Maths

Given $\begin{array}{l} \textit{block size} = 4K \\ \textit{block bitmap} = 1\,\textit{blk} \end{array}$, then

$$\textit{blocks per group} = 8\,\textit{bits} \times 4K = 32K$$

How large is a group?

$$\textit{group size} = 32K \times 4K = 128\,M$$

How many block groups are there?

$$\approx \frac{\textit{partition size}}{\textit{group size}} = \frac{\textit{partition size}}{128M}$$

How many files can I have in max?

$$\approx \frac{\textit{partition size}}{\textit{block size}} = \frac{\textit{partition size}}{4K}$$