

# TuffServ® 282 Network File Server/Recorder

# AMPEX

## The TuffServ® 282 File Server (TS 282) is a Rugged, High Performance File Server for Challenging Manned Environments.

Built for tough environments, the TS 282 can go wherever operators need to go, and deliver consistent, reliable performance in challenging conditions.

### Designed for Operators

The TS 282 has been designed from the ground up to meet the real-world needs of operators, with a features such as built-in power hold up, a front-panel display to help identify and resolve anomalies, two media types to allow for different data sources, and service features to facilitate maintenance.

### Two Types of Media

The two doors on the front of the TS 282 provide access to two types of removable media: the RSM, a high-performance, high-capacity module for the primary storage, and the RASP, an economical lower-capacity module designed for applications such as flight plans, updates or maintenance data; both media types can be accessed simultaneously. Each type of media supports a USB 3.0 interface providing convenient I/O access when removed from the TS 282. Both of the media types are based on commodity storage, which leverages the capacities, resilience and economies of scale of standard solid-state storage devices. Also available is a desktop docking station unit for integration into a more permanent data transfer station, attaching to the station using a USB 3.0.



### Features

- *More than 200MB/s sustained read or write throughput*
- *6 Second Full Load Power Holdup*
- *Standard Dual Gigabit Ethernet Interfaces*
- *Optional Additional Ethernet and/or Fibre Channel Network Interfaces*
- *Two Removable Memory Modules*
- *Memory Module Capacities to 5TB (RSM), 512GB (RASP)*
- *Built for Rugged, MIL-STD-810 environments with MIL-STD power and connectors*

### Power, Display and Diagnostics

To support environments where the vehicle power may be subject to interruptions, the TS 282 includes a large capacitor bank that allows the system to continue operating for a short period without external power. In the default configuration, the system will initiate a power-fail shutdown 1000 milliseconds after external power fails, and has enough stored energy to function for up 6 seconds in total, ensuring that applications and data in transit is safely written to permanent storage before the system shuts off.

And to assist operators in making “Go/No Go” decisions, the TS 282 has a dimmable front-panel display that provides status and BIT exception condition information to the operator. For further troubleshooting and maintenance, the system offers a dedicated, front-accessible Ethernet interface that can be accessed with the system installed in a vehicle with the operational cables attached.

### Expansion and Options

The TS 282 is equipped with two expansion sites, which can be used to provide additional network interfaces or additional interface types; Fibre Channel, Ethernet network switches, MIL-STD-1553, Serial FPDP are all possibilities. Contact Ampex for more information.



# AMPEX TuffServ® 282 Network File Server

## Specifications<sup>1</sup>

### System

CPU Subsystem:	Intel SL9400 Core 2 Duo, 1.86GHz 6MB Cache, 2GB Dual Channel DDR3 at 800MHz (PC3-6400) Write-protected flash boot device and separate SD card log device
Network Interfaces:	Two 1000Base-T Gigabit Ethernet; One 10/100 Diagnostic NIC
Optional Interfaces:	Additional Gigabit Ethernet ports, IP over Fibre Channel, others
Removable Storage:	Primary Removable Storage Media, and secondary Rugged Application Storage Pack (RASP)
Network Protocols:	NFSv4, NFSv3, CIFS/SMB, FTP, TCP
Operating system:	Red Hat Linux (STIG compliant)



**TuffServ 282**

(Showing diagnostic network port)

### Performance

Internal Data Rate:	300 MByte/sec (sustained, to RSM)
NFS Data Rate:	200 MByte/sec sustained (read or write)
Storage Capacity:	RSM: up to 5TB total (with two 2.5TB solid state drive modules) RASP: up to 512GB total (single solid state drive module)

### Power

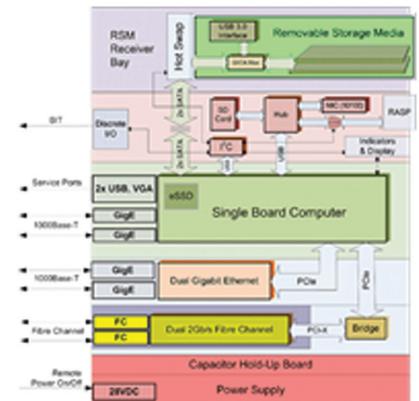
Power:	28VDC per MIL-STD-704A with under/over voltage protection
Dissipation (Full Load):	41W

### Mechanical

Dimensions:	9" H x 4.8" W x 11.0" D (229mm x 122mm x 279mm), incl. handles
Mounting:	Panel mount (12x standard "Quarter Turn" fasteners)
Weight (System):	14.6lbs (6.6Kg)

### Environmental

Temperature:	Operating (Extended Range) -40°C to +55°C Non-operating: -40°C to +85°C
Humidity:	0% to 95% RH (MIL-STD-810E, Procedure III)
Vibration:	4.6grms (active) / 9.8grms (endurance), MIL-STD-810E
Shock:	20g (half sine, 11ms), MIL-STD-810E
EMI Compatibility:	MIL-STD-461F



**TuffServ 282FN Block Diagram**

## TuffServ 282 Ordering Configurations and Options

The TS 282 is available in several pre-defined configurations; additional options are also available:

- TuffServ 282: the baseline model, with two gigabit Ethernet interfaces.
- TuffServ 282HC: additional two gigabit Ethernet interfaces (total 4), plus installed PMC carrier for industry standard mezzanine interface cards.
- TuffServ 282FN: as the TS 282HC with additional dual IPFC (IP over Fibre Channel) interfaces supporting either 1Gb/s or 2Gb/s copper connections (uses PMC site).
- RSM Media: available with one or two standard solid-state storage devices, offering usable capacities from 256GB up to 5TB.
- RASP Media: available using one small form factor solid-state storage device, offering usable capacities from 4GB to 512GB.
- Docking Station: a desktop unit providing power and receiver bays for both the RSM and RASP media types simultaneously. Attaches to industry standard systems using USB 3.0.

<sup>1</sup> Specifications subject to change without notice.

Amplex Data Systems Corporation  
A Delta Information Systems company

www.ampex.com

26460 Corporate Ave., Hayward, CA 94545, USA

E-mail: sales@ampex.com

Fax: +1-650-367-3106

Tel: 1-800-752-7590

(+1-650-367-2011)

Amplex is a US Owned and Operated; AS9100C/ISO 9001:2008 certified small business.