

Empower the Intelligent Edge

with Next-Generation Field Instruments

Advances in measurement, processing, security, connectivity, and power management technologies are enabling the development of more intelligent field instruments, helping to drive the digital transformation of the process industry. As a co-creation partner of choice, Analog Devices holds the key enabling technologies to access new data, unlocking insights to improve product quality, increase productivity, lower maintenance costs, reduce energy consumption, and avoid unplanned downtime. These technologies include Ethernet-APL (advanced physical layer), smart ultra low power data converters, and highly secure microcontrollers with high efficiency AI acceleration and wireless connectivity.



Increase
Productivity



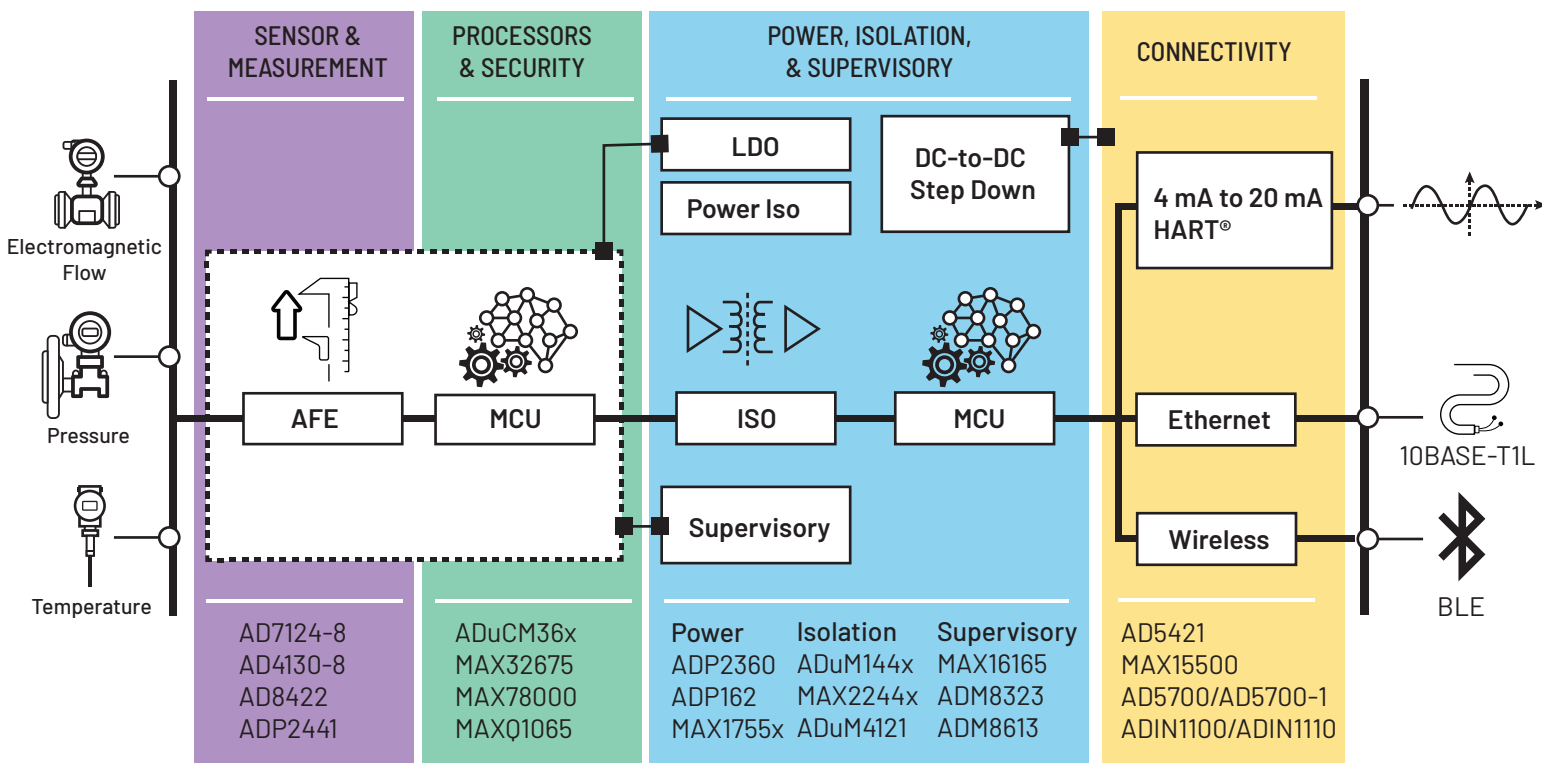
Improve Process
& Product Quality



Reduce Energy
Consumption



Avoid Unplanned
Downtime

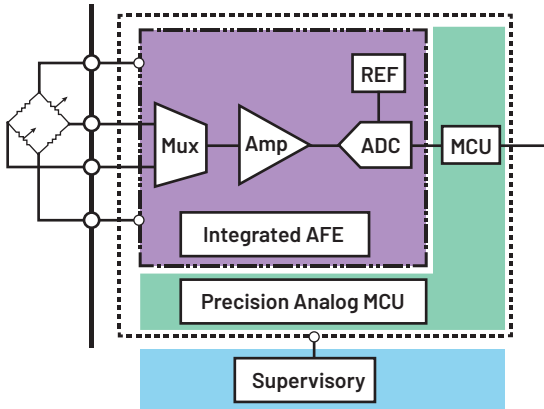


ADI offers tailored solutions, from implementations with discrete components to complete integrated solutions and everything in between.

Ultra Low Power Technologies to Maximize Intelligence at the Edge

Smart Sensor & Measurement

Offering the highest performance, lowest power, and most complete sensor interface and measurement solutions, ADI is simplifying the development of field instruments. Industry-leading sigma-delta ADCs such as the AD7124-4/AD7124-8 and AD4130-8 integrate the full signal chain for temperature and pressure measurement with advanced diagnostics, while the AD8422 instrumentation amplifier and ADP2441/ADuM4121 isolated gate driver products are ideal candidates for a discrete implementation of an electromagnetic flow meter front end.

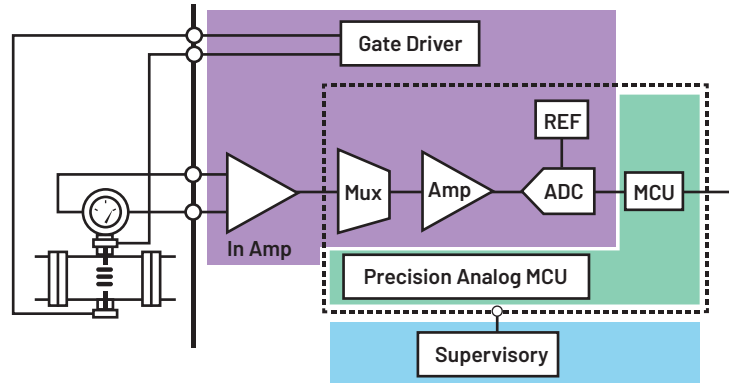


Pressure Transmitter

AD7124-8
AD4130-8
AD8422
ADP2441

AD4130-8 ADC

- ▶ Ultra low power
- ▶ Enhanced digital features
- ▶ Autonomous sensor measurement capabilities



Electromagnetic Flow Transmitter

Flexible Processors & Security

With an extensive range of highly integrated, ultra low power, secure Arm® based microcontrollers, and with a choice of memory sizes, cores and peripherals, ADI is enabling flexible design of field instruments. The ADuCM360/ADuCM361/ADuCM362/ADuCM363 family of Cortex®-M3 microcontrollers offer high performance analog while the new MAX32675 Cortex®-M4F includes robust security features. The MAX32680 with integrated BLE 5 makes it ideal for enabling Bluetooth® connectivity in process devices.

ADuCM36x
MAX32675
MAX78000
MAXQ1065

MAX32680

- ▶ Bluetooth LE 5.2
- ▶ Precision analog front end
- ▶ RISC-V coprocessor



MAX78000/MAX78002

- ▶ Neural network accelerator
- ▶ High system integration
- ▶ Advanced power management



Intelligent Power, Isolation, & Supervisory

High performance power management solutions from ADI meet stringent field instrument power requirements with unmatched power densities, ultra low noise technology, and superior reliability. Our micropower digital isolator, power supply monitors and microprocessor supervisory products are ideal for power and space constrained designs.

Power	Isolation	Supervisory
ADP2360	ADuM144x	MAX16165
ADP162	MAX2244x	ADM8323
MAX1755x	ADuM4121	ADM8613

Seamless Connectivity

The industry's lowest power 10BASE-T1L MAC PHY and accompanying ADIN1100 PHY are enabling the transition to seamless connected field devices, bringing Ethernet-APL all the way to the process edge over 1.7 km single pair Ethernet (SPE) cables. The MAC PHY enables the lowest power system designs and optimized system partitioning by supporting SPI connectivity to a range of host controllers. The transition to Ethernet will be gradual with continued use of legacy 4 mA to 20 mA analog connectivity – ADI offers a comprehensive portfolio including complete 16-bit loop-powered 4 mA to 20 mA and certified HART modem solutions.

AD5421
MAX15500
AD5700/AD5700-1
ADIN1100/ADIN1110

ADIN1110 MAC-PHY

- ▶ Simplified connection via SPI
- ▶ Unburdens the processor
- ▶ Supports intrinsically safe use case



AD5421 4-20mA DAC

- ▶ High performance
- ▶ HART compatible
- ▶ Integrated regulator

