PPSystems.
Science made seamless.

INVARAS™ 100
CO_2 GAS ANALYZER

CO_2 measurement built for the long run.

Once the analyzer is inside your system,
its performance becomes part of yours.

Start from a known zero.
TRUEZERO™ TECHNOLOGY

If zero is uncertain, every measurement starts with a question. TrueZero™ technology provides a known zero reference and a defined starting point.

Keep drift out of the data.
DRIFT-FREE PERFORMANCE

Drift can shift a reading without announcing itself. INVARAS 100 is engineered so changes in the data reflect the application, not analyzer drift.

Keep it deployed.
NO FACTORY RECALIBRATION

Removing an embedded analyzer for factory recalibration means interruption, logistics, and added service work. No factory recalibration keeps INVARAS 100 inside the system throughout long-term deployment.

INVARAS™ 100 is an OEM-ready NDIR CO_2 gas analyzer engineered for highly accurate measurement, drift-free performance, and long-term deployment.

It is built for the realities of embedded measurement, where baseline certainty, stability, integration, and serviceability all affect system performance.

Proven Performance

< ±1%	<0.25 ppm	<0.25 ppm	<0.4 ppm/hr
Accuracy of calibrated measurement range*	Lower limit of detection at 0 ppm**	RMS noise at 500 ppm***	Total CO_2 drift at 500 ppm

*Accuracy limited by the accuracy of the calibration mixture. **3σ, default configuration (6 s internal averaging). ***With 1.6 s filtering.

Built for what happens after integration.

Day-one accuracy is only the beginning. Certainty comes from knowing the measurement will hold over time.

Let the application move the data. Not the analyzer.

DRIFT-FREE PERFORMANCE

Analyzer drift adds uncertainty where you want it least: in the data. INVARAS 100 is engineered so changes in the measurement reflect the application, not the analyzer.

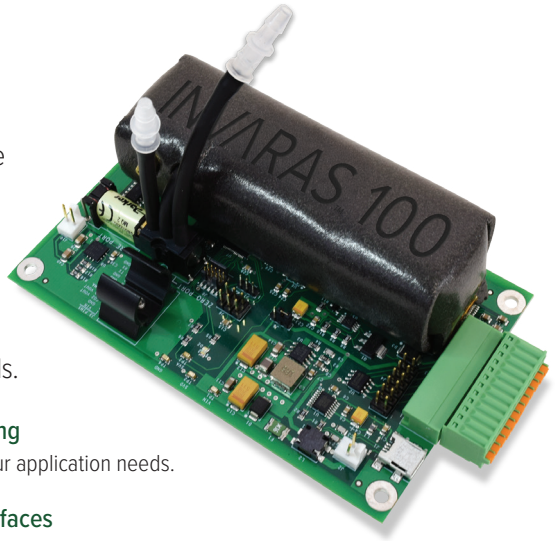
TOTAL CO_2 DRIFT	RMS NOISE
< 0.4 ppm/hr at 500 ppm	< 0.25 ppm at 500 ppm*

*With 1.6 s filtering.

Changing conditions shouldn't change the measurement.

ENHANCED MEASUREMENT STABILITY

Advanced thermal regulation maintains a stable internal measurement environment as conditions change, supporting accurate, repeatable, low-noise CO_2 measurement through continuous operation.



Built to integrate. Not complicate.

SEAMLESS OEM INTEGRATION

INVARAS 100 is designed to fit the host system without unnecessary workarounds.

Compact PCB format
Built for embedded OEM systems.

Configurable reporting
Output the variables your application needs.

Fixed-length data string
Predictable, integration-friendly data communication.

Analog + digital interfaces
12-pin terminal block and USB for flexible integration.

See what your analyzer sees.

GAS SOFTWARE

Configure settings. Monitor live CO_2 data. Log environmental sensor data. Review performance. Confirm operation before deployment.

Learn more at ppsystems.com/invaras-100

CO_2 data you can build on.

What are you building?

Let's talk about your application and how INVARAS 100 can bring long-term measurement certainty to your next design.

Accurate CO_2 data. Drift-free performance. Seamless integration.

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