

DAC1003D160HW/C1, 5:

Dual 10-Bits DAC, Up to 160 MHz, 2 x Interpolation

Product Feature Sheet

Features

- Dual 10-bit resolution
- Spurious Free Dynamic Range (SFDR) = 80 dBc at 2.5 MHz
- Input data rate up to 80 MHz
- 2 x interpolation filter
- Output data rate up to 160 MHz
- Single 3.3 V power supply
- Low noise capacitor free integrated Phase-Locked Loop (PLL)
- Low power dissipation
- HTQFP80 package
- Ambient temperature from -40 °C to +85 °C

Device Overview

The DAC1003D160 is optimized to reduce architecture complexity and overall system cost. The Digital-to-Analog Converter (DAC) leads dynamic performance in multi-carrier support because of its direct IF conversion capabilities. With an internal sampling rate up to 160 MHz, the DAC1003D160 is an extremely competitive solution for broadband wireless systems transmitters, as well as a wide range of applications.

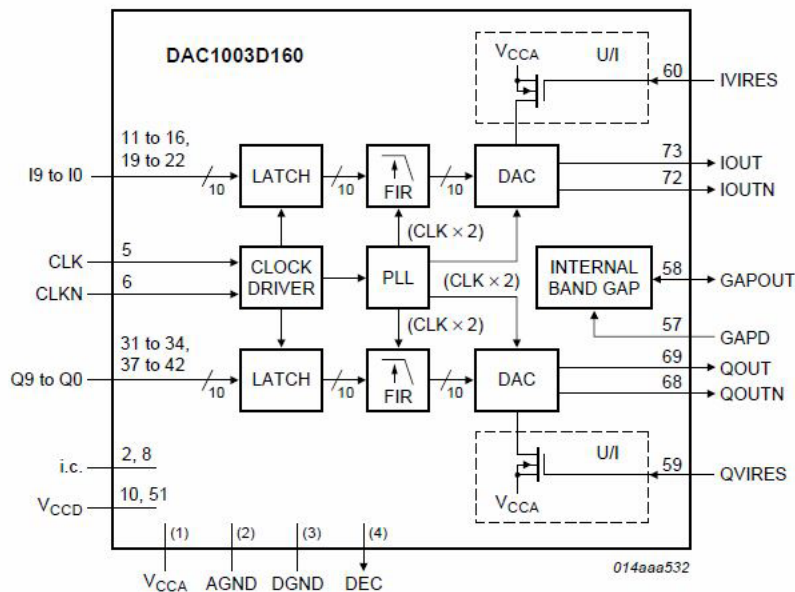
Typical Applications

- Broadband wireless systems
- Digital radio links
- Cellular base stations
- Instrumentation
- Cable modems
- Cable Modem Termination System (CMTS)/Data Over Cable Service Interface Specification (DOCSIS)

Absolute Maximum Ratings:

Digital Supply Voltage	-0.3 V to +3.9 V
Analog Supply Voltage	-0.3 V to +3.9 V
Supply Voltage Difference	-150 mV to +150 mV
Input Voltage (pins Qn and In referenced to DGND)	-0.3 to $V_{CCD} + 0.3$ V
Input Voltage (pins IVIRES, QVIRES, GAPD, CLK and CLKN referenced to AGND)	-0.3 V to $V_{CCA} + 0.3$ V
Output Voltage (pins IOU, IOU, QOUT and QOUTN referenced to DAGND)	-0.3 V to $V_{CCA} + 0.3$ V
Storage Temperature	-55 °C to +150 °C
Ambient Temperature	-40 °C to +85 °C
Junction Temperature	125 °C

Block Diagram



- (1) Pins 1, 3, 61, 65, 76 and 80.
- (2) Pins 4, 7, 62, 64, 66, 67, 70, 71, 74, 75, 77 and 79.
- (3) Pins 9, 17, 25, 29, 30, 35, 44, 49, 50, 52, 53, 54, 55 and 56.
- (4) Pins 18, 26, 36, 43, 63 and 78.