

Figure 3: SP16160CH1RB block diagram

2.0 Evaluation Kit Contents

The SP16160CH1RB evaluation kit includes the following items:

- SP16160CH1RB reference design board
- PIC microcontroller board (ADC14PIC REV. A)

The SP16160CH1RB reference board is fully assembled for immediate evaluation. A PIC microcontroller board is included with the evaluation kit to properly configure the on-board clock solution.

The following items are required to evaluate the SP16160CH1RB but NOT included in the evaluation kit. See section 5.0 Quickstart for more information.

- Signal generator and connecting cables
- +5V, 1A power supply and cable
- Data capture hardware and analysis software

3.0 System Description

The SP16160CH1RB is a high IF receiver reference design board that utilizes the following components from National Semiconductor:

- **ADC16DV160** A dual channel, 16-bit, 160 MSPS (Megasamples-per-second) analog-to-digital converter (ADC) with parallel LVDS outputs.
- **LMH6517** A high performance, dual channel digitally controlled variable gain amplifier (DVGA) with a 31.5 dB gain range in 0.5 dB steps.
- **LMK04031B** A clock conditioning solution composed of a low-noise jitter cleaner, clock multiplier, and clock distribution stage.
- Several energy-efficient power management ICs including the LM2734 switching regulator and the LP3878-ADJ and LP5900 low drop-out (LDO) regulators.