SOLUTION BRIEF

Flexino sensor integration platform

Introduction

Advances in sensor miniaturization, low-power processing and connectivity are enabling new applications such as cloud-based predictive maintenance, portable medical-grade health monitors and remotely controlled smart appliances.

Sensing architectures are an integral part of next-generation products. They allow manufacturers to create connected ecosystems for monitoring real-world variables and extracting actionable information at the network edge before sending data to the cloud.

Selecting the optimal combination of sensing components typically requires extensive investment in scouting, comparison of different components and a network of silicon providers to furnish the best processing cores. This ensures you get the best features tailored to your specific application at the lowest cost.

Not only is the selection process complex, but to deliver intelligent devices faster and meet increasing consumer demand, companies must be able to prototype for a given application. Quick prototyping is key to speeding up the manufacturing process, reducing cost and decreasing time-to-market.

Flex solution

Seeing the challenges facing our customers, we created Flexino, a sensor integration development kit with 50-plus reference designs. The modular system combines sensory modules with a low power computational core and embedded operating software.

flex
Create the extraordinary.

By creating an easily configurable sensing solution that works across industries and segments, we've simplified the sensor integration cycle. Quickly assemble prototypes with 50+ building blocks that allow you to combine different sensors to optimize your product architecture. And with our extensive library of hardware schematic drawings (which are ready for incorporation into a final product architecture) and 500,000+ lines of tested embedded software code, save development time and reduce risk.

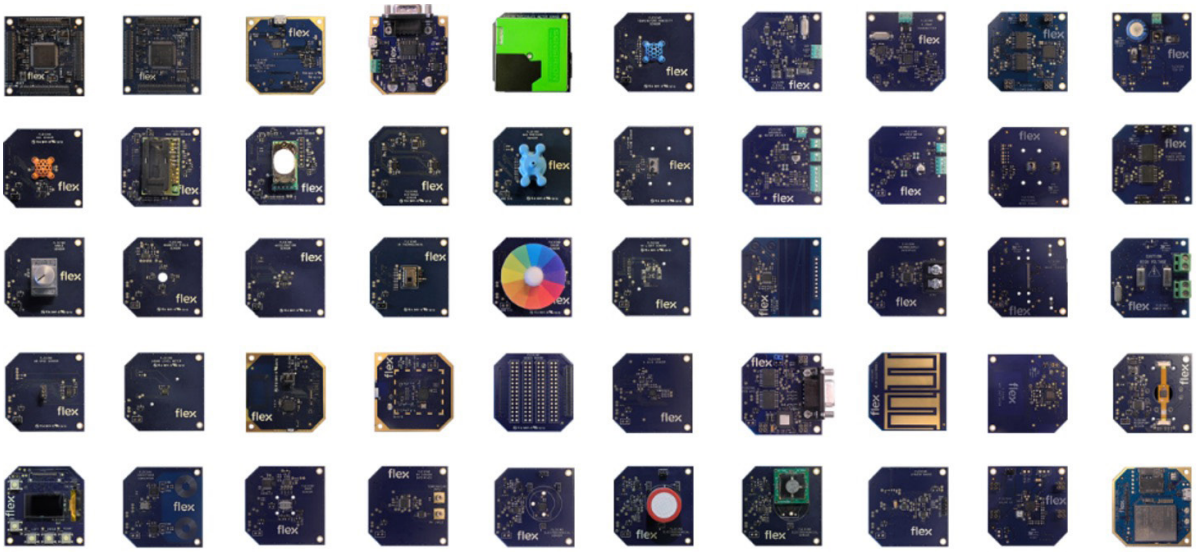
Flexino provides a customizable sensing solution that's built with quality in mind. We sourced the components from our comprehensive supply chain, which provides product reliability and the ability to scale quickly. In addition, we've evaluated each of the sensors to gain key insights into power consumption, measurement accuracy, speed, strengths and weaknesses. These insights allow us to optimize solutions more efficiently and avoid integration pitfalls that might delay production.

Reference designs

Flexino reference designs cover common sensing applications, including temperature and humidity, vibration, distance, liquid level, pressure, medical electrocardiogram and heart rate, air quality and gas sensing. Add-on cards also support the latest IoT connectivity solutions, energy harvesting and human machine interfaces.

Each of the 50+ building blocks are built in a 2 in x 2 in format, easily connected together via a common interface. The adoption of a STM32L4 computation core offers the right balance between edge computing needs and beneficial power consumption for battery-operated end nodes.

The interface-rich architecture allows the management of several different hardware interfaces and creates an expandable, scalable workbench to quickly build a prototype. The availability of multiple sensors connected with a common core to a wireless module enables the design of new sensor fusion applications.



Why Flexino?

- 50+ building blocks, in a 2" x 2" format on common interfaces
- Wide market and application footprint
- Supports different operating systems and smart software architectures
- Offers different connectivity options and security features
- Focused on miniaturization, low power and low-cost solutions
- Aligned to Flex supplier base for quality and production volume scalability

Partner with Flex

Flexino allows our design centers to assess product specifications rapidly and select the best sensing solutions using real-time data.

Our design-led manufacturing expertise, ready-to-import design files and tested embedded software provide our customers with the competitive advantage of improved time-to-market and reduced development cost. No matter the market application, Flex design centers provide a faster development track for delivering automotive, healthcare, lifestyle and industry solutions.

Our advantage

- Accelerate time to market and reduce initial investment by tapping into our Flexino reference designs
- Move rapidly from design to NPI to mass production with our best-in-class manufacturing capabilities
- Scale quickly with our global supply-chain expertise, extensive supplier network and worldwide distribution

Contact us to learn more about how you leverage Flexino.

Explore our other resources to learn more about applications for Flexino.

- Review our data sheets for each of the Flexino boards
- Watch our video on a Flexino automotive solution
- Read about how sensors are advancing healthcare

Learn more at flex.com

Flex (reg. No. 199002645H) is the manufacturing partner of choice that helps a diverse customer base design and build products that improve the world. Through the collective strength of a global workforce across 30 countries and responsible, sustainable operations, Flex delivers technology innovation, supply chain, and manufacturing solutions to various industries and end markets. For more information, visit flex.com.