Chapter 4: Raid Support; Raid Configurations; Raid Definitions - Asus ROG STRIX H370-F GAMING User Manual

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RAID Support

4.1

RAID configurations

The motherboard supports Intel
RAID 5, and RAID 10 solution.
If you want to install a Windows
set, you have to create a RAID driver disk and load the RAID driver during OS installation.

Refer to section 4.2 Creating a RAID driver disk for details.
The screenshots shown in this section are for reference purposes only.

4.1.1

RAID definitions

RAID 0 (Data striping) optimizes two identical hard disk drives to read and write data in
parallel, interleaved stacks. Two hard disks perform the same work as a single drive but
at a
sustained data transfer rate, double that of a single disk alone, thus improving data
access
and storage. Use of two new identical hard disk drives is required for this setup.
RAID 1 (Data mirroring) copies and maintains an identical image of data from one drive
to
a second drive. If one drive fails, the disk array management software directs all
applications
to the surviving drive as it contains a complete copy of the data in the other drive. This RAID
configuration provides data protection and increases fault tolerance to the entire
system. Use
two new drives or use an existing drive and a new drive for this setup. The new drive must
be
of the same size or larger than the existing drive.
RAID 5 strips both data and parity information across three or more hard disk drives.
Among
the advantages of RAID 5 configuration include better HDD performance, fault
tolerance, and
higher storage capacity. The RAID 5 configuration is best suited for transaction
processing,
relational database applications, enterprise resource planning, and other business
systems.
Use a minimum of three identical hard disk drives for this setup.
RAID 10 is data striping and data mirroring combined without parity (redundancy data)
having
to be calculated and written. With the RAID 10 configuration you get all the benefits of
both
RAID 0 and RAID 1 configurations. Use four new hard disk drives or use an existing
drive
and three new drives for this setup.
ROG STRIX H370-F GAMING
Rapid Storage Technology enterprise with RAID 0, RAID 1,
®

operating system to a hard disk drive included in a RAID

®

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4-1

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