

# Chengbo's high precision industrial flow meters strike perfect balance of performance, cost efficiency, and system size with ADI *iCoupler* digital isolators



Chengbo, a leading supplier of industrial automation systems to OEMs and system integrators in China, has established a reputation for providing high performance, cost effective systems that meet the most demanding requirements for industrial process applications. The company's new portfolio of electromagnetic flow meters exemplifies its technology leadership, assuring flow rate measurement precision that can surpass competing ultrasonic flow meters without compromising overall system cost.



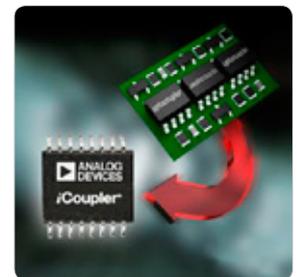
To achieve the desired system precision, BOM, and form factor specifications for its electromagnetic flow meters, Chengbo required a digital isolation component platform that delivers superior performance characteristics in a tightly integrated, compact package. The company's design team had utilized optocouplers in its earlier generation flow meter products, but the optocouplers lacked the desired performance and introduced considerable integration complexity, size, and cost to the designs.

ADI's quad-channel *iCoupler*® digital isolators proved to be the clear alternative for Chengbo's design team, easily meeting performance profile targets while enabling significant design efficiencies across

the PCB. *iCoupler* devices forego the LEDs and photodiodes used in traditional optocouplers and instead utilize high speed CMOS and monolithic air core transformer technologies to dramatically reduce component count and cost.

Delivering board space savings up to 60% compared to optocouplers, ADI *iCoupler* devices enabled Chengbo's designers to consolidate the electronics assembly onto a 90 mm × 80 mm PCB and realize an ultracompact form factor for its electromagnetic flow meters. Chengbo's transition from optocouplers to *iCoupler* devices also yielded up to 90% lower power consumption at the digital isolator component level, an advantage that Chengbo intends to exploit for its forthcoming line of power-efficient "in home" automation systems.

With more than half a billion ADI *iCoupler* channels shipped worldwide and a 50+ year projected lifetime for each device, *iCoupler* technology provides Chengbo with a high quality and highly reliable digital isolation platform that unlocks the full performance and value of its high precision electromagnetic flow meters.



“ADI's *iCoupler* technology exemplifies the spirit of innovation that Chengbo applies to its own products, distinguishing ADI as a valued and trusted supplier to Chengbo.”

**Xianxi Chen, CEO, Chengbo**