



block-size = 1024 bytes
sect-size = 512 bytes

$$LBA = pt_start_sect + 1024 / sect_size (512)$$

Super-block

| |
|------------------|
| blocks-num |
| blocks-per-group |
| inodes-num |
| inodes-per-group |
| : |

$$groups-num = \frac{blocks-num - 1}{blocks-per-group} + 1$$

group descriptors

| |
|-------------------|
| block-group-num 0 |
| block-group-num 1 |
| block-group-num 2 |
| : |

group-descriptor-table

| |
|--|
| block-bitmap |
| inode-bitmap |
| inode-table/blk-size (start addr of inode-tb and of inodenum=12) |
| : |

$$\begin{cases} size = groups-num * size\ of\ (grp-descriptor-table) \\ LBA = pt_start_sect + 2048 / sect_size \end{cases}$$

block-size = 1024 bytes

| | direct | in | double | triple |
|-----------------|--------|-------|------------------|------------------|
| block-num | 12 | 256 | 256 ² | 256 ³ |
| Data-block-size | 12KB | 256KB | 64KB | 16TB |

给一个 inodes-num, 找到其 start-address

inode 12 开始

$$group-index = \frac{inode-num - 1}{inodes-per-group}$$

$$inode-index = (inode-num - 1) \% inodes-per-group$$

dir-entry (in data block, i_block[0])

inode (128 bytes)

| | |
|----------------------------|--------------|
| i-mode | i-owner-info |
| i-size | |
| direct_block [0] | |
| direct_block [1] | |
| direct_block [11] | |
| indirect_block [12] | |
| double_indirect_block [13] | |
| double_indirect_block [14] | |
| : | |

data block

data block

data block

data block

data block

| |
|--------------------|
| inode-num |
| rec-len name-len |
| name [255] |