Abstract

As billions of transistors can easily getting manufactured on small chips, multiple processing elements are also getting fabricated on these chips. This type of chip manufacturing caught attention of researchers from the domains like Parallel and Distributed Computing, Computer Aided Chip Manufacturing, Computer Design etc. Many researchers tried to utilize the boosted capacity of multiprocessor chips to implement time consuming, bulky, parallel algorithms. A strong communication network, which is reliable, robust and reusable is very much needed to achieve expected performance. This paper proposes a new Gamma Interconnection Network variant, namely NoCGIN, which act as interconnection network for Networks-on-Chip. The paper further gives information about the topology of NoCGIN and a simple routing algorithm for routing packets.

References


40. Tilera Announces the world’s first 100-core processor with the new tile-gx family, Available At: http://goo.gl/K9c85


42. University of Glasgow, “Scientists squeeze more than 1,000 cores on to computer chip.”, Available At: http://goo.gl/KdBBW


Index Terms

Computer Science  Networks

Keywords

Networks-on-chip, Gamma Interconnection Network, Systems-on-chip, Parallel Computing