

# Quick Start

## Demonstration Board for ADC0808S

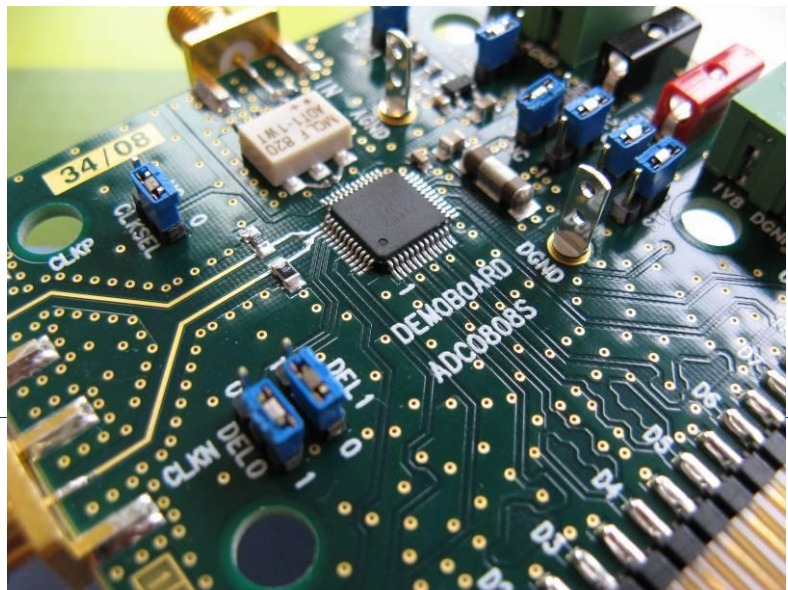
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Quick Start

### Document information

Info	Content
<b>Keywords</b>	PCB2050-1, Demonstration board, ADC, Converter, ADC0808S
<b>Abstract</b>	This document describes how to use the demonstration board for the analog-to-digital converter ADC0808S.

### Overview



### Revision history

Rev	Date	Description
2.0	20120702	Rebranded.
0.1	20081006	Initial version.

# 1. Quick start

## 1.1 Setup overview

Figure Fig 1 presents the connections to measure ADC0808S.

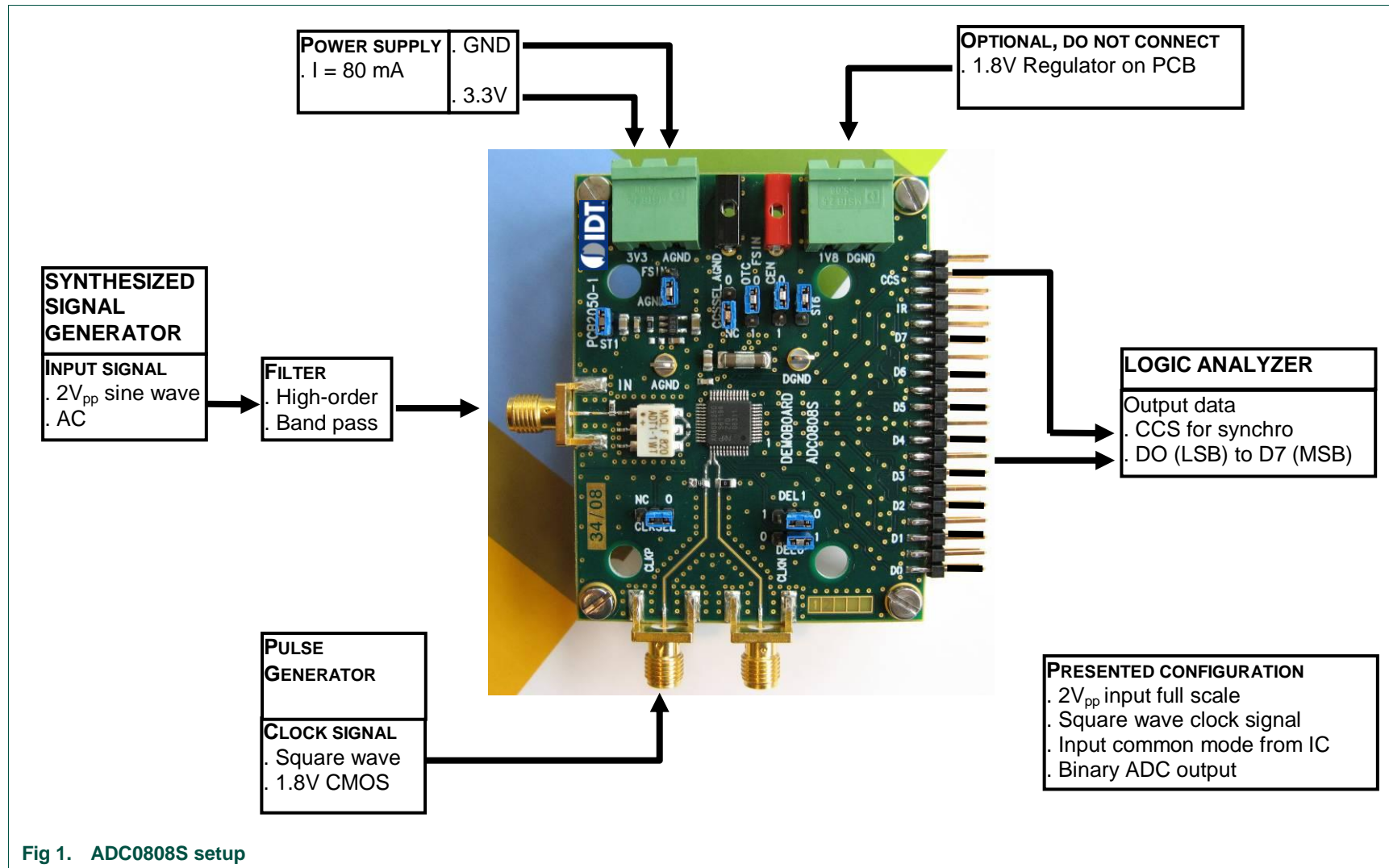


Fig 1. ADC0808S setup

## 1.2 Power supply

The board is powered with a single 3.3 V<sub>DC</sub> power supply. A power supply regulator is used to supply all the circuitry on the board.

**Table 1. General power supply**

Name	Function	View
J4	+3.3V green connector – Power supply 3.3 V <sub>DC</sub> / 100 mA.	
J7	Do not connect, optional. Internal 1.8V regulator. +1.8V green connector – Power supply 1.8 V <sub>DC</sub> / 50 mA	
TP1	DGND test point – Digital ground	
TP2	AGND test point – Analog ground	

## 1.3 Input signals (IN, CLK)

The ADC0808S clock inputs are selectable between 1.8 V Complementary Metal Oxide Semiconductor (CMOS) or Low-Voltage Differential Signals (LVDS).

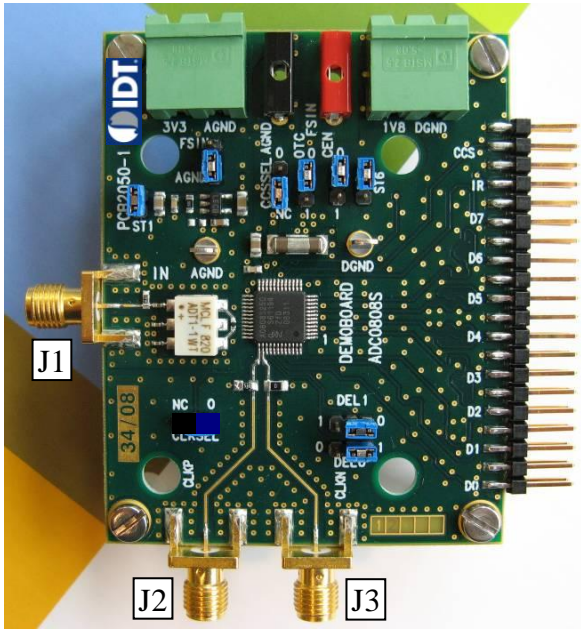
To ensure a good evaluation of the device, the input signal and the input clock must be synchronized together.

Moreover, the input frequency (F<sub>i</sub>, MHz) and the clock frequency (F<sub>clk</sub>, Msp/s) should follow the formula:

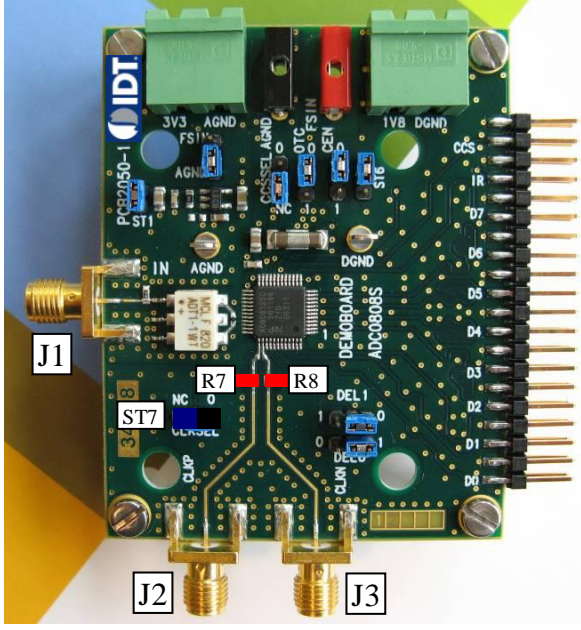
$$\frac{F_i}{F_{clk}} = \frac{M}{N}$$

,where M is an odd number of period and N is the number of samples.

**Table 2. Input signals, CMOS Clock**

Name	Function	View
J1	IN connector – Analog input signal (50Ω matching)	
J2	CLKP connector – Single ended 1.8V CMOS clock input signal	
J3	CLKN connector – Grounded on that demo board	
ST7	Clock input format selection. 0: 1.8V CMOS	

**Table 3. Input signals, LVDS Clock**

Name	Function	View
J1	IN connector – Analog input signal (50Ω matching)	
J2	CLKP connector – LVDS Clock input, 50 ohms must be soldered on R7 footprint.	
J3	CLKN connector – LVDS complementary Clock input, 50 ohms must be soldered on R8 footprint.	
ST7	Clock input format selection. NC: LVDS	

## 1.4 Output signals (D0 to D7, IR, CCS)

The digital output signal is available in binary, 2's complement.

A Complete Conversion Signal output (CCS) is provided by the device for the data acquisition.

Table 4. Output signals

Name	Function	View
J8	Array connector – ADC digital output(D0 to D7), In Range output (IR) and Complete Conversion Signal (CCS)	

## 1.5 Configuration

The ADC0808S reference, output coding, timing and frequency of complete conversion signal can be adjusted thanks to PCB jumpers.

Table 5. Configuration

Name	Function	View
ST2	AGND: Internal reference selected FSIN: External reference from J5 and J6	
J5	External reference ground	
J6	External reference voltage	
ST3	NC: CCS output is at $F_{clk}$ frequency 0: CCS output is at $F_{clk}/2$ frequency	
ST4	Output format selection: OTC and CEN & 00: binary	
ST5	10: 2's complement X1: High impedance	
ST4	Delay control of CCS edge, see datasheet. &	
ST5		

# Notes