TuffServ® 480v2 Airborne Network Server

AMPEX

Features

- Ruggedized NAS Computer / Server / Recorder; fully compatible with the TS 480
- Hot-Swappable Removable Solid State Storage Array; supports legacy RSAs and new RSA
- Multiple Interfaces Gigabit Ethernet; Optical10 Gigabit Ethernet, sFPDP, and custom
- NFS, CIFS/SMB Network File Systems
- Ampex Common Compute Environment on a Certified Operating Systems Protection Profile platform
- GUI and Web Interface for Administration and Environmental Monitoring
- Conduction-cooled Flight-proven Package
- Compact: 5.25" H x 7.25" W x 10" D

TuffServ 480v2 Airborne Server

Product Description

The TuffServ® 480v2 is a P3I update to the Model TS 480. It offers hardware and software compatibility to the TS 480 with increased performance to 500MB/second (800MB/s Peak), increased storage, and modern processor choices for the user. It functions as a ruggedized computer, a file server, or, with suitable application software, as a recorder. It can also be configured as a network-attached block-storage device using the iSCSI protocol. The unit supports the Ampex BLUE line of Cyber Security and Machine Learning software for Airborne and rugged applications.

Typical Applications

- *Network Storage and Processing for Networked Systems*
- *Cyber Security/Machine Learning Applications*
- *Mission and Flight Testing*
- *Airborne and Rugged Ground Units; Video Radar; EO/IR Storage*
- *IRIG106 Chapter10/11 Recording*

The airborne server provides a large removable storage capacity which support the original TS 480 RSA and a new RSA with increased performance and storage to 16TB.

The standard system is delivered with the ACCE (Ampex Common Compute Environment) Linux Red Hat Common Criteria Security Certified Operating System. This provides a wide range of network services out of the box, including NFS, SMB/CIFS, and iSCSI, as well as routing and bridging capabilities between the network interfaces. As a completely open system, based on the industry standard architecture, there is a wealth of additional open-source or commercial software which may be installed and deployed, including databases, multimedia packages and management tools. The standard system can be controlled and administered with a web browser or a terminal emulator and a traditional command line interface. Direct access is also available via the service ports.
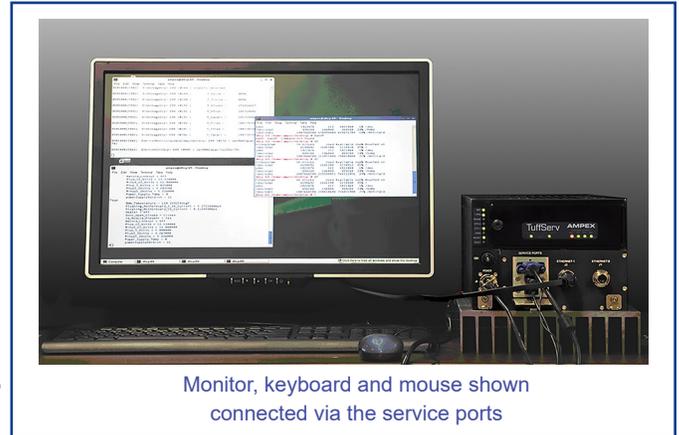

Removable Storage Module
Sixteen Terabytes of Solid State Array Storage
Canister is 5.5" x 1.8" x 9" and weighs just 5 lbs.

Specifications[1]

System

CPU:	5th Generation Intel®Core™ i3 or i7
Memory:	4GB or 8GB DDR3L 8GB Dedicated flash boot device
Network Interfaces:	Two 1000Base-T Gigabit Ethernets
Service Ports:	Two USB, VGA
Removable Storage:	Array Solid State Memory to 16TB
	Flash type: High Density standard
	Options: Emergency erase, "data at rest"
	protection via 256 bit AES
Network Storage:	NFS, CIFS/SMB
Operating system:	Linux Red Hat 7 plus ACCE Framework
Configuration:	Browser based administration tool, Linux command line
Interface Options:	Ethernet (Copper, Optical, 1 gigabit/s and 10 gigabit/s), 2 or 4 Channel sFPDP, mini-PCIe and XMC sites for expansion (GPS, 1553 etc)

Monitor, keyboard and mouse shown connected via the service ports

Performance

Internal Data Rate:	500 MByte/sec writes (peak 800 Mbyte/sec),
Network Data Rate:	100 MByte/sec typical with CIFS per Ethernet
	Actual performance will vary with file access protocols and patterns
Storage Capacity:	RSA capacities from 1TB to 16TB

Power

Power input:	28VDC per MIL-STD-704F
Power dissipation:	70 W

Mechanical

Dimensions:	5.25" H x 7.25" W x 10" D (133mm x 184mm x 254mm)
Weight (System):	17.5 lbs (7.9 kg) – with 16TB removable storage Array installed
	3.8 lbs (1.7 kg) – 16TB removable storage array

Environmental

Temperature:	Industrial Extended Temp Range
	Operating: -40C to +71C
	Non operating: -50º C to +85º C
Humidity:	0% to 100% RH
Operational Vibration:	10 grms
Operational Shock:	20 g, half sine, 11ms
EMI Compatibility:	MIL-STD-461E

[1] Specifications subject to change without notice.