



SUPPLIER	AMPLIFIERS	ANALOG SWITCH MULTIPLIERS	DATA CONVERSION	DISCRETES	VOLTAGE REFERENCE	INTERFACE	LOGIC & TIMING	POWER MANAGEMENT
Abrakon							•	
Aereoflex Metelics				•				
Ampleon				•				
Artesyn Embedded Technologies								•
AVX				•			•	
Bourns			•	•		•		
Broadcom				•		•		
Cirrus Logic	•		•				•	
CTS							•	
Dialog Semiconductor							•	•
Diodes, Inc.	•			•	•		•	•
e2v			•					
ECS International							•	
Ericsson								•
Fox							•	
IDT	•		•	•		•	•	
Infineon				•		•		•
ISSI	•							
Maxim Integrated	•	•	•	•	•	•	•	•
Moons' Industries								•
Microchip	•	•	•	•	•	•	•	•
Murata							•	•
MPS	•				•			•
NXP	•	•		•		•	•	•
ON Semiconductor	•	•	•	•	•	•	•	•
Panasonic				•		•		
Pericom Semiconductor		•				•	•	
Power Integrations				•				•
Renesas	•	•	•	•	•	•	•	•
ROHM Semiconductor	•			•		•		•
Schurter								•
Seiko Instruments								•
Silicon Labs	•					•	•	•
STMicroelectronics	•	•		•	•	•	•	•
TE Connectivity				•		•		
Toshiba	•	•		•			•	•
Vishay		•		•		•	•	
VX							•	
WeEn Semiconductors				•				

SIGNAL CHAIN SOLUTIONS

SPECIALIZED DESIGN AND SUPPORT

We have assembled a team of Avnet, Supplier and Partner resources to deliver a true Signal Chain Design & Support Ecosystem.

AVNET ACCOUNT MANAGERS AND FIELD APPLICATION ENGINEERS

Providing customers with day to day supply and design chain support for Analog and Timing Technology requirements.

SUPPLIER NETWORK

Avnet's line up of supplier partners provide a full portfolio of data conversion, interface, amplifier, standard logic, clock/timing and power management devices and solutions. Avnet also has a strong portfolio for input and output products like FPGAs, DSPs, microprocessors and sensors.

ENGINEERING TO "TOTAL SOLUTION" DESIGN PARTNERS

The Avnet Technical Network connects customers to design resources with the objective of accelerating new project development. These partners offer engineering design services, software expertise, and manufacturing capabilities tied to signal chain technology and key vertical markets.

AVNET AVAIL BLOCK DIAGRAM APP

Your local FAE team is armed with Avnet AVAIL Block Diagram APP, an interactive engineering tool built on the Microsoft Visio platform that allows Avnet to take advantage of an elite knowledge base of engineering talent and manufacturer information to help customers develop system level block diagrams including signal chain solutions quickly and efficiently.



MARKETS SERVED

AUTOMOTIVE

Motion control, radio control, driver information systems, infotainment, airbag controller, aftermarket access and diagnostics.



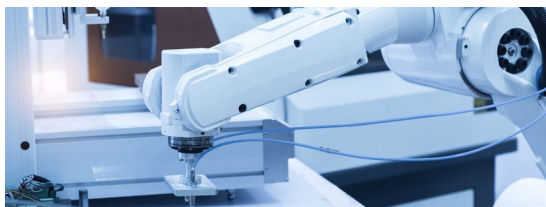
COMMERCIAL

Security systems, energy management, portable instruments, advertising signs, temperature sensing and PCs.



CONSUMER

Domestic broadband gateway, web cam, home theater in a box, set-top boxes, DSL modems, mobile phones, PDAs, digital cameras, HDTV and precision audio.



INDUSTRIAL

Measurement and control, robots, process control, instrumentation, automation, data acquisition, distributed power systems, servers, remote control and security cameras.



HEALTHCARE

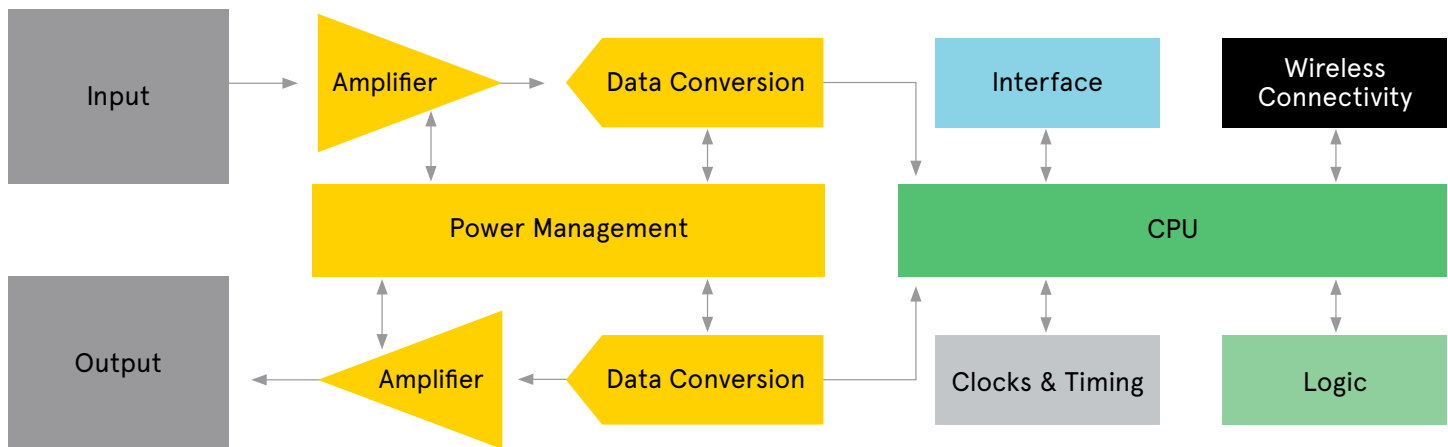
Blood analyzers, portable instrumentation, ultrasound, X-ray MRI, CAT scanners, glucose meters, temperature meters and patient monitoring.

THE ANALOG SIGNAL CHAIN

What's Involved and What We Support:

The analog signal can be the input and/or the output interface to any design. The analog input signal chain receives its' analog signals from keyboards, pressure sensors, accelerometers, temperature sensors, microphones, voltages (i.e., batteries) and/or currents (i.e., a motor), etc... This input signal is then conditioned or filtered via an amplifier to remove any unwanted noise or to amplify the input signal from the sensor. The signal is then converted to the digital realm through an analog-to-digital (A/D) converter. FPGAs, DSPs, and microprocessors are now able to understand the digital information supplied by the A/D converter.

The opposite function is performed in the analog output signal chain. The digital signal from an FPGA, DSP or microprocessor is converted to an analog signal by either a digital-to-analog (D/A) converter or from an on-chip D/A on the microprocessor/DSP. This input signal is then conditioned or filtered via an amplifier to remove any unwanted noise or to amplify the signal. The analog signal is then outputted to the analog world via a speaker, motor/fan, LED or a relay.



OP Amps (amplifiers) or filters are used to clean up and amplify a signal from the sensor output. This is typically called signal conditioning.

Analog switches/multiplexers function as an electronic switch where there are multiple inputs and one output. A processor can be used to control the multiplexer, which selects the appropriate input signal that needs to be passed through to the output of the multiplexer.

A/D converters produce a digital output, which corresponds to the value of the analog signal applied to its input and compared with a reference voltage. A/D and D/A converters perform the opposite functions.

Voltage references provide an extremely accurate output voltage that does not change as temperature changes. Most A/D and D/A converters use them to compare a voltage to their inputs because of their accuracy.

D/A converters produce a discrete analog output value (either AC or DC) corresponding to a digital input word relative to its reference voltage. A/D and D/A converters perform the opposite functions.

FETs, IGBTs and transistors are typically used as the final output stage in power applications (i.e., motor drive and high power audio).

Interface devices enable efficient and reliable communication for industrial control, networking and computing applications.

Logic & Timing devices: Clock generators, buffers, dividers, multiplexers, crystal oscillators and jitter attenuators with frequency translation.

Wireless Connectivity: RF, Wi-Fi or other wireless connection to the CPU.

Signal Chain Products

AMPLIFIERS

- Analog Divider & Multiplier
- Audio Amplifier
- Comparator
- OP Amp
- SP Amplifier
- Sample and Hold
- Video Amplifier

ANALOG SWITCH MULTIPLEXERS

DATA CONVERSION SUB

- ADC
- DAC
- Data Acquisition System
- Digital Potentiometer
- V2F and F2V

DISCRETES

- Bipolar Transistor
- Diode
- IGBT Chip
- IGBT Module
- Thyristor
- Transistor

INTERFACE SUB

- IR Remote Receiver
- IrDA Transceiver
- LVDS
- Termination ICs

LOGIC AND TIMING SUB

- Bus Exchange Switch
- Bus Switch
- Controlled Oscillators
- Crystals
- Delay Line
- Digital Synthesizers
- Logic ICs
- Oscillators
- Real Time Clock
- SMD Crystal Oscillators
- TH Crystal Oscillators
- Universal Bus Exchange

POWER MANAGEMENT

- Battery Management
- Charge Pump
- Current Limit Switch
- DC to DC Controller
- DC to DC Converter
- Feedback Signal Generator
- Hot Swap Controller
- LED Driver ICs
- Linear Regulator
- Low Dropout Controller
- MOSFET and Power Drivers
- Motion Motor Control
- PWM Controllers
- Power Muxes
- Power Switch
- Supervisory Circuits
- USB Power Switch
- Voltage Reference