

# Design of Multicore-based High Performance Load Distribution System

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**Abstract**— This paper proposes a method of implementing a NIC (Network Interface Card) capable of data processing at 40Gbps. Recently, technologies such as cloud services, mobile, and big data have been developed and more and more traffic is increasing. Therefore, network equipment capable of processing such traffic at high speed is attracting attention. We developed a network card based on the TILE-Gx36 processor, which made it possible to process data at high speed. As a result of our experiments, we confirmed that data transmission and reception are working normally at 40Gbps.

**Keyword**—40Gbps, TILE-Gx, by-pass, implementation, SDNIC



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