# \*.OSD File Memory Layout

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| **Part** | **Data structure** | **Count** | **Unit**  **size** |
| Scene Header | struct \_osd\_scene\_hw {  u16 width, height;  u32 ram\_offset;  u8 palette\_data\_size;  u8 ingredient\_data\_size;  u8 window\_data\_size;  u8 glyph\_header\_size;  u8 palette\_count;  u8 window\_count;  u16 ingredient\_count;  char title[12]; //3 bytes  u16 timer\_ms; //0 means no timer  u16 glyph\_count;  }; | 1 | 32B |
| Palettes Header | struct \_osd\_palette\_hw {  u8 pixel\_format;  u8 pixel\_bits;  u16 entry\_count;  u32 luts\_addr;  }; | palette\_count | 20B |
| Ingredients Header | struct \_osd\_ingredient\_hw {  u8 type;  u8 palette\_index;  u16 flags;  union {  osd\_rectangle\_hw rectangle;  osd\_line\_hw line;  osd\_bitmap\_hw bitmap;  osd\_character\_hw character;  osd\_label\_hw label;  } data;  }; | ingredient\_count | 16B |
| Window header | struct \_osd\_window\_hw {  u8 palette\_index;  u8 visible;  u8 alpha;  u8 z\_order;  u16 x, y;  u16 width, height;  u32 block\_count;  u32 blocks\_addr;  }; | window\_count | 16B |
| Glyph binary | struct \_osd\_glyph {  u8 left, top;  u8 width, height;  u16 char\_code;  u8 font\_id;  u8 font\_size;  u8 pitch;  u8 advance\_x;  u16 data\_size:15;  u16 monochrome:1;  };  u8 glyph\_data[data\_size]; | variant | 12 + data\_size |
| Palette binary | binary | 4 | entry\_count |
| Ingredient binary | binary | variant | Depends on type |
| Window binary | struct \_osd\_block {  u16 visible: 1;  u16 reserved: 15;  u16 ingredient\_index;  u16 x;  u16 y;  }; | block\_count | 4 |