Press Release

EtherCAT: Almost 60 million nodes and exponential growth

For the first time since EtherCAT was introduced 20 years ago, the EtherCAT Technology Group (ETG) is publishing node figures. Excluding modular I/O devices, ETG counts 59.1 million nodes, with recent growth being particularly impressive. Since 2014, growth has been exponential, with 18.4 million nodes added in 2022 alone.

These figures include EtherCAT chips sold in a respective year, though this does not include the chips for Bus Terminals. Thus, a modular I/O station counts as a single node, even if it consists of many more EtherCAT Bus Terminals.

"The chip numbers are accurate figures, but there is a certain time lag: not every chip becomes an installed EtherCAT device in the same calendar year", comments Martin Rostan, Executive Director of the EtherCAT Technology Group, on the counting method.

Martin Rostan is also in charge of all EtherCAT licensing, on the behalf of Beckhoff Automation. EtherCAT, similar to CAN, requires only the chip manufacturer license their hardware, the cost of which is included in the purchase of the EtherCAT chips. Beckhoff Automation finances the EtherCAT Technology Group with the chip license income, and membership in the world's largest fieldbus association is free of charge.
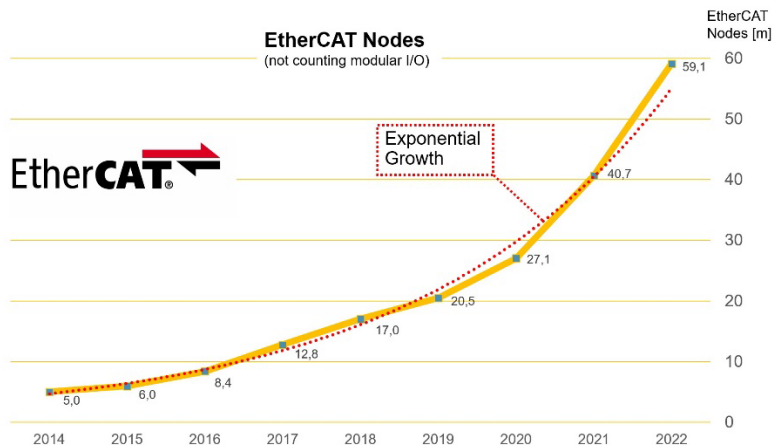
> "Because we don't know the exact unit numbers of FPGA IP core-based implementations, we have held back on publishing node numbers so far," says Martin Rostan. "But the reported unit numbers of the current 12 EtherCAT chip vendors are now so large that any possible fuzziness in estimating FPGA numbers is no longer a factor: they enter the totals at less than 10%. We have also included multiprotocol chips in proportion to the market share of the protocols. Thus, on the one hand, the figures are based on very reliable sources, and on the other hand, they are determined very conservatively: there are probably significantly more EtherCAT devices."

Except for 2019, where EtherCAT unit numbers were also unable to escape the sideways trend of the automation market, growth has been exponential for several years. "Three years ago, we still believed in an upward outlier, but now the trend has solidified: the exponential growth continues," says Rostan. "The Asian market is developing the fastest, especially China. But EtherCAT is also making better and better progress in North America. And in Europe, where EtherCAT has its origins, EtherCAT has been going strong for quite some time."

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Press picture:

Picture caption: In 2022, 18.4 million EtherCAT chips were sold. This brings the total number of EtherCAT nodes - not counting Bus Terminals - to 59.1 million. The growth is exponential.
Link: www.ethercat.org/images/press/etg_022023.jpg

About EtherCAT Technology Group (ETG):
The EtherCAT Technology Group is an organization in which key user companies from various industries and leading automation suppliers join forces to support, promote and advance the EtherCAT technology. With over 7.100 members from 72 countries the EtherCAT Technology Group is the largest fieldbus organization in the world. Founded in November 2003, it is also the fastest growing fieldbus organization.

About EtherCAT®:
EtherCAT is the Industrial Ethernet technology which stands for high-performance, low-cost, easy to use with a flexible topology. It was introduced in 2003 and has been an international IEC standard and a SEMI standard since 2007. EtherCAT is an open technology: anyone can implement or use it.

➔   For further information please see: www.ethercat.org

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