TuffServ® 641 Mission Download Station

AMPEX

Product Overview

The Ampex TuffServ TS641 is an integrated Linux-based system tailored for high-speed downloading of data from the Removable storage/Array (RSA) Memory Module from the TuffServ TS640 Rugged airborne NAS Server Recorder. The TS641 can also be used for the common RSAs also used in the Model TS645 Ground Rack Mount Server/Recorder (ground version of the TS640). The TS641 contains no local data storage but transfers data from the RSA Module out thru the 40GigE interface connector located on the backside of the chassis. A user software GUI is supplied with the system for easy command and control for download of the RSA data.
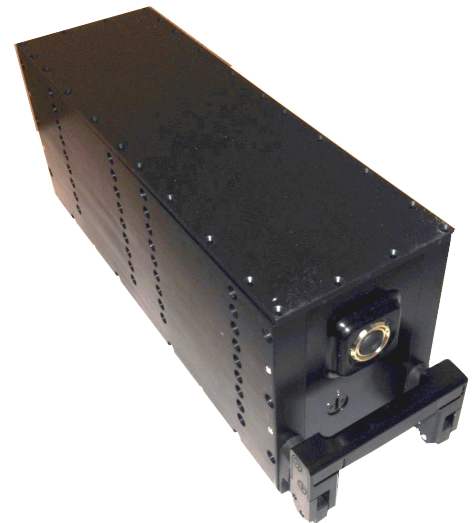
General

The Ampex TS641 marries a server-class rack-mountable PC with the RSA "receiver" for the TS640/645 memory module with full-speed interface (PCI Express 3.0 c 8 link) and a 40 Gigabit Ethernet network interface. It supports network protocols to read and write data from both Linux NFS and Windows hosts and support of the TuffServ management software interface to erase and reconstruct the RSA.

The unit is rack-mountable and is a custom 3U chassis with depth less than 26". It allows for attaching to rack and included rack mount slide kit. The system comes with Linux RedHat 7.X installed. System control is via a 1000Base-T GigE Interface. The unit is an open system that can allow user written software to be installed or used as a "data loader" to put information on a RSA storage module.

Features

- *Download Station for TS640 NAS Recorder RSA Solid State Memory Modules (2 to 80 TB)*

- *High Speed internal interface from RSA to controller*

- *40GigE Pipe Interface connector on back side Download to user Network/ Server/RAID Farm)*

- *19" Rack Mountable Unit*

- *Linux RedHat 7.X Software Operating System*

- *Downloads data off RSA at 1,000+Mbyte/second*

TS640/TS645 Removable Storage Array to 80TBytes
Dimensions: 2.77"W x 3.39"H x 10.5"D

Specifications

CPU:
Intel Xeon E3-1270VS 4 Core Processor
16GB Memory DDR4 at 2133MHz ECC Unbuffered RAM (PC4-17000)

Storage:
TS641 has a removable SSD for the Linux operating system and general user configurations. The removal of the SSD may be via the front or rear panel. The SSD in its "removed" state may be simply a bare drive. Once inserted, the SSD will be locked in place so that it will not vibrate lose (i.e. in transit). The capacity of the SSD is 300GB or greater.

Connectivity-Networking:
The 40Gigabit Ethernet Interface allows for different cable media types, including 40GBase-SR4 and 40GBase-CR4 by the use of QSFP+ transceivers. A point to point connection kit is available as an option. The kit consists of a 40Gigabit Ethernet network controller card and a fixed length cable that a user can install in their system.

Video and Other I/O:
The unit has a VGA and/or DVI video interface located at the rear.

Physical Specifications

Dimensions: 19" wide and 3U height
Weight: Approximately 35 lbs
Power Supply: 120V - 240VAC
Power Consumption: 600W (TBD)

Available Models and Options

Part Number 6410000-010   TS641 Mission Download Station

Optional rugged transit case is available - contact your Ampex representative.

Point to Point Connection Kit - PN to be assigned.

TS641 Specifications subject to change. Please contact your Ampex representative.

The TuffServ 640 Family

The TS 641 is not just a product: it's a product family. There is a complete range of systems tailored to meet different applications and requirements:

- TuffServ 640: The flagship airborne recorder, offering dual 10 gigabit/second Ethernet interfaces over optical fiber. A compact, "½ ATR" (4MCU) airborne package.
- TuffServ 640 options: additional 10 gig E interfaces, MIL-STD-1553 interfaces, GPS, additional gigabit Ethernet interfaces.
- TuffServ 640FP: A Serial Front Panel Data Port (sFPDP, VITA 17.1) recorder, based on the TS 640 with the addition of 2 or 4 interfaces running at up to 2.5 Gbaud each. Contact Ampex for other sFPDP variations (e.g. 4.25 Gbaud)
- TuffServ 641: A download station for ingesting data into a ground-based data center. Configured as a 19 inch, 3U rack-mount system, a 40 gigabit/sec Ethernet links the TS 641 unit with processing and data archiving systems, creating a clean separation between the data collection and data processing parts of a mission. Accepts the RSA-2 storage module.
- Tuffserv 645: A rack-mounted, lab version of the TS 640, it is a 3U high, 19in rack package like the TS 641, but using the same board design as used by the airborne TS 640 (including the RSA-2), making it an ideal lab support and/or development system.
- TuffServ 645FP: The sFPDP version of the TS 640FP, perfect for developing systems that will transfer to an airborne configuration.