

16-Bit, Single/Dual Channel, 20-250 MSPS, Analog-to-Digital Converter (ADC)

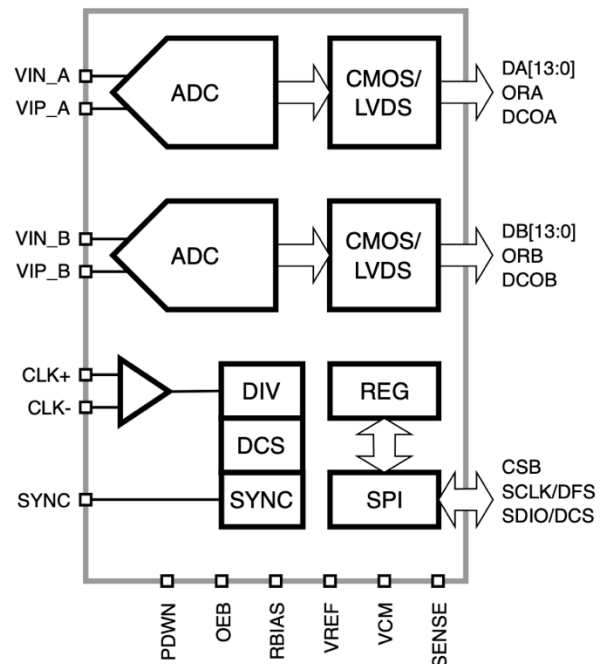


Plural 16 Platform products Highlights

- Multistage pipeline architecture with background calibration to provide 16-bit accuracy
- Dual ADC with single channel ADC offerings
- Guarantee no missing codes over the full operating temperature range.
- Internal power management system that is insensitive to power supply variation
- Supports output data formats CMOS or LVDS with optional channel interleaving
- Programming for configuration and control is accomplished using a 3-wire SPI-compatible interface.

PERFORMANCE

- Sample rates of 20/25/40/65/80/105/125/170/210/250 MspS
- 1.8V Analog supply voltages
- 1.8V & 3.3V IO supply voltages (LVDS & CMOS)
- LVDS (ANSI-644 levels) outputs
- Integer 1-to-8 input clock divider (500MHz maximum input)
- Internal ADC voltage reference
- Flexible analog input range
- 1.8 Vp-p nominal
- ADC clock duty cycle correction
- 95dB channel isolation/crosstalk
- Serial port control
- Energy saving power-down modes



APPLICATIONS

- Communications
- Software Defined Radios (SDRs)
- Quadrature and Diversity radio systems
- Network and Vector Analyzers
- Radar and Smart antenna systems
- Test and Measurement
- Motor Control Feedback
- Ultrasound equipment
- Patient Monitoring
- Broadband data applications
- Nondestructive Testing
- Munitions Guidance

GENERAL DESCRIPTION

The Plural16 Platform product is a platform based, factory-programmable analog to digital integrated circuit.

The device uses an internal power management system that is insensitive to power supply variation and can operate with supply voltages down to 1.5V. The device features internal references and can operate without an external reference or external common-mode bias.

The device can be set to operate using either CMOS or LVDS output data formats.

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AC Characteristics

	65Mps	170Mps	210Mps	250Mps
SNR (dbFS)	76.5	76.5	74.3	72.0
SFDR (dBc)	90.7	81.1	82.8	78.5
SNDR (dBFS)	76.1	74.9	72.8	71.5
ENOB	12.3	12.1	11.8	11.6

Analog Inputs

Input Span	1.9.V
Input Capacitance	6 pF
Input Comon—Mode Voltage	0.70 V
Reference input Resistance	6k Ω

AC Characteristics

Resolution	16-bits			
	65Mps	170Mps	210Mps	250Mps
Accuracy				
INL	+ - 3.9	+ - 8.9	+ - 6.6	+ - 10.2
DNL	+ - 1.8	+ - 1.9	+ - 2.4	+ - 2.4
Power (LVDS)				
VAVDD (1.8V)	0.306 mW	0.405 mW	0.459 mW	0.464 mW
VDRVDD (1.8V)	0.108 mW	0.117 mA	0.144 mW	0.153 mW
IAVDD	0.170 mA	0.225 mA	0.255 mA	0.258 mA
IDRVDD	0.060 mA	0.065 mA	0.080 mA	0.085 mA

SPEED GRADE OPTIONS:

20 / 25 / 40 / 65 / 80 / 105 / 125 / 170 / 210 / 250 MSPS

PACKAGING OPTIONS

64-Lead, 9 mm x 9 mm Body LFCSP
 56-Lead 8 mm x 8 mm Body LFCSP
 48-Lead 7 mm x 7 mm Body LFCSP
 32-Lead, 5 mm x 5 mm Body LFCSP