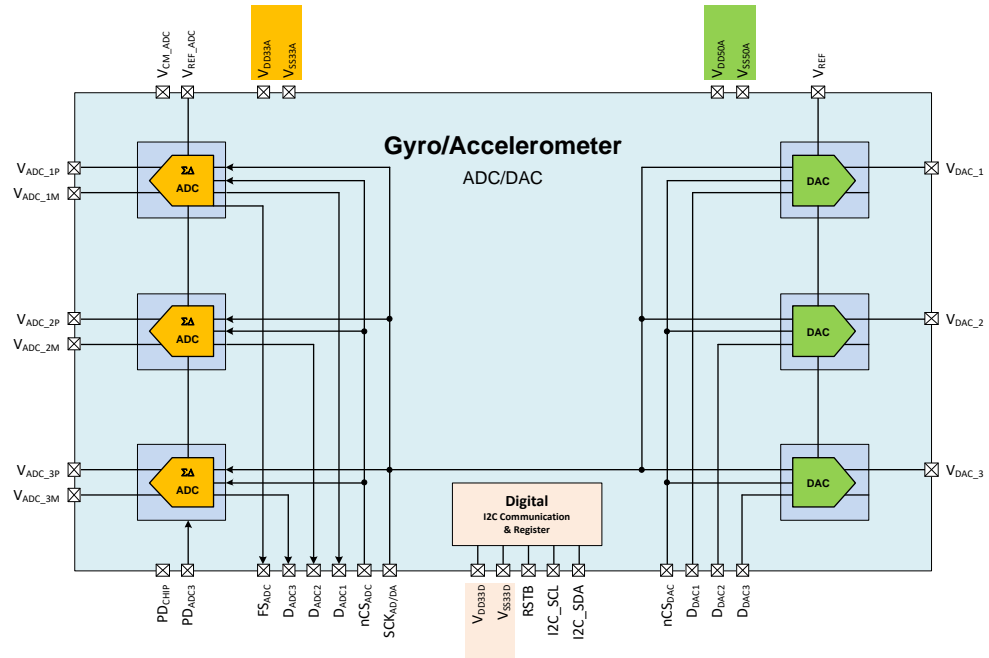


Figure G CAS101D Block Diagram

1.1.2 Chip Layout

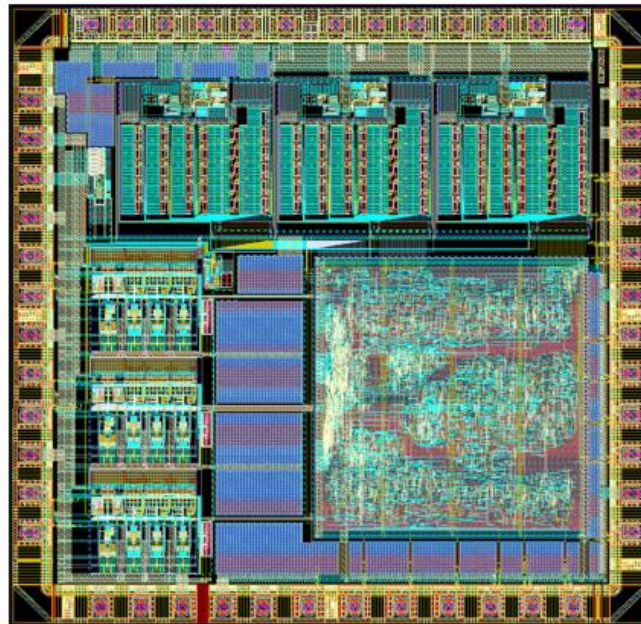


Figure 1 CAS101D Chip Layout

1.1.3 CAS101D Pin Description

Table 1 CAS101D Pin Description

Pin	Pin Name	Pin Description
1	VSS33A	0V analog ground pin
2	VREF_ADC	2.5V reference voltage input pin for ADC
3	VCM_ADC	1.65V ADC common voltage output pin. (1uF external cap.)
4	VSS33A	0V analog ground pin
5	VADC_1P	Positive analog input pin for ADC, Ch1
6	VADC_1M	Negative analog input pin for ADC, Ch1
7	VSS3A	0V analog ground pin
8	VADC_2P	Positive analog input pin for ADC, Ch2
9	VADC_2M	Negative analog input pin for ADC, Ch2
10	VSS3A	0V analog ground pin
11	VADC_3P	Positive analog input pin for ADC, Ch3
12	VADC_3M	Negative analog input pin for ADC, Ch3
13	VSS33IO	0V IO ground pin
14	VDD33IO	3.3V IO power pin
15	VDD33A	3.3V analog power pin
16	VDD33D	3.3V digital power pin
17	VDD33D	3.3V digital power pin
18	DADC_3	Serial data output pin for ADC, Ch3
19	DADC_2	Serial data output pin for ADC, Ch2
20	DADC_1	Serial data output pin for ADC, Ch1
21	FSADC	Frame sync input pin for ADC
22	nCSADC	Chip selection bar pin for ADC
23	SCKADDA	Clock input pin for ADC, DAC
24	PDADC3	Power-down pin for ADC, Ch3 (0d=Power-on, 1d=Power-down)
25	PDCHIP	Power-down pin for ADC, DAC (0d=Power-on, 1d=Power-down)
26	VSS33D	0V digital ground pin
27	nCSDAC	Chip selection bar pin for DAC
28	DDAC_3	Serial data input pin for DAC, Ch3
29	DDAC_2	Serial data input pin for DAC, Ch2
30	DDAC_1	Serial data input pin for DAC, Ch1
31	VSS33D	0V digital ground pin
32	I2C_SDA	I2C serial data in/out pin for IP(ADC/DAC) test
33	I2C_SCL	I2C clock input pin for IP(ADC/DAC) test
34	RSTB	Chip reset bar pin
35	VSS33D	0V digital ground pin
36	VSS33D	0V digital ground pin
37	VDD50IO	5.0V IO power pin
38	VDD50A	5.0V analog power pin
39	VDD50A	5.0V analog power pin
40	VREF_DAC	4.096V reference voltage input pin for DAC
41	VSS50A	0V analog ground pin
42	VDAC_3	DAC analog output pin for DAC, Ch-3
43	VSS50IO	0V IO ground pin
44	VDAC_2	DAC analog output pin for DAC, Ch-2
45	VSS50A	0V analog ground pin
46	VDAC_1	DAC analog output pin for DAC, Ch-1
47	VSS50A	0V analog ground pin
48	VSS50IO	0V IO ground pin

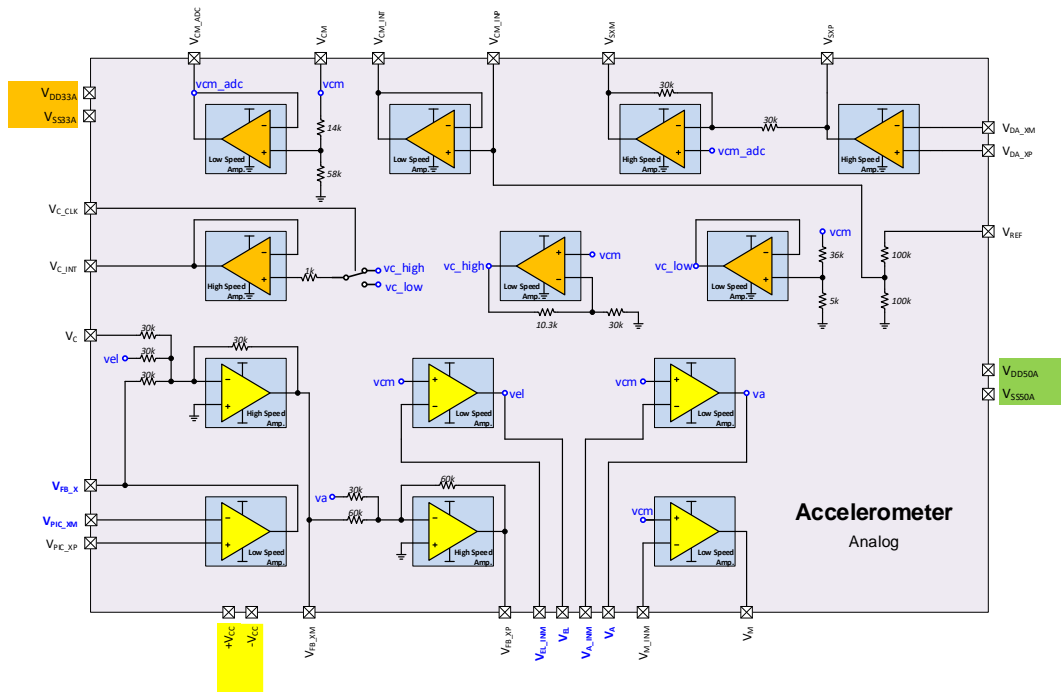
1.2.3 Pin Description

Table 2 CAS101G Pin Description

Pin	Pin Name	Pin Description
1	VDD33A	3.3V analog power pin
2	VDD33IO	3.3V IO power pin
3	VCM_ADC	Common mode voltage output pin
4	VCM	Common mode voltage input pin
5	VRING_INM	OP-Amp negative input pin
6	VRING_INT	OP-Amp output pin
7	VTRP_INT	OP-Amp output pin
8	VTRM_INT	OP-Amp output pin
9	VXT_INP	OP-Amp positive input pin
10	VATO_INP	OP-Amp positive input pin
11	VCCM	-13V analog power pin
12	VCCM	-13V analog power pin
13	VCCP	+13V analog power pin
14	VCCP	+13V analog power pin
15	VPC_SP	OP-Amp positive input pin
16	VFB_SP	OP-Amp output pin
17	VFB_SM	OP-Amp output pin
18	VCCM	-13V analog power pin
19	VCCM	-13V analog power pin
20	VDCQ_P	OP-Amp negative input pin
21	VBT	OP-Amp output pin
22	VAT	OP-Amp output pin
23	VCCP	+13V analog power pin
24	VCCP	+13V analog power pin
25	VPIC_DP	OP-Amp positive input pin
26	VFB_DM	OP-Amp output pin
27	VFB_DP	OP-Amp output pin
28	VCCM	-13V analog power pin
29	VCCM	-13V analog power pin
30	VDD50A	3.3V analog power pin
31	VDD50IO	3.3V IO power pin
32	VDD50IO	3.3V IO power pin
33	VSS50A	0V analog ground pin
34	VCA_DP	OP-Amp positive input pin
35	VCA_DM	OP-Amp negative input pin
36	VSS50A	0V analog ground pin
37	VSS50A	0V analog ground pin
38	VCA_SP	OP-Amp positive input pin
39	VCA_SM	OP-Amp negative input pin
40	VSS33A	0V analog ground pin
41	VSSP	OP-Amp output pin
42	VSSM	OP-Amp output pin
43	VSS33A	0V analog ground pin
44	VSDP	OP-Amp output pin
45	VSDM	OP-Amp output pin
46	VSS33A	0V analog ground pin
47	VSS33IO	0V IO ground pin
48	VSS33IO	0V IO ground pin

CAS101A (Accelerometer Analog Chip)

1.2.4 Block Diagram



1.2.5 Chip Layout

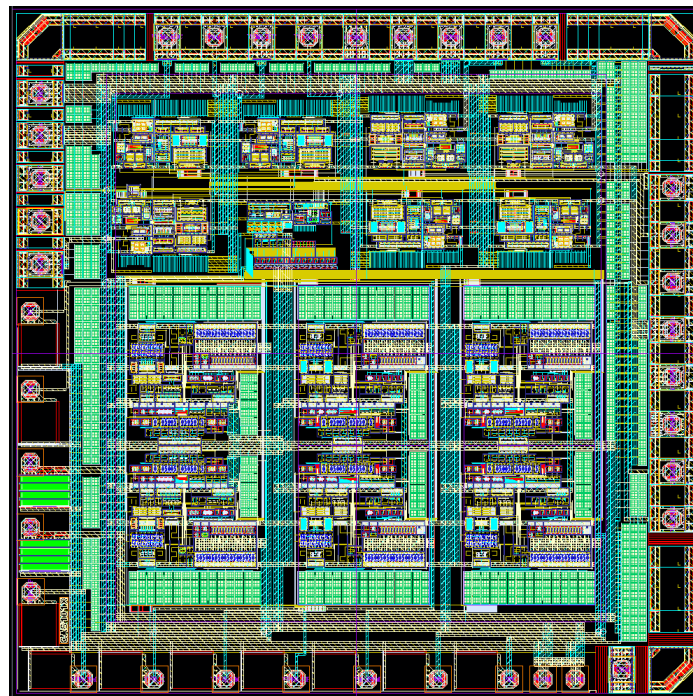


Figure 4 CAS101A Chip Layout