sciemetric

# sigPOD

## THE ULTIMATE DEFECT DETECTION FOR THE SMART FACTORY

Monitor Processes to Catch Defects in Real-Time with sigPOD

# ENABLE MANUFACTURING 4.0 IN YOUR FACTORY WITH SIGPOD

## The Most Accurate Defect Detection for Smart Manufacturing

Sciemetric's sigPOD is a process monitoring platform that delivers process insight with the most accurate and reliable defect detection. The sigPOD will help you improve product quality, improve production efficiency, and achieve higher yields. That is smart manufacturing.

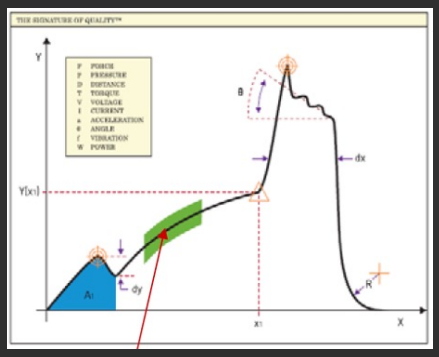

If you have assembly processes that are critical-to-quality, cause repeated defects or bottlenecks, the sigPOD is your answer. Use the sigPOD to:

- Find assembly quality issues in real time
- Test the functionality of components
- Enable process data acquisition on your line
- Provide a flexible assembly process monitoring solution

# MONITOR THE HEARTBEAT OF YOUR ASSEMBLY PROCESSES

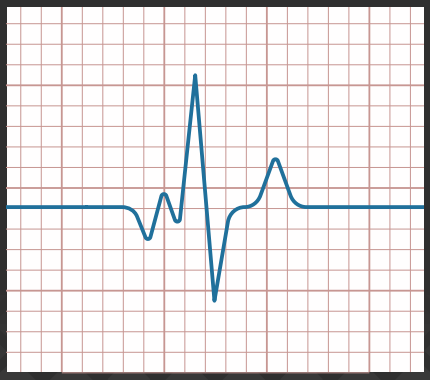
## Digital Process Signature Technology

Using process signature verification (PSV™) technology, the sigPOD offers a level of detail that catches defects other systems miss. Sciemetric's sigPOD measures every instant of your process, providing a visualized waveform that tells you so much about the health of your test process—like how an ECG provides a visual representation of health and function of your heart.




sigPOD PSV™ waveform

An ECG tells you more than just your pulse rate, it shows how different chambers are beating, heart capacity, and if there are blockages.



ECG waveform

The sigPOD's PSV™ technology offers the same level of detail for processes on your line. A waveform does more than just confirm your press process took place, it alerts you of variations that identify improper alignment, incorrect ram speed, damaged seals, low hydraulic pressure, and more. sigPOD helps you catch issues at first sight—before they become bigger problems!

# sigPOD 2204

## New and Improved Platform!

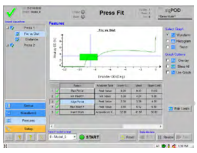
- Even smaller footprint
- 4 channels
- Available with or without capacitive touchscreen
- MicroSD data drive for simple exchange or replacement
- Efficient functional design with fewer internal cables and no internal fan

# APPLICATIONS

## sigPOD Has the Flexibility to Monitor Nearly Any Process on the Line!

Sciemetric's sigPOD real time production monitoring system is modular, flexible, and user-friendly, making it easy to connect, select your settings, and start collecting data. The sigPOD can be deployed across the production line to monitor manufacturing processes, including:

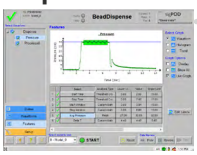
**Press**



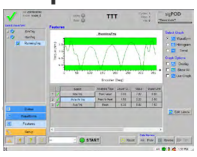
**NVH**

**Leak**

**Dispense**

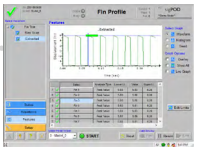



**Torque**

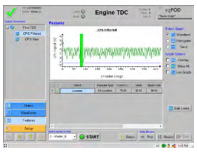


**Weld**

**PSV™**



**Functional Test**



### Uniquely Universal System

1. Common **Hardware**
2. Common **Software**
3. Common **Look and Feel**
4. Common **Learning Curve**
5. Common **Spare Parts**

**Use Sciemetric's pre-configured templates to get you started, OR you can build your own test for nearly any application using sigPOD's easy, configurable software!**

**Standardize testing across your production line**

With the sigPOD, it's easy to standardize all your process monitoring onto a single platform, offering many benefits, including:

- Improve efficiency and reduce costs
- Streamline test development across the line
- Minimize training time for operators
- Streamline maintenance and reduce spare parts
- And more!

# WHY MANUFACTURERS CHOOSE sigPOD

## The Most Advanced Defect Detection Technology

The sigPOD's unique PSV™ (process signature verification) technology provides the most accurate, reliable, and repeatable measurement of manufacturing processes. By collecting more data points than is typical in conventional test systems, the sigPOD catches defects the other systems miss.

## The Best Resolution, Accuracy, and Speed

The sigPOD 2204 now offers 24-bit analog inputs, sample rates up to 125 kHz per channel, and a faster processor and design upgrades for impeccable accuracy in even the most demanding applications, now up to 2x faster testing than previous models!

## Easy, Configurable Test Setup

The sigPOD features pre-configured software templates for a wide range of common manufacturing processes. These templates can be easily adapted to meet nearly all your process monitoring needs.

## Visualized On-Screen Data

Waveforms make it easy for operators to view, compare, and overlay data from different parts for ultimate visual defect detection.

## Intelligent Setting of Test Limits

Easily set and adjust test limits with the ability to automatically derive statistically optimized limits from production data.

## MicroSD Storage for More Than 2,000 Complete Test Records

Store, retrieve, and view signatures, histograms, trends, and statistics directly on the sigPOD, including high resolution waveforms and full process signature data. MicroSD data drive offers simple exchange or replacement.

## Comprehensive SPC Tools

Use SPC to signal process deviations in real time, and access a comprehensive list of SPC reports, including trending, histograms, statistics.

## Easy-to-Use, Touch Screen Interface

Intuitive point-and-click configuration and a large, high-resolution display make the sigPOD easy to setup and operate.

## Flexible Connectivity

The sigPOD comes with many connectivity options (Ethernet/IP, Modbus TCP, PROFINET), providing remote communications with virtually any PLC or other common plant floor systems for integrated monitoring and control, including "go/no go" decision-making triggers.

## Modular, Scalable

Compact, robust design easily integrates into any manufacturing station. Expansion units offer inputs for up to 16 additional analog channels or 64 additional encoder channels for more complex applications.

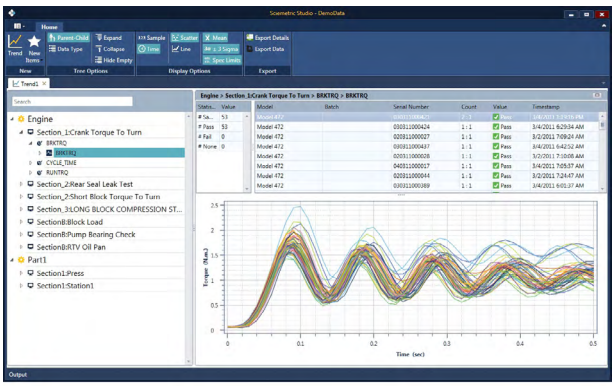
# CONNECTIVITY

Easily connect your sigPOD—or any data collection device—to Sciemetric's most advanced manufacturing analytics tools, **QualityWorX** and **Sciemetric Studio**. This brings all your process data together in one place organized for deeper analysis and process optimization. Use these tools to:

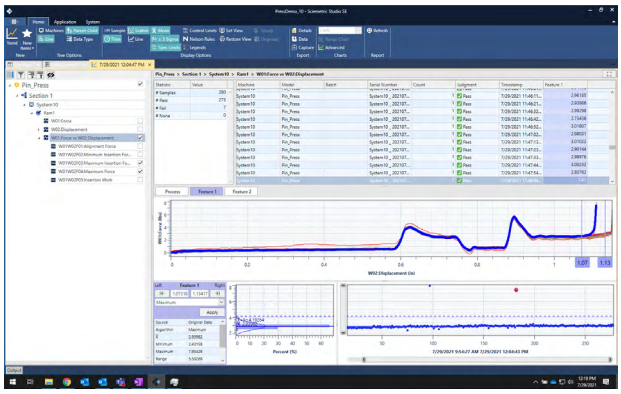
- Provide detailed reports on parts manufactured
- Enable full part traceability by serial number
- Analyze and optimize your assembly processes
- Quickly investigate and identify the root cause of quality issues
- Continuously improve your manufacturing processes

Sciemetric Studio

qualityworx



**Waveform overlay trend**



**Waveform Analyzer**

# sigPOD MODELS AND SPECIFICATIONS

| Model | 2204 | 1608 |
|---|---|---|
| **Name** | **sigPOD** | **8-channel USB Expansion** |
| **Analog In** | 4 | 8 |
| **Analog Range** | 16 ranges from ±12.5 V to ±104 mV | ±10, 5, 1, 0.2V |
| **Bandwidth** | 37 kHz @ 125 kHz | 700 kHz |
| **Anti-Aliasing** | ✔ | - |
| **Max Sampling Rate** | 125 kHz per channel | 250 kHz Aggregate |
| **Resolution** | 24 bit (± 8,388,608) | 16 bit (± 32,768) |
| **Analog Out** | - | 2 |
| **Encoder In** | 4 | 2 |
| **Digital I/O** | 8 In / 8 Out | 8 In / 8 Out |
| **Processor** [1] | Intel Atom x6425E (2.00 GHz / 3.00 GHz) | - |
| **Memory** [1] | 16 GB | - |
| **HD** [1] | 64 GB System, 16 GB Data MicroSD | - |
| **USB** | 2x USB 2.0; 2x USB 3.1 | 1x USB 2.0 out |
| **Ethernet** | 2 | - |
| **Operating System** | Windows 10 IoT LTSC 2021 | - |
| **Size - inches (mm)** | 9.65 x 7.52 x 2.05 no TFT<br>(245 x 191 x 52)<br>11.89 x 8.27 x 2.68 with TFT<br>(302 x 210 x 68) | 8 x 4.5 x 8<br>(203 x 115 x 203) |
| **NEMA 12 (IP 52)** | ✔ Panel mounted or with optional NEMA hood | - |
| **Expandable** | ✔ | - |
| **Optional Integrated Touchscreen Display** | ✔ | - |
| **Supports remote monitor** | ✔ via HDMI or DisplayPort | |
| **Mounting** | | |
| **Pedestal Mount** | ✔ | - |
| **Machine Mount** | ✔ | - |
| **Panel Mount** | Model with integrated screen only | - |
| **Wall Mount** | Model without integrated screen only | ✔ |
| **DIN Rail** | Model without integrated screen only | ✔ |

[1] *The exact processor type and speed, memory supplied and other technical specifications are subject to change without notice. Please contact Sciemetric for latest specifications.*

Please see the datasheet for more detailed specifications.

## CURRENTLY USING sigPOD?

### It's easy to upgrade to the 2204!

- Same channels
- Same connectors
- Same mounting options
- Same power supply
- Same soft fieldbuses

## Contact Sciemetric to see how our solutions can help you achieve the most reliable manufacturing defect detection, saving you time and money!

**For more information, visit sciemetric.com or email us at inquiries@sciemetric.com.**

Since 1981, Sciemetric has been working with the world's top manufacturers to improve product quality and production efficiency through process monitoring, measurement, and data analysis. With locations across the globe, Sciemetric is available with local experts to provide the expertise and advice you need to improve your product quality and production efficiency.

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