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Microsemi's TimeProvider 4100 Enables Denmark's Stofa to Launch First Trial of Remote PHY in Europe Based on DOCSIS 3.1 Standard

IEEE 1588 PTP Grandmaster Clock Offers Flexibility, Scalability and Precision Necessary for Next-Generation Cable Architectures

ALISO VIEJO, Calif., June 12, 2018 /PRNewswire/ -- **Microsemi Corporation**, a wholly owned subsidiary of Microchip Technology Inc. (Nasdaq: MCHP), today announced it has enabled cable TV and internet provider Stofa, based in Denmark, to successfully complete the first trial in Europe deploying a new type of architecture—Remote PHY (R-PHY)—based upon the DOCSIS® 3.1 standard in Europe. Using Microsemi's TimeProvider 4100, a highly flexible IEEE™ 1588 Precision Time Protocol (PTP) grandmaster clock, to meet the stringent PTP synchronization requirements of the new Remote PHY architecture, Stofa thoroughly tested the device to ensure suitability for the cable industry's deployments.

R-PHY technology enables more efficient use of the network media, enabling service speeds of up to 1Gbps. DOCSIS 3.1 specifies stringent synchronization requirements based on the IEEE™ 1588 v2 standard, whereby the cable modem termination system (CMTS) and the R-PHY devices act as IEEE-1588 v2 slaves with 1 millisecond phase alignment enabled via a IEEE-1588 v2 grandmaster provided by Microsemi.

Microsemi's TimeProvider 4100 provides the Ethernet fan-out necessary for these deployments with eight Ethernet ports in its base unit. TimeProvider 4100 has been designed to support the latest IEEE-1588 v2 profiles for frequency and phase, and features

scalability to support a high number of PTP slaves as required by deployment of advanced cable infrastructures based on the new DOCSIS 3.1 standard.

"After more than 10 years of positive experience leveraging Microsemi's TimeProvider technology, we were pleased at the new TimeProvider 4100's ease of management in comparison to competing solutions during our extensive field trial," said Uffe Callesen, technology architect, DOCSIS 3.1 Project, at Stofa A/S. "The platform is a perfect match for the demanding requirements in our Remote PHY deployments, as it accommodates our need for scalability, high number of Ethernet ports and DC power capabilities."

Microsemi's TimeProvider family is designed to scale from the core to the aggregation and edge layers of access networks, as well as mobile infrastructure. The company's new TimeProvider 4100 gateway clock is complementary to its higher capacity and fully redundant TimeProvider 5000 core grandmaster clock, which is used for higher density core deployments. Microsemi's TimeProvider 4100 offers the latest PTP standards as well as oscillator choice for holdover. The device represents a new class of synchronization product which accepts multiple inputs from Global Navigation Satellite Systems (GNSS), Synchronous Ethernet (SyncE), 1588 PTP and E1/T1 digital transmission links, and distributes timing flows to multiple endpoints. The TimeProvider 4100 also boasts an extensive port fan-out for PTP, Network Time Protocol (NTP), SyncE and legacy building integrated timing supplies (BITS). With multiple ports for current, legacy and future networks, the device offers customers a cost-effective solution that can be easily adapted for a wide variety of use cases.

"Our TimeProvider 4100 offers a robust solution with the flexibility to deploy in a wide range of environments accommodating standards ranging from mobile 5G to the new cable DOCSIS 3.1 criterion due to its impressive versatility," said Eric Colard, director of product line management for Microsemi. "The device uniquely provides a 1588 grandmaster supporting these standards with the high precision, accuracy and reliability requirements needed for leading cable operators like Stofa."

According to IHS Markit, the market value for the access network market segment will reach more than $20 billion in 2021, driven by the fiber market which will show a nearly 6 percent compound annual growth rate (CAGR), as well as growth within the cable market. Microsemi's TimeProvider 4100 is well-aligned with the growth opportunity, as the device is designed to accommodate the increased PTP and synchronization requirements within the market, including Remote PHY architectures and the DOCSIS3.1 standard.

Product Availability
Microsemi's TimeProvider 4100 is available for sampling now, with general availability in June 2018. For more information, visit http://www.microsemi.com/product-directory/carrier-grade-ntp-ptp-grand-masters/4422-tp4100 or email sales.support@microsemi.com.

About Microsemi's Timing and Synchronization Product Portfolio
As a global provider of advanced timing and synchronization solutions, Microsemi offers a complete portfolio of precise time and frequency products that span all levels of integration, from integrated circuits, to components for embedded applications, to timing and synchronization systems, to turnkey timescales for customers around the world. Microsemi's embedded timing solutions include Clock Management ICs, Network Synchronization ICs, embedded clocks, such as the rubidium Miniature Atomic Clock (MAC) and the Chip Scale Atomic Clock (CSAC), with best-in-class performance for their respective power consumption levels, as well as modules, providing GPS Disciplined Oscillators (GPSDOs)

and bus level timing. At the systems level, solutions offered by the company generate, distribute and apply precise time for the communications, aerospace, defense, IT infrastructure and metrology industries. Customers range from communications service providers and network equipment manufacturers to governments and their suppliers worldwide. Using the technology offered by Microsemi, customers are able to build more reliable networks and systems by using the company's advanced timing technologies, atomic clocks, services and solutions. These systems support today's precise timing standards, including GPS-based timing, IEEE 1588 (PTP), NTP and Synchronous Ethernet timing. To learn more visit https://www.microsemi.com/product-directory/3425-timing-synchronization.

About Microsemi
Microsemi Corporation, a wholly owned subsidiary of Microchip Technology Inc. (Nasdaq: MCHP), offers a comprehensive portfolio of semiconductor and system solutions for aerospace & defense, communications, data center and industrial markets. Products include high-performance and radiation-hardened analog mixed-signal integrated circuits, FPGAs, SoCs and ASICs; power management products; timing and synchronization devices and precise time solutions, setting the world's standard for time; voice processing devices; RF solutions; discrete components; enterprise storage and communication solutions, security technologies and scalable anti-tamper products; Ethernet solutions; Power-over-Ethernet ICs and midspans; as well as custom design capabilities and services. Microsemi is headquartered in Aliso Viejo, California, and has approximately 4,800 employees globally. Learn more at www.microsemi.com.

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"Safe Harbor" Statement under the Private Securities Litigation Reform Act of 1995: Any statements set forth in this news release that are not entirely historical and factual in nature, including without limitation statements related to it enabling cable TV and internet provider Stofa, based in Denmark, to successfully complete the first trial in the region deploying a new type of architecture—Remote PHY—based upon the DOCSIS 3.1 standard in Europe, and its potential effects on future business, are forward-looking statements. These forward-looking statements are based on our current expectations and are inherently subject to risks and uncertainties that could cause actual results to differ materially from those expressed in the forward-looking statements. The potential risks and uncertainties include, but are not limited to, such factors as rapidly changing technology and product obsolescence, potential cost increases, variations in customer order preferences, weakness or competitive pricing environment of the marketplace, uncertain demand for and acceptance of the company's products, adverse circumstances in any of our end markets, results of in-process or planned development or marketing and promotional campaigns, difficulties foreseeing future demand, potential non-realization of expected orders or non-realization of backlog, product returns, product liability, and other potential unexpected business and economic conditions or adverse changes in current or expected industry conditions, difficulties and costs of protecting patents and other proprietary rights, inventory obsolescence and difficulties regarding customer qualification of products. In addition to these factors and any other factors mentioned elsewhere in this news release, the reader should refer as well to the factors, uncertainties or risks identified in the company's most recent Form 10-K and all subsequent Form 10-Q reports filed by Microsemi with the SEC. Additional risk factors may be identified from time to time in Microsemi's future filings. The forward-looking statements included in this release speak only as of the date hereof, and Microsemi does not undertake

any obligation to update these forward-looking statements to reflect subsequent events or circumstances.

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