

## Welcome to the October 2021 issue of H2scan Sensor News. In this issue we present:

- Did you know...?
- Gen5 GRIDSCAN™ GSAO-1 Analog Output Modules are in Production
- H2scan Has Begun Shipping Prototypes of its Next-Generation Hydrogen Products
- Interview with Christian Smith, Manufacturing Engineer
- Hydrogen Economy News Bytes

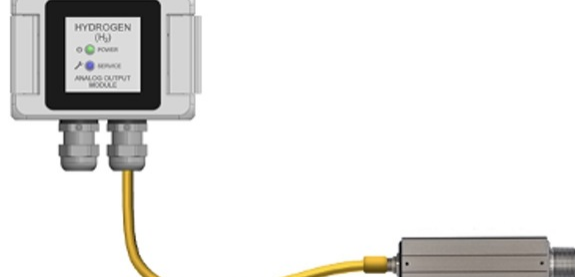
Thanks for taking a look. Please reach out with any [questions](#).

### Did you know...?

H2scan's explosion proof HY-OPTIMA™ 2740 can work in environments with up to 20% CO and 3% H2S present continuously?

### Gen5 GRIDSCAN™ GSAO-1 Analog Output Modules are in Production

H2scan is now accepting orders for its new Hydrogen Analog Output Module (GSAO-1). The GSAO-1 pairs with the [GRIDSCAN™ 5000](#) hydrogen sensor designed for distribution transformers to provide a simple analog interface to any transformer monitor, relay or controller that accepts a 4-20mA input. The GSAO-1 allows users to change oil types and select the optimal analog output range without the need for a PC or software. Rated for a wide hydrogen and temperature range, the GRIDSCAN™ 5000 with the GSAO-1 accessory leads the industry in ease of retrofitting a hydrogen sensor package to existing transformers.



GRIDSCAN™ 5000 with GSAO-1 Analog Output Accessory

### H2scan Has Begun Shipping Prototypes of its Next-Generation Hydrogen Products

H2scan has started shipping prototypes of its new HY-OPTIMA™ 5000 Series designed for process industries. The general purpose-rated analyzer measures hydrogen directly in process gas streams with no cross sensitivity to most gases and eliminates the need for calibration or maintenance for the life of the system up to 10 years.

The prototype features the first ever auto calibration capability and is ideal for stand-alone or OEM integration into existing analyzers. It can be used in gas streams where real-time, hydrogen-specific measurements can enhance process plant efficiencies, improve yields, reduce maintenance costs, and enable the green hydrogen economy. The HY-OPTIMA™ 5000 is designed for low-cost use in power-to-gas, hydrogen metering in homes, measuring purity for electrolyzers and several other emerging applications. The first Alerta 5000 prototype product has been shipped to a customer for test and validation. The product line will have the same auto-calibration as the HY-OPTIMA™ 5000, which requires no maintenance or periodic calibration requirement for up to 10 years.

### Interview with Christian Smith, H2scan Manufacturing Engineer

#### What is a typical day like for you?

I start the day by checking in with my team and I address anything that requires immediate attention. I follow that with a plant tour to get a feel for how things are running, and as a touch point with the manufacturing floor team. I update my standard work to capture findings, prior to my daily meeting where we review metrics, capture, or resolve issues and update our production schedule.

Production support and continuous process improvement are the team's priority, along with maintaining the equipment and facility, and ensuring our manufacturing systems are meeting production needs. With the production launch of the GRIDSCAN™ 5000 product family coming, we are preparing our production environment to support tremendous growth, and the entire organization has really supported the vision. Sometimes the hardest thing is getting support for an idea, so seeing the levels of engagement, and the successes we have been able to achieve as a group has been spectacular. There are the expected bill of material, manufacturing method, and routing adjustments that are a natural, albeit less captivating, part of manufacturing, but one area we are enthusiastically maturing is our level of production automation. Integrating SCADA, automated manufacturing and data processing, the incorporation of additive manufacturing processes and an increasingly, digitally integrated, manufacturing floor, are leading to reductions in cycles and lead times across the value streams.

Along with production support and infrastructure sustainment, is the project work. We are developing the next generation of production technologies in partnership with our Product Development Team. The proximity has really helped us better match the deliverable, be it a piece of equipment, a production cell, or assembly aid, to the product quality needs. I close out my day with a final plant walkthrough, conducting necessary system checks and layered audits.

#### What excites you about the future of H2scan and / or the hydrogen economy?

I am excited by the company's growth and the interest we are receiving from the market. I think we are all looking forward to being an integral solutions provider in the burgeoning green energy future, and I see continued integration of Lean 6 Sigma and the continued evolution of our manufacturing systems as the fastest path to meeting this goal.

The team has really taken an active role in analyzing our processes, identifying opportunities, and proactively implementing improvements. As our quality management system has evolved, we have increased visibility to the effectiveness of our processes and the overall health of the production system. This key performance data then informs transformational activities, helping manage resources more strategically. We want to be sure we are doing the right things right.

With the hydrogen economy, I really see us at the dawn of a new energy age, with hydrogen technologies as one of the key pathways on the road to an ecologically sustainable future. We see an extraordinary horizon. Hydrogen's versatility makes it an extremely attractive vehicle for cutting the fossil fuel umbilical. Fuel cells, power to gas, commercial transport & shipping, as well as some of the concept work in aviation, and the rapidly growing aerospace sector, offers incredible market penetration points. H2scan holds a unique position in the ecosystem.

Leveraging the Gen5 platform, I see tremendous opportunities in green hydrogen generation, on-site green ammonia production, and applications in fuel cells and electrolyzers. There are multiple points in the blue hydrogen production cycle that lend themselves to our technology set, also.

Long term hydrogen storage is just beginning down its path to grid scale viability, and we are excited to be on the cutting edge of these developments. It is a very exciting time to be operating in this sector with a fantastic group and exceptional technology.

**Thank you Christian!**

### Hydrogen Economy News Bytes

#### Construction begins on world's largest green hydrogen power plant

This project combines a photovoltaic plant with innovative storage technologies including hydrogen systems. Siemens Energy plans on operating the unique, \$197 million plant in a remote part of French Guiana. The power plant will provide 10MW of power during the day, and 3 MW at night. This project is currently the largest power plant project in the world to store intermittent renewable energy using hydrogen. [Read more about the plant.](#)

#### Toyota Mirai hydrogen fuel-cell car goes 845 miles between fills

Setting a new Guinness World Record, a 2021 Toyota Mirai was driven 845 miles on a single tank of hydrogen. Toyota said the Mirai achieved 152 MPGe and used just 12.4 pounds of hydrogen to cover the distance. The company also says that the Mirai cleans the air as it's driven—creating "minus emissions" and they plan to begin making fuel-cell modules in the U.S. [Read more about the hydrogen fuel-cell car.](#)

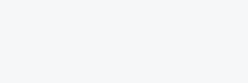
#### WVU researchers hope to build the bridge to a greener future with clean hydrogen

Researchers at West Virginia University are working on connecting renewable energy to the power grid by "greenifying" the production of hydrogen. "We have a really good source of renewables and a huge market for hydrogen, but the barrier is that we cannot connect them," said Wenyuan Li, assistant professor of chemical and biomedical engineering and principal investigator of the project. [Learn more about how WVU plans to eliminate their carbon footprint.](#)



H2scan • 27215 Turnberry Lane, Unit A, Valencia, CA 91355 • +1-844-442-7226 • [sales@h2scan.com](mailto:sales@h2scan.com)

Share this email:



[Manage](#) your preferences | [Opt out](#) using TrueRemove®

Got this as a forward? [Sign up](#) to receive our future emails.

View this email [online](#).

27215 Turnberry Lane Unit A  
Valencia, CA | 91355 US

This email was sent to .  
To continue receiving our emails, add us to your address book.

[Subscribe](#) to our email list.