

Keysight, FormFactor and CompoundTek Join Forces to Accelerate Integrated Photonics Innovations

SANTA ROSA, Calif; LIVERMORE, Calif.; SINGAPORE, November 14, 2019 – [Keysight Technologies, Inc.](#) (NYSE: KEYS), a leading technology company that helps enterprises, service providers and governments accelerate innovation to connect and secure the world, [FormFactor, Inc.](#) (NASDAQ: FORM), a leading provider of essential test and measurement technologies along the full IC life cycle and [CompoundTek](#), a global foundry services leader in emerging silicon photonic solutions (SiPh), have joined forces to accelerate integrated photonics innovations.

Integrated photonics, also called silicon photonics, is a revolutionary technology that multiplies data transfer capacities while reducing power consumption and cost. While photonics integrated circuits (PICs) offer an exciting alternative to the limitations of traditional data center networking, they also introduce new design and test challenges for component and device manufacturers. Adoption of PICs is primarily dependent on an industrial ecosystem comprised of new foundries, commercial modeling tools and photonic test capabilities.

Keysight, FormFactor and CompoundTek, have jointly developed an advanced photonics on-wafer testing solution that delivers industry-first capabilities including automated alignment, simultaneous optical-optical and optical-electrical device tests.

The joint solution, to be offered by CompoundTek includes:

- The [FormFactor CM300xi-SiPh](#), with automated wafer level photonics positioning combined with Keysight's industry standard [IL/PDL engines and N7700A Photonics Application Suite \(PAS\)](#), to support wavelength repeatability of ± 1.5 pm at two-way sweeps up to 200 nm/s within 1240nm to 1650nm to ensure accuracy and repeatability from O-band to L-band.
- [Keysight's N4372E 67 GHz Lightwave Component Analyzer](#) which delivers unprecedented bandwidth for both optical receiver testing and optical transmitter testing with guaranteed specifications for electro-optical S-parameter measurements for device traceability.
- [Keysight's PathWave software platform](#) which provides a consistent user experience, common data formats and control interfaces.
- [FormFactor's SiPh software](#) that enables automated calibrations and alignments and simplifies integration with Keysight's PathWave software platform, as well as optical instrumentation, to ensure ease of use.

Silicon photonics also delivers benefits for industrial segments such as intra data center communication and data center interconnects (DCI), telecom, 5G and automotive connectivity, high-performance computing, light detection and ranging (LIDAR), as well as sensing and medical applications.

"Innovation in optics is critical to connect the world and help the industry to monetize 5G, as well as data center and telecom services," said Dr. Joachim Peerlings, vice president of Network and Data Center Solutions at Keysight Technologies. "Advancing in speed as well as power and cost efficiency requires a tightly connected eco-system to jointly solve the challenges ahead. We are pleased with our partnerships and progress of enabling this eco-system through our unmatched photonics test expertise."

CompoundTek plans to establish a state-of-the-art silicon photonics testing services hub in Singapore. The company's chief operating officer, K.S. Ang, commented, "With added on-wafer level, automated Si photonics Optical/Electrical/RF testing with this solution, customers will be able to limit packaging costs to avoid module packaging level testing turn-around time losses. This test solution complements our current services in mass production volume with fast cycle-time, offered alongside world-class commercial foundry capabilities that accelerate time-to-market to achieve customers' commercialization goals."



“FormFactor’s industry-leading silicon photonics wafer test capability allows our customers to obtain repeatable, consistent results with unsurpassed throughput,” said Claus Dietrich, vice president and general manager of the Systems Business Unit at FormFactor. “The system’s automated and high-speed calibration and optical alignment, as well as precision measurement capability in collaboration with Keysight, enable CompoundTek to offer customers faster time to market.”

About Keysight Technologies

Keysight Technologies, Inc. (NYSE: KEYS) is a leading technology company that helps enterprises, service providers and governments accelerate innovation to connect and secure the world. Keysight’s solutions optimize networks and bring electronic products to market faster and at a lower cost with offerings from design simulation, to prototype validation, to manufacturing test, to optimization in networks and cloud environments. Customers span the worldwide communications ecosystem, aerospace and defense, automotive, energy, semiconductor and general electronics end markets. Keysight generated revenues of \$3.9B in fiscal year 2018. Additional information about Keysight Technologies is available in the newsroom at <https://www.keysight.com/go/news> and on [Facebook](#), [LinkedIn](#), [Twitter](#) and [YouTube](#).

About CompoundTek Pte Ltd

Founded and supported by industry veterans and technologists, Singapore-based CompoundTek combines world-class commercial foundry with leading silicon photonics (SiPh) research institutes to provide cutting-edge SiPh technologies that enhance foundry services capabilities. CompoundTek brings to the marketplace revolutionary semiconductor applications designed to meet critical requirements in high bandwidth and high data transfer solutions particularly in emerging connectivity driving Industry 4.0. For more information, visit <http://www.compoundtek.com> and [LinkedIn](#).

About FormFactor

FormFactor, Inc. (NASDAQ: FORM), is a leading provider of essential test and measurement technologies along the full IC life cycle –from characterization, modeling, reliability, and design de-bug, to qualification and production test. Semiconductor companies rely upon FormFactor’s products and services to accelerate profitability by optimizing device performance and advancing yield knowledge. The Company serves customers through its network of facilities in Asia, Europe, and North America.