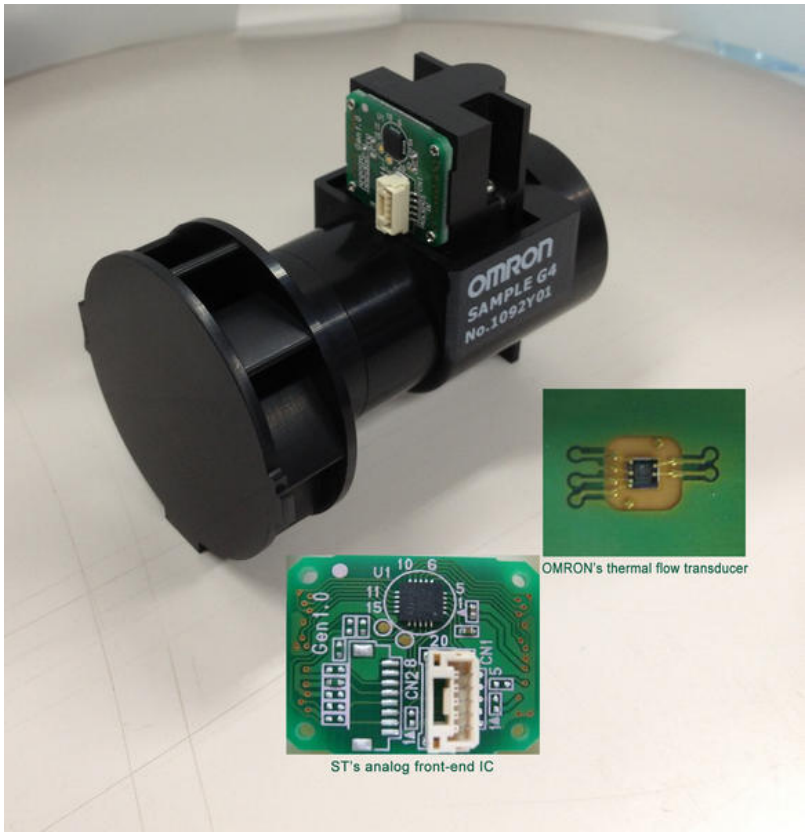
MEMS-based gas flow sensor includes built-in correction for differences in gas composition



OMRON Corporation and STMicroelectronicsannounced the completion of the development of a MEMS-based gas flow sensor with industry-unique built-in correction for differences in gas composition. OMRON will start sample shipments of the new sensor in November 2012.

As with electricity-consumption measuring, gas metering is moving from conventional mechanical solutions to smart electronic meters with automatic meter-reading functions. There are over 400 million mechanical gas meters in the world and most major gas providers are readying to replace their traditional meters with more accurate and reliable electronic devices.

In addition to higher precision and reliability, the OMRON/ST sensor solution enables the development of smart gas meters that are much smaller, less expensive, and more power-efficient than the conventional equipment, resulting in substantial cost savings for the utility companies and end users alike. Industry analysts expect the global smart gas meter market to exceed 10 million units a year by 2015.

The new gas-flow sensor combines OMRON’s state-of-the-art MEMS (Micro-Electro-Mechanical System) thermal flow transducer with ST’s high-performance analog front-end IC, delivering high-precision gas flow-rate measurement with excellent reproducibility. Gas meters built around the OMRON/ST solution do not need to be

configured for a certain type of gas at the time of shipment or installation, as they are intrinsically compensated for both temperature and pressure variations and a built-in circuit compensates for the variation of multiple gas composition. The sensor is dust-resistant to comply with international gas-meter standards.

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