

RFID and MSP430 Solution for Electronic Utility Meters



China-based systems integrator Lierda, is equipping household electric, gas and water meters in China with TI's TRF796x reader module and MSP430 microcontroller to enable contactless pre-payment of utilities.

In the electronic metering application, residents purchase contactless cards from a kiosk that contain TI's secure multi-purpose contactless chip module stored with a pre-paid yuan amount. TI's secure multi-purpose contactless chip is designed for the growing closed-loop contactless micropayment, loyalty, ID and access application markets. The cards are waved in front of the meters to activate them, and the amount chosen by the customer is debited from the card.

"Many homes have separate meters for their utilities that must be pre-paid so it's difficult to keep track of them," said Liang Yuan, Chief Technology Officer of Lierda. "Using TI's secure contactless chip and reader technology we can offer our utility company customers a fast and convenient way for their customers to pay, while ensuring continuous service."

TI's secure multi-purpose contactless chip and module include a highly sensitive radio frequency front end to enable a successful transaction each time with little consideration of the orientation of the card as the customer taps it to the reader. The chip and module support RF antennas as small as 38 x 28 mm, while providing superior read performance, allowing them to be packaged into a variety of form factors including keyfobs, tokens and ISO/IEC 7810 cards. For more information RF-HCT-WRC5-KP221 chip or the RF-HCT-MRT4-KP222 module, visit www.ti.com/secureIC or contact 1-800-962-7343.