

CC4000

Quad DAC SoC | 12Bit 110MSPS



The CC4000 is a high speed Quad 12bit digital to analog converter with built-in Bandgap Reference and 1.8V LDO. This core is composed of advanced segmentation architecture that provides high Spurious Free Dynamic Range(SFDR) for single tone as well as multi-tone signals.

CC4000 has a nominal output current range of up to 34mA per channel with high impedance and output compliance of 1.28V. The optimal matching of current outputs makes superior dynamic performance in the differential configuration that can be applied with a transformer. Each channel DAC (R/G/B/Y) is composed of Demux, 12bits data resistors, segmented switches, Decoder, and Current Sources block.

The power supply of CC4000 is multiple of 1.8V and 3.3V. In power down mode standby current is 50uA. The conversion rate is up to 110MSPS. The conversion data can be accessible with parallel interface.

Features

- 12Bit Resolution with High Speed
- Differential Linearity Error: +/- 1 LSB
- Integral Linearity Error: +/- 2 LSB
- Maximum conversion rate: 110MSPS
- Low Power consumption: 400mW
- 1.8V/3.3V multi power supply
- Built-in the Low drop-out Voltage regulator
- Sleep mode

Parameter	Specification					Units
	Symbol	Condition	Min	Typ	Max	
Resolution				12		Bits
Output update speed	fCK	AVD33R/G/B/Y = 3.3V			240	MSPS
Differential Nonlinearity Error	DNL	AVD33R/G/B/Y = 3.3V Top = 25°C		+/-0.5	+/-1.0	LSB
Integral Nonlinearity Error	INL	AVD33R/G/B/Y = 3.3V Top = 25°C		+/-1.0	+/-2	LSB
Full Scale Output current Range	Iout	D[11:0] = high	2	34		mA