Provigent
Intelligent Silicon for Broadband Wireless

For Immediate Release

Provigent SoC Doubles Wireless Channel Capacity

New Broadband Wireless Transmission Chip Doubles Capacity of Frequency Channels by Introducing XPIC Technology

LOS ALTOS, Calif., November 22, 2004 – Provigent Inc., a leading provider of system-on-a-chip (SoC) solutions for broadband wireless transmission, today announced the general availability of its PVG310, a single-chip modem that uses cross-polarization interface cancellation (XPIC) technology to double wireless channel capacity.

Provigent's XPIC technology supports the co-channel dual-polarization (CCDP) operation, which allows the simultaneous transmission of two separate data streams on two polarizations of a single channel. By transmitting on orthogonal antenna polarizations and using advanced digital signal processing techniques to cancel interference, net channel capacity is doubled.

Advanced digital XPIC is a tested and proven feature of Provigent's PVG310 SoC solution. By incorporating all the PHY (physical layer) baseband functionality, the PVG310 achieves a new level of integration and performance in the broadband wireless transmission industry. This highly integrated single-chip modem was specifically optimized for point-to-point radio systems and incorporates state-of-the-art modulation, demodulation and FEC (forward error correction) functions.

The PVG310's advanced features enable wireless system vendors to develop improved performance solutions with overall system cost savings. Features include:

- Net payload up to 311Mbps (2xSTM-1) and 622Mbps (STM-4) using XPIC;
- Rich modulation schemes (QPSK, 16, 32, 64, 128 and 256 QAM);
- Maximum bandwidth of 56MHz;
- Powerful error correction (programmable Reed-Solomon block code, trellis or block convolutional code and interleaver);
- IF or baseband sampling;
- Powerful adaptive decision-feedback equalizer;
- I/Q imbalance correction; and
- Distortion compensation.

All functions are implemented digitally and eliminate the need for external VCO (variable crystal oscillators) and loop filters. Modem parameters – including data rates, modulation schemes and bandwidth – are all software programmable, making the PVG310 the modem core of the IDU (indoor unit) or ODU (outdoor unit) for a broad variety of SDH, PDH and IP traffic systems.

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"The development of the PVG310 was spurred by the growing need for optimized bandwidth utilization – a need driven by expensive spectrum allocation and the scarcity of frequency bands," said Guy Resheff, co-founder and CTO of Provigent. "Provigent's unique intellectual property allows our customers to introduce cost-effective XPIC systems. The PVG310 highly integrated system-on-a-chip modem simplifies the design and shortens time-to-market of point-to-point radio systems. System vendors can leverage our modem solution to develop a single design for their entire point-to-point product line, from low-capacity, low-cost systems to high-end, high-capacity, feature-rich systems."

Point-to-point radio systems based on the PVG310 are being designed by leading system vendors worldwide. The introduction of CCDP operation mode using XPIC technology allows vendors to expand product offerings into the ultra-high-capacity market. Operators can build networks that transmit up to 311Mbps over 28MHz channels and up to 622Mbps over 50/56MHz channels, achieving a spectral efficiency of 13.5 bits/Hz, thereby offering an attractive wireless alternative to the deployment of expensive fiber-optic links.

About Provigent

Provigent is a fabless semiconductor company aiming to become the leading supplier of SoC solutions for the broadband wireless transmission industry. Provigent financed by leading venture capital companies and private individuals like Dr. Andrew Viterbi, co-founder of QUALCOMM (NASDAQ: QCOM). More information is available on the Web at www.provigent.com or via e-mail at info@provigent.com.

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