ABSTRACT

ARCHITECTURE FOR MULTIPLE DISK FILE ASSEMBLIES ON A COMMON MOUNTING FRAME

A multiple disk drive assembly (10) in a 5 1/4 inch disk drive form factor having two 3 1/2 inch disk drive form factor head-disk assemblies (HDA) (11, 13) internally mounted on a rigid frame (15) and accessible via a common industry-standard interface connector (55) is provided. Both the interface and power connectors (55 and 53 respectively) and the frame mounting hole patterns are industry standard to provide interchangeability with 5 1/4 inch form factor disk drives provided by manufacturers for use in computer systems. A single electronics controller board (17) is shared by both HDAs and is mounted on the bottom side of the frame below the HDAs. The controller board may implement SCSI or IPI interfaces in either differential or single-ended versions. A spring vibration damper (47) is utilized to minimize external vibration and shock effects on the HDAs and also to minimize the effects of vibration internally generated by one HDA on the adjacent HDA. The assembly is fully enclosed with metal top and bottom covers (19 and 21 respectively) to provide separate enclosures for the HDAs and the controller board cooling and to provide EMC and RFI protection.

Fig. 1