TACHYON*
Fibre Channel
Interface Controller

Product Overview

HPFC-5000

Description

TACHYON is a fundamental building block compatible with Hewlett-Packard's Fibre Channel solution which includes interface controllers, physical link modules, adapters, switches and disk drives.

The TACHYON architecture supports both networking and mass storage connections to provide a low cost, high performance solution with low host overhead.

Features

- Single chip Fibre Channel interface (no I/O processor required)
- Supports 1062.5, 531, and 266 MBaud links
- Supports 3 topologies; direct connect, fabric, and Fibre Channel Arbitrated Loop (FC-AL)
- Supports Fibre Channel Class 1, 2, and 3 Services
- Supports up to 2-Kbyte frame payload for all classes of service
- Sequence segmentation/ reassembly in hardware

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* TACHYON (tak' - ē - än)

1. a subatomic particle that only exists at speeds faster than the speed of light.
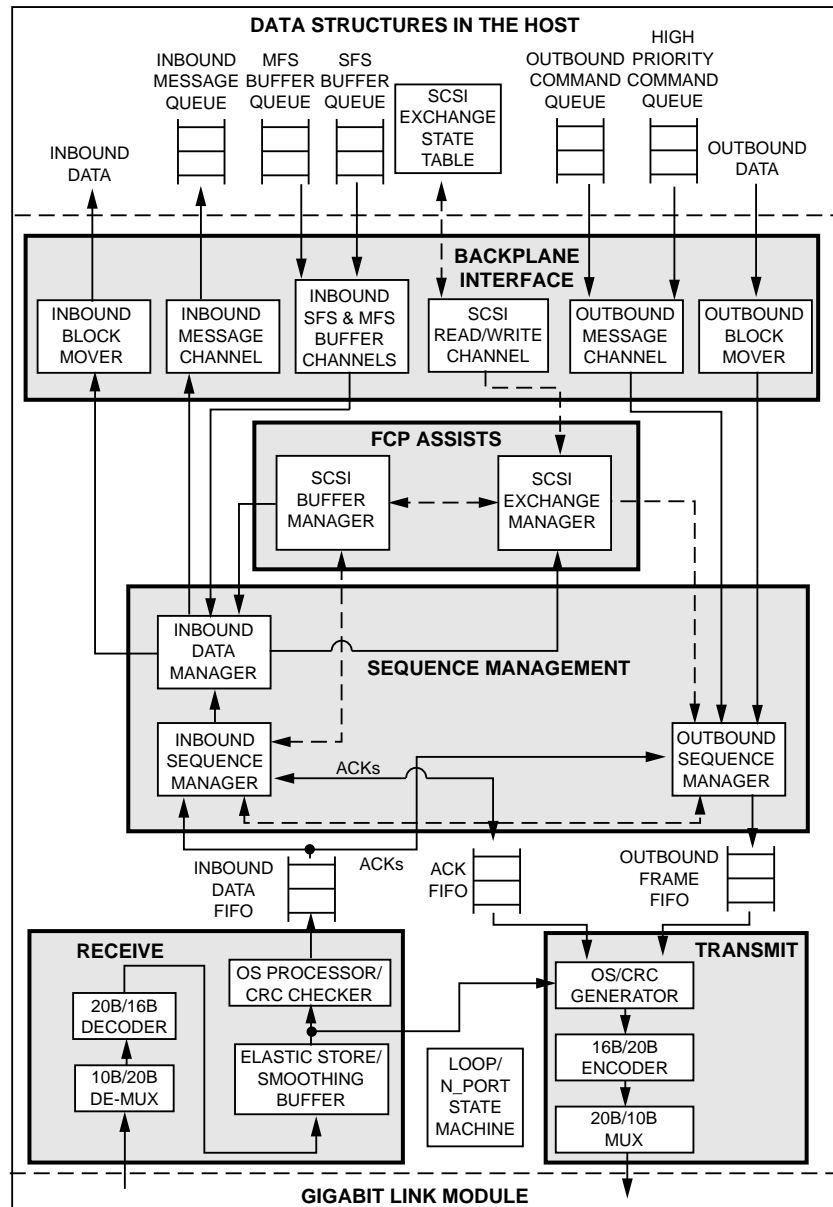2. HP's Fibre Channel Interface chip.

Figure 1. TACHYON Internal Block Diagram

Features (continued)

- Automatic ACK frame generation and processing
- On-chip support of FCP for SCSI Initiators and Targets
- Supports up to 16,384 concurrent SCSI I/O transactions
- Compliant with Internet MIB-II network management
- Direct interface to industry standard 10 and 20-bit Gigabit Link Modules (GLM)
- Hardware assists for TCP/UDP/IP networking
- Parity protection on internal data path
- Eight internal DMA channels
- Full duplex internal architecture that allows TACHYON to process inbound and outbound data simultaneously

Specifications

System Clock Frequency:
  24-40 MHz backplane operation
Operating Temperature:
  0-50°C @ 0 m/s airflow,
  0-70°C @ 1.5 m/s airflow
Testability:
  Full internal scan path. IEEE Standard 1149.1 Boundary Scan
Packaging:
  208-pin metal quad flat pack
Standards:
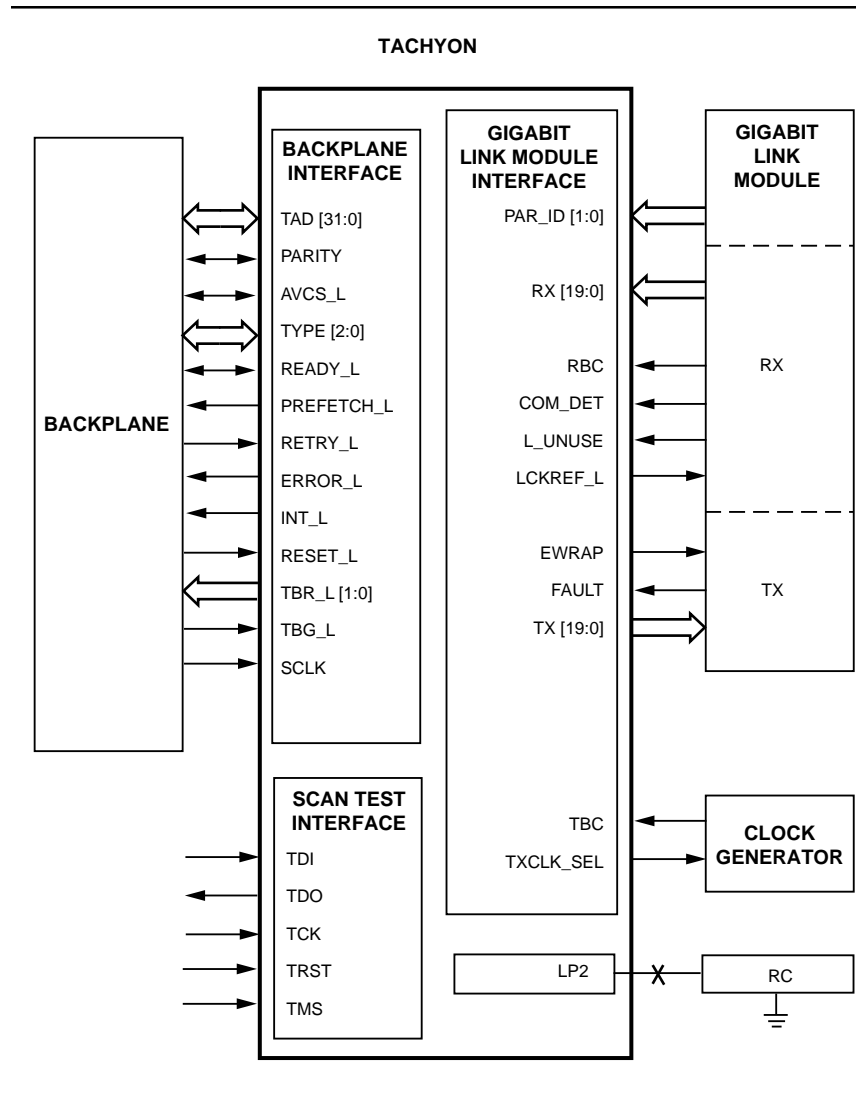 Intended to be compliant with ANSI standards and FCSI/FCA profile definitions
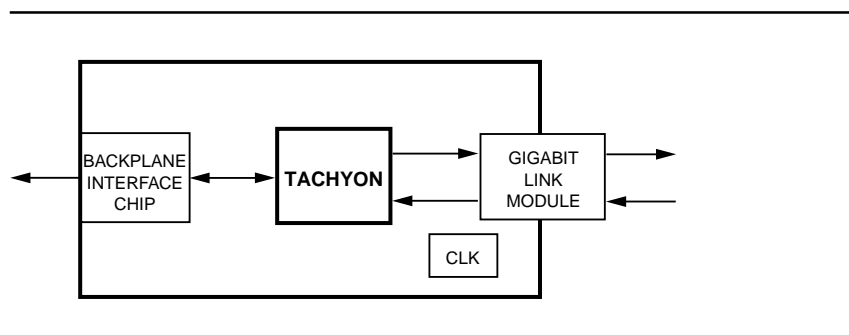

Figure 3. TACHYON Pin-out Block Diagram

Figure 2. System Adapter Card Block Diagram