

## TuffServ® Network File Server Series

### TuffServ® 645 Rugged 10GigE Server

The TuffServ 645 recorder/server is a ground rack mount unit designed similar to the airborne systems with electronics housed in a rugged convection cooled chassis. Available with multiple interfaces: GigE, 10GigE, sFPDP, etc. The data path is optimized for high-speed data transactions and fully software compatible to other TuffServ NAS/NFS models. The RSA (Removable Storage Array) is removable and hot-swappable and is the same array used in its Airborne version, the TS640.



### TuffServ® 485 Rugged Ground System

Using the same circuit board set as the TS480 systems, this 19-inch rack-mounted unit delivers the same performance standards as our airborne systems. The TuffServ 485 is configured for convection cooling and includes auto-switching 115/220 VAC power supplies to support typical ground and lab applications.



## TuffServ® 481 and 641 Ground Systems

To complement the rugged members of the TS480 and TS640 family, Ampex offers the TS481 (for 480 family) and TS641 (for 640 10GigE/high-bandwidth unit) download stations. Intended for use in data center environments, the TS481/641 systems provide an industry-standard server with a receiver port for the removable storage arrays used throughout the product family. As a full-fledged server, the systems can do duty both as a processing station in its own right and/or a bridge between the acquisition



units and ground-based data processing and archive infrastructures. Since the unit platform uses industry-standard components, variations offering features such as a range of removable storage and local storage arrays are available. Contact Ampex with specific requirements.

## TuffServ® Network File Server Series

Field-Proven, with Lightning-Fast Performance and Scalable Architecture



### Rugged NAS for EXTREME Environments

- Network Storage & Processing for Networked Systems
- Airborne & Mobile Data Collection
- Radar & Video Recording/File Server
- Flight & Vehicle Testing and Instrumentation
- Mapping & Earth Resource Data Collection

#### ABOUT AMPEX

Ampex designs, develops, and manufactures their line of IRIG106 Chapter 10 solid-state recorder systems, network file servers, and family of mission recorders at their Hayward, California facilities in Silicon Valley.



Ampex Data Systems Corporation is AS 9100C / ISO 9001:2008 Certified

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Ampex is a US Owned and Operated; AS9100/ISO 9001 certified small business.

TuffServ® is a registered trademark of Ampex Data Systems.



# TuffServ® Network File Server Series

## Applications:

The rugged and feature-rich design of the TuffServ series makes it ideal for use in a wide range of data management and recording configurations and harsh environments. Typical applications include:

- Network Storage & Processing for Networked Systems
- Airborne & Mobile Data Collection
- Radar & Video Recording/File Server
- Flight & Vehicle Testing and Instrumentation
- Mapping & Earth Resource Data Collection

Welcome to the Ampex TuffServ® file server series. These computer/recorder/server systems are tailored to perform in extreme airborne, ground and space environments to support the full spectrum of commercial and military operations to include ISR and flight test. United by a common architecture, today's TuffServ family provides removable storage capacities up to 100TB and a range of interfaces and software capabilities.

## TuffServ® 640 Ultra-Wideband Rugged File / Application Server



The newest, most-advanced TuffServ ever, the TS640 represents the future of airborne network storage arrays. Leveraging the common architecture found throughout the TuffServ series, the TS640 advances performance and scalability to an entirely new level utilizing a standard ½ ATR package. Blazing read/write speeds of up to 1GB/sec, 100TB of removable solid-state memory, and dual 10Gbit optical Ethernet ports offer unparalleled performance for a wide variety of airborne and mobile applications.

## Features:

- Up to 1GB/sec read/write, 1000MB+ sustained
- Up to 100TB solid-state removable storage
- Optional dual 10Gbit optical Ethernet
- Flexible, Multi-I/O capability: sFPDP, LVDS, & custom-developed interfaces
- FIPS 140-2
- ACCE Ampex Common Compute Environment Software System runs on all platforms

## TuffServ® 480v2 Rugged File / Application Server



The TuffServ 480 airborne server is a rugged, general-purpose computing platform packaged for airborne and mobile applications. It functions as a ruggedized computer, a file server, or as a network recorder. It can also be configured as a network-attached, block-storage device using the iSCSI protocol.

## TuffServ® 480v2FP Rugged File / Application Server



Often used in radar development and other high-volume applications, the TuffServ 480FP provides two low-latency 2.5Gbit/sec sFPDP fiber optic channels, one Gigabit Ethernet port — plus service/power ports.

## TuffServ® 540 Rugged Recorder / Server



Designed with a scalable architecture consistent with the Ampex Common Compute Environment™ (ACCE), the recorder / reproducer supports a wide range of applications. With its compact size, low weight, and I/O options, it can be used wherever it is needed.

## TuffServ® Rackmount Solutions

TuffServ Rackmount Solutions (TRS) bring Ampex's unrivaled experience with rugged, conduction-cooled airborne systems to the rack-mount system arena! TRS addresses three key issues encountered when attempting to take products designed for data center use into aerospace environments: cooling, removable storage and the management of internal cables in high-vibration environments.



## TuffCORD™ Mission Data Recorder

*Rugged, Efficient Network Recorder, File Server and Data Loader*

Built for tough environments, the TuffCORD goes wherever operators need to go, and delivers consistent, reliable performance in challenging conditions. The TuffCORD has been designed from the ground up to provide cybersecurity capabilities that meet the real-world needs of operators.



## TuffServ® 282 Rugged File / Application Server

The Ampex TuffServ 282 is a rugged, general-purpose computing platform and file server for panel-mounted applications in airborne and mobile systems. The TS282 provides both a twin SSD removable memory module for high-performance, high-capacity use and a RASP for cost-effective, rugged storage — each with a USB 3.0 download interface. I/O is provided by up to 4 Gigabit Ethernet ports and a PMC/XMC site. A front panel display and controls are provided for HMI feedback.

