Fabric Interconnect Networking Software (FIN-S) Embedded Clustering (EC) Package

FIN-S PACKAGE OVERVIEW

Concurrent Technologies Fabric Interconnect Networking Software (FIN-S) is a family of software packages that provides a rich fabric software ecosystem allowing applications on multiple processor boards to communicate with each other. To address different use cases, FIN-S is split into two functional packages: Embedded Clustering (EC) and Device Communication (DCOM). The EC package enables multiple Concurrent Technologies' boards to communicate with each other over a socket interface to provide a clustering solution. The DCOM package enables a point to point communications interface between multiple Concurrent Technologies' boards and third party boards.

FIN-S EC HIGHLIGHTS

- IP socket based communication interface
- Ability to run off-the-shelf OpenDDS and OpenMPI communication middleware
- Support for the latest interconnect fabrics:
  - RapidIO®
  - PCI Express®
- FIN-S DCOM package enables communication:
  - between Concurrent Technologies and 3rd party boards
  - utilizing either RapidIO and PCI Express fabrics
- Available on a range of system architectures:
  - VPX™
  - AMC
- Operating Systems supported:
  - Linux®, Windows® and VxWorks®
  - contact your local sales office for latest operating system support
- Available on range of Concurrent Technologies boards utilizing Intel® and ARM® processors including:
  - Intel® Core™ i7 processors
  - Intel® Atom™ processors
  - NVIDIA® Tegra® K1 processors
- Contact your local sales office for further details

FIN-S EC DESCRIPTION

This datasheet describes the Concurrent Technologies' FINS Embedded Clustering (EC) package. This package provides an open standards based Application Programming Interfaces (APIs) for multiple processor boards to communicate efficiently with each other over an interconnect fabric, enabling development of High Performance Embedded Computing (HPEC) systems. FIN-S EC provides support for the widely accepted IP socket interface, enabling portability and ease of use at application level.

This provides the additional benefits of having the same APIs across multiple operating systems and multiple supported fabrics. High performance computing applications can easily be implemented in the embedded domain using off-the-shelf communication middleware like OpenMPI and OpenDDS. FIN-S EC supports various system architectures including VPX™ and AMC along with their associated interconnect fabrics.

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SW FN2/0xx: FIN-S EC Package

- Fabric Interconnect Networking Software (FIN-S) Embedded Clustering (EC) package:
  - → see Figure 1 for an example of FIN-S EC

IP Socket based communication interface

- Ethernet interface emulation over interconnect fabric
- communication based on standard socket library API
- true point to point communication between communicating nodes
- use of standard off the shelf network applications over supported fabric
- use of standard off the shelf communication middleware like OpenDDS and OpenMPI
- support for standard IP features, including multicast
- operating system, hardware and fabric abstraction insulating application from technology change
- ability to get runtime statistics of the system

Interconnect Fabrics Supported

- support for the latest interconnect fabrics:
  - → PCI Express® (PCIe®)
  - → RapidIO®
  - → contact your local sales office for latest fabrics supported

System Architectures Supported

- available on various system architectures, e.g.:
  - → VPX™
  - → AMC

Software Supported

- support for Linux®, Windows® and VxWorks®:
  - → contact your local sales office for the latest operating system support

Concurrent Technologies Boards

- available on a range of Concurrent Technologies boards utilizing Intel® and ARM processors, e.g.:
  - → Intel® Core™ i7 processors
  - → Intel® Atom™ processors
  - → NVIDIA® Tegra® K1 processors
  - → contact your local sales office for the latest boards available

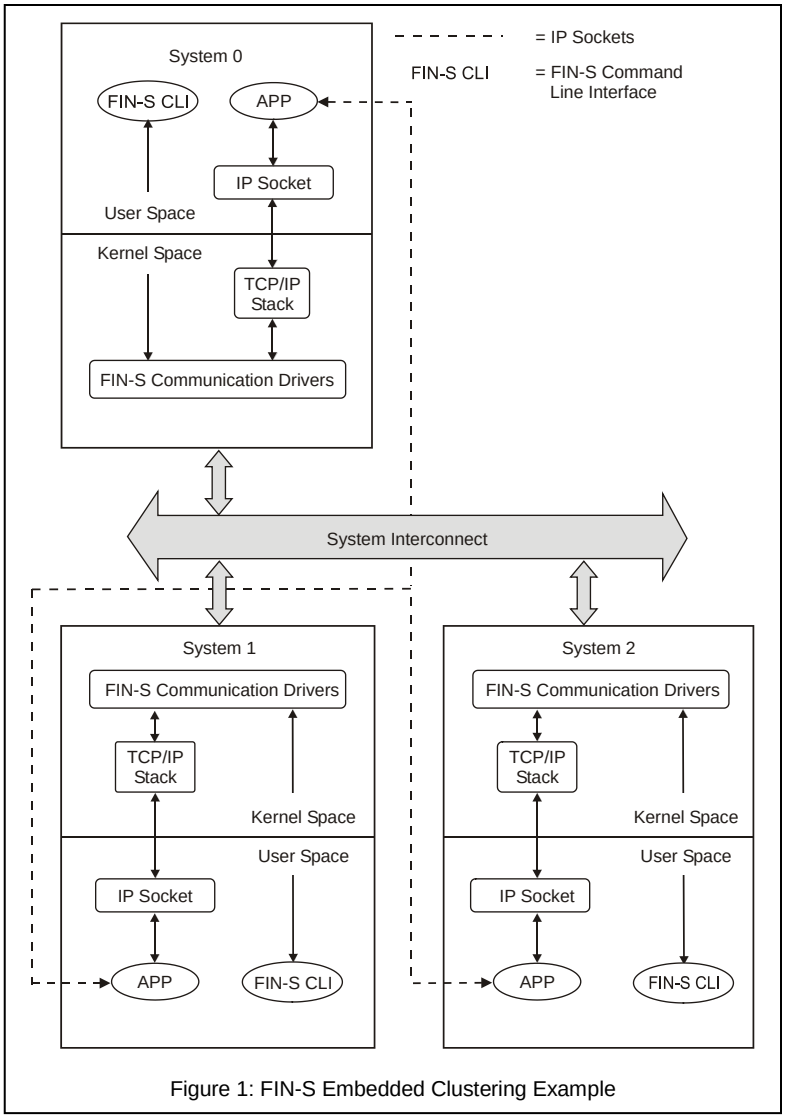

Figure 1: FIN-S Embedded Clustering Example

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