

CAST Releases 100Gbps UDP/IP Core

Lean networking protocol stack gets 512-bit datapath to increase communication speed, offloads UDP/IP functions from processor to improve system performance

Woodcliff Lake, NJ — May 14, 2020 — CAST, Inc. today announced the availability of a new silicon intellectual property core enabling lean networking with the User Datagram Protocol (UDP) Internet Protocol (IP) at bidirectional speeds up to 100Gbps.

The UDP/IP protocol trades off the error resiliency of the common Transmission Control Protocol (TCP) for significantly faster networking with fewer hardware resources and less bandwidth consumption. This makes UDP/IP an excellent choice for applications where receiving most of the data packets on time matters more than receiving every single data packet—such as live video broadcasting—or for applications that employ other mechanisms for avoiding packet loss such as time-aware traffic shaping in Time-Sensitive Networking (TSN) networks or application-level data transport protocols like UDP-based Data Transfer (UDT).

The new **UDPIP-100G core** includes a complete, full-featured UDP/IP hardware stack, with support for related networking standards and functions (such as ARP with cache, IGMP, and VLAN). It operates in stand-alone mode, offloading the demanding task of UDP/IP encapsulation/decapsulation from the system processor while transmitting and receiving data at speeds up to 100Gbps. Easy system integration—with industry-standard interfaces and pre-integration with popular Ethernet MAC cores—plus straightforward run-time configuration and numerous operating options help the UDPIP-100G core significantly reduce typical system design time.

CAST customers have reaped the benefits of UDP/IP since 2011, using these cores for data center acceleration, streaming or bulk data transfers in different types of communication systems and devices, real-time industrial control, and other applications. The well-proven IP and extensive application experience make the UDP/IP cores and support team from CAST one of the lowest-risk options available.

The UDPIP-100G Hardware Protocol Stack core is available now, joining existing 1G and 40G UDP/IP Stacks in CAST's [Internet Protocol Stacks Family](#). These are part of the broad line of leading-edge and standards-based digital IP available from CAST, including compression engines; microcontrollers and processors; automotive interfaces; SoC security modules; and a variety of peripherals, interfaces, and other IP cores. Learn more by visiting www.cast-inc.com, emailing info@cast-inc.com, or calling +1 201.391.8300.

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