MACOM and GLOBALFOUNDRIES Collaborate to Scale Silicon Photonics to Hyperscale Cloud Data Center and 5G Network Buildouts

March 5, 2019

- *Collaborative agreement expands existing relationship, to deliver requisite cost, scale and capacity to enable mainstream L-PIC deployment for 100G, 400G and beyond*
- *Multi-source supply chain leveraging GF's global manufacturing footprint in Singapore and New York*
- *Production scale of 300mm wafers is expected to enable exponential port growth in cloud Data Centers and 5G networks*

Lowell, Massachusetts and Santa Clara, Calif., March 5, 2019 – MACOM Technology Solutions Inc. ("MACOM"), and GLOBALFOUNDRIES ("GF") today announced a strategic collaboration to ramp MACOM's innovative Laser Photonic Integrated Circuit (L-PIC™) platform using GF's current-generation silicon photonics offering, 90WG, to meet Data Center and 5G Telecom industry demands. The collaboration will leverage GF's 300mm silicon manufacturing process to deliver requisite cost, scale and capacity that is expected to enable mainstream L-PIC deployment for hyperscale Data Center interconnects and 5G network deployments at 100G, 400G and beyond.

GF's 90WG, built on the company's 90nm SOI technology using 300mm wafer processing, enables low-cost integration of optical devices like modulators, multiplexers and detectors into a single silicon substrate. MACOM's L-PIC technology solves the remaining key challenge of aligning lasers to the silicon PIC. Leveraging MACOM's patented Etched Facet Technology (EFT) lasers and a patented Self-Alignment EFT (SAEFTTM) process, MACOM's lasers are aligned and attached directly to the silicon photonics die with high speed and high coupling efficiency, thereby accelerating the adoption of silicon photonics in true industrial-scale applications.

The industry is entering a long upgrade cycle for high speed optical connectivity within Cloud Data Centers as well as 5G optical buildouts. Industry forecasts project 2019, 2020 and beyond to be strong growth years for Coarse Wavelength Division Multiplexing (CWDM) and PAM-4, with the potential for overall unit demand in 2019, reaching volumes of 10 million units. With a track record of enabling 1.6 million ports in 2016, 4 million ports in 2017, and 6 million ports in 2018, MACOM will work with GF to scale L-PIC production aimed at meeting this exponentially growing market demand.

"With the demand for bandwidth doubling inside Data Centers each year, Cloud Service Providers are supply constrained in moving to 100G and beyond. On top of this, Telecom carriers are now adopting the same CWDM and PAM-4 optical standards for their 5G Network buildouts. The ability to efficiently scale transceiver capacity and manufacturing throughput is critical," said John Croteau, President and CEO of MACOM. "By aligning capacity expansion between GF's silicon photonics technology and MACOM's EFT Lasers, and moving to 300mm wafers, we believe that this very strategic collaboration will allow us to meet industry demand and position us to service the industry for years to come."

"We have built an incredible foundation as a leader in providing silicon photonic solutions and advanced packaging capabilities that enable our clients to build a new generation of high-performance optical interconnects," said Tom Caulfield, CEO at GF. "With our deep manufacturing expertise, combined with MACOM's strong technology, we can deliver differentiated silicon photonic solutions at scale, accelerate time-to-market, and reduce costs for client applications in Data Center and next-generation 5G optical networks."

About MACOM:

MACOM enables a better-connected and safer world by delivering breakthrough semiconductor technologies for optical, wireless and satellite networks that satisfy society's insatiable demand for information.

Today, MACOM powers the infrastructure that millions of lives and livelihoods depend on every minute to communicate, transact business, travel, stay informed and be entertained. Our technology increases the speed and coverage of the mobile Internet and enables fiber optic networks to carry previously unimaginable volumes of traffic to businesses, homes and Data Centers.

Keeping us all safe, MACOM technology enables next-generation radars for air traffic control and weather forecasting, as well as mission success on the modern networked battlefield.

MACOM is the partner of choice to the world's leading communications infrastructure, aerospace and defense companies, helping solve their most complex challenges in areas including network capacity, signal coverage, energy efficiency and field reliability, through its best-in-class team and broad portfolio of analog RF, microwave, millimeterwave and photonic semiconductor products.

MACOM is a pillar of the semiconductor industry, thriving for more than 60 years of daring to change the world for the better, through bold technological strokes that deliver true competitive advantage to customers and superior value to investors.

Headquartered in Lowell, Massachusetts, MACOM is certified to the ISO9001 international quality standard and ISO14001

environmental management standard. MACOM has design centers and sales offices throughout North America, Europe, and Asia.

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About GF:

GLOBALFOUNDRIES (GF) is a leading full-service foundry delivering truly differentiated semiconductor technologies for a range of high-growth markets. GF provides a unique combination of design, development, and fabrication services, with a range of innovative IP and feature-rich offerings including FinFET, FDX™, RF and analog mixed signal. With a manufacturing footprint spanning three continents, GF has the flexibility and agility to meet the dynamic needs of clients across the globe. GF is owned by Mubadala Investment Company. For more information, visit www.globalfoundries.com.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS:

This press release contains forward-looking statements based on MACOM's beliefs and assumptions and on information currently available to MACOM. These forward-looking statements reflect MACOM's current views about future events and are subject to risks, uncertainties, assumptions and changes in circumstances that may cause those events or our actual activities or results to differ materially from those expressed in any forward-looking statement. Although MACOM believes that the expectations reflected in the forward-looking statements are reasonable, it cannot and does not guarantee future events, results, actions, levels of activity, performance or achievements. Readers are cautioned not to place undue reliance on these forward-looking statements. A number of important factors could cause actual results to differ materially from those indicated by the forward-looking statements, including, but not limited to, those factors described in "Risk Factors" in MACOM's Annual Report on Form 10-K, Quarterly Reports on Form 10-Q and other filings with the Securities and Exchange Commission. MACOM undertakes no obligation to publicly update or revise any forward-looking statement, whether as a result of new information, future events or otherwise.

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