

Double-size Programmable Analog and Digital I/O Up to 16 Analog Inputs, 2 Analog Outputs, up to 68 Digital I/O Lines

Features

- Drop-in replacement for **SBS IP-ADIO**
- Up to 16 single-ended or 8 differential analog inputs
- 13-bit ADC (from 1X to 128X) yielding a 21-bit effective dynamic input range
- $\pm 10V$ maximum input with $\pm 44V$ overvoltage protection
- 24-bit pacer clock for ADC and DAC
- 17 μs analog sample rate (50kHz maximum throughput)
- Hardware autozero and autocalibration, factory trim
- 16-bit interface
- 2 deglitched analog outputs with 3 independent output ranges
- DACs double buffered with pacer clock
- Up to 68 digital I/O lines
- Up to 12 interrupt sources
- 2 24-bit general purpose timers



Analog Inputs

The **IP-ADIO** has 16 analog inputs. Each input passes through an 8-step programmable gain amplifier before being routed to a 13-bit ADC. The analog input range is $\pm 10V$ full scale, with $\pm 44V$ overvoltage protection. The amplifier gives a gain of 1X to 128X in eight steps of $2^{n=0..7}$, which yields a 21-bit effective dynamic input range. Typical acquisition-conversion time is 17 μs , which gives a maximum nominal throughput of 50kHz. A software selectable high-speed mode doubles throughput, with reduced analog specifications.

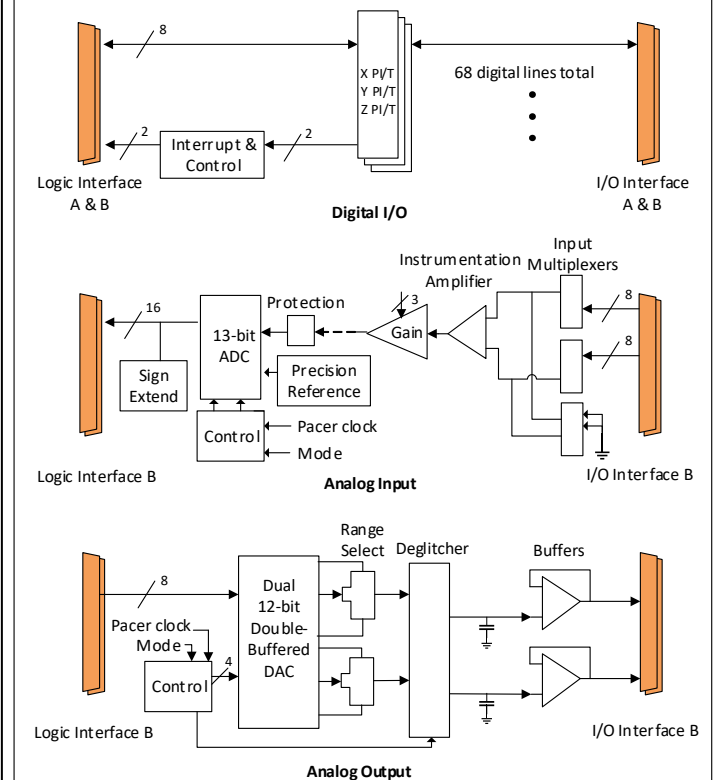
Analog Outputs

The **IP-ADIO** has two 12-bit deglitched analog output channels, with three available independent output ranges: 0 to +5V; 0 to +10V; and $\pm 5V$. The output interval is programmable from 4 μs to over 60s in 4 μs intervals. The DACs are double-buffered, which eliminates timing-induced output jitter.

Digital Inputs/Outputs

Up to 68 digital I/O lines are available. Each connects to one of three MC68230 Programmable Interface/Timers.

IP-ADIO Simplified Block Diagram



Applications

This is an ideal solution for:

- Process control
- Industrial control
- Precision instrumentation
- Data acquisition systems (DAS)

Available Software Drivers

- C library dll's
- Linux® drivers
- Windows® drivers
- VxWorks® drivers

Mechanical

- Double-size Industry Pack
1.800in x 3.900in
(45.72mm x 99.06mm)
- Power: tbd
- Front panel I/O
- Vibration: 0.5G, 20-2000Hz rand
- Shock: 20G, 11msec, ½ sine
- Weight: tbd
- MTBF: >250,000 hours

Operating Environment

- Operating temperature
Industrial: -40°C to +85°C
- Humidity: 5 to 90% (non-cond)
- Altitude: 0 to 10,000 feet

Ordering Information

IP-ADIO: Double-size Industry Pack, 16 Analog Inputs, 2 Analog Outputs, 68 Digital I/O
Temp: -40°C to +85°C