TDA8763AM/3/4/5:

Single 10 Bits ADC, Up to 30, 40, or 50 MHz

Product Feature Sheet

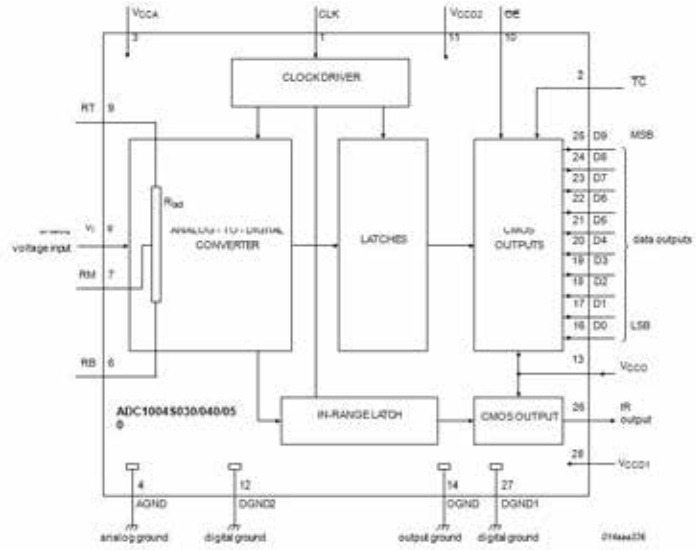
Features

- 10-bit resolution
- Sampling rate up to 50 MHz
- DC sampling allowed
- One clock cycle conversion only
- High signal-to-noise ratio over a large analog input frequency range (9.4 effective bits at 4.43 MHz full-scale input at fclk = 40 MHz)
- No missing codes guaranteed
- In-Range (IR) CMOS output
- TTL and CMOS levels compatible digital inputs
- 3 V to 5 V CMOS digital outputs
- Low-level AC clock input signal allowed
- External reference voltage regulator
- Power dissipation only 175 mW (typical)
- Low analog input capacitance, no buffer amplifier required
- No sample-and-hold circuit required

Typical Applications

- Video data digitizing
- Radar
- Transient signal analysis
- ΣΔ modulators
- Medical imaging
- Barcode scanner
- Global Positioning System (GPS) receiver
- Cellular base stations

Block Diagram



Information subject to change without notice

Device Overview

The TDA8763AM/3/4/5 are a family of 10-bit high-speed low-power Analog-to-Digital Converters (ADC) for professional video and other applications. They convert the analog input signal into 10-bit binary-coded digital signals at a maximum sampling rate of 50 MHz. All digital inputs and outputs are Transistor-Transistor Logic (TTL) and CMOS compatible, although a low-level sine wave clock input signal is allowed.

The device requires an external source to drive its reference ladder. If the application requires that the reference is driven via internal sources, Silicon360 recommends you use one of the ADC1003S030/040/050 family.

Absolute Maximum Ratings:

Analog Supply Voltage	4.75 V to 5.25 V
Digital Supply Voltage	4.75 V to 5.25 V
Output Supply Voltage	3.0 V to 5.25 V
Analog Supply Current	24 mA
Digital Supply Current	21 mA
Output Supply Current	2 mA
Integral Non-Linearity	±0.8 LSB to ±2.0 LSB
Differential Non-Linearity	±0.5 LSB to ±0.9 LSB
Maximum Clock Frequency - ADC1004S030TS	30 MHz
Maximum Clock Frequency - ADC1004S040TS	40 MHz
Maximum Clock Frequency - ADC1004S050TS	50MHz
Total Power Dissipation	

Ordering Information

TDA8763AM/3	30 MHz
TDA8763AM/4	40 MHz
TDA8763AM/5	50 MHz