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```
#ifndef _FDT_H
```

```
#define _FDT_H
```

```
/*
```

```
* libfdt - Flat Device Tree manipulation
```

```
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```

```
* Copyright 2012 Kim Phillips, Freescale Semiconductor.
```

```
*
```

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```
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```

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/*
```

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```

```
*/
```

```
#ifndef __ASSEMBLY__
```

```
#include <libfdt_env.h>
```

```
struct fdt_header {  
    fdt32_t magic; /* magic word FDT_MAGIC */  
    fdt32_t totalsize; /* total size of DT block */  
    fdt32_t off_dt_struct; /* offset to structure */  
    fdt32_t off_dt_strings; /* offset to strings */  
    fdt32_t off_mem_rsvmap; /* offset to memory reserve map */  
    fdt32_t version; /* format version */  
    fdt32_t last_comp_version; /* last compatible version */
```

```
/* version 2 fields below */
```

```
    fdt32_t boot_cpuid_phys; /* Which physical CPU id we're  
        booting on */
```

```
/* version 3 fields below */
```

```
    fdt32_t size_dt_strings; /* size of the strings block */
```

```
/* version 17 fields below */
```

```
    fdt32_t size_dt_struct; /* size of the structure block */
```

```
};
```

```
struct fdt_reserve_entry {
```

```
    fdt64_t address;
```

```
    fdt64_t size;
```

```
};
```

```
struct fdt_node_header {
```

```
    fdt32_t tag;
```

```
    char name[];
```

```
};
```

```

struct fdt_property {
    fdt32_t tag;
    fdt32_t len;
    fdt32_t nameoff;
    char data[];
};

#endif /* !__ASSEMBLY */

#define FDT_MAGIC 0xd00dfeed /* 4: version, 4: total size */
#define FDT_TAGSIZE sizeof(fdt32_t)

#define FDT_BEGIN_NODE 0x1 /* Start node: full name */
#define FDT_END_NODE 0x2 /* End node */
#define FDT_PROP 0x3 /* Property: name off,
    size, content */
#define FDT_NOP 0x4 /* nop */
#define FDT_END 0x9

#define FDT_V1_SIZE (7*sizeof(fdt32_t))
#define FDT_V2_SIZE (FDT_V1_SIZE + sizeof(fdt32_t))
#define FDT_V3_SIZE (FDT_V2_SIZE + sizeof(fdt32_t))
#define FDT_V16_SIZE FDT_V3_SIZE
#define FDT_V17_SIZE (FDT_V16_SIZE + sizeof(fdt32_t))

#endif /* _FDT_H */
/*
 * libfdt - Flat Device Tree manipulation
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 *
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*/

```
#include "libfdt_env.h"
```

```
#include <fdt.h>
```

```
#include <libfdt.h>
```

```
#include "libfdt_internal.h"
```

```
int fdt_check_header(const void *fdt)
{
  if (fdt_magic(fdt) == FDT_MAGIC) {
    /* Complete tree */
    if (fdt_version(fdt) < FDT_FIRST_SUPPORTED_VERSION)
      return -FDT_ERR_BADVERSION;
    if (fdt_last_comp_version(fdt) > FDT_LAST_SUPPORTED_VERSION)
      return -FDT_ERR_BADVERSION;
  } else if (fdt_magic(fdt) == FDT_SW_MAGIC) {
    /* Unfinished sequential-write blob */
    if (fdt_size_dt_struct(fdt) == 0)
      return -FDT_ERR_BADSTATE;
```

```

} else {
    return -FDT_ERR_BADMAGIC;
}

return 0;
}

const void *fdt_offset_ptr(const void *fdt, int offset, unsigned int len)
{
    const char *p;

    if (fdt_version(fdt) >= 0x11)
        if (((offset + len) < offset)
            || ((offset + len) > fdt_size_dt_struct(fdt)))
            return NULL;

    p = _fdt_offset_ptr(fdt, offset);

    if (p + len < p)
        return NULL;
    return p;
}

uint32_t fdt_next_tag(const void *fdt, int startoffset, int *nextoffset)
{
    const fdt32_t *tagp, *lenp;
    uint32_t tag;
    int offset = startoffset;
    const char *p;

    *nextoffset = -FDT_ERR_TRUNCATED;
    tagp = fdt_offset_ptr(fdt, offset, FDT_TAGSIZE);
    if (!tagp)
        return FDT_END; /* premature end */
    tag = fdt32_to_cpu(*tagp);
    offset += FDT_TAGSIZE;

    *nextoffset = -FDT_ERR_BADSTRUCTURE;
    switch (tag) {
    case FDT_BEGIN_NODE:
        /* skip name */
        do {
            p = fdt_offset_ptr(fdt, offset++, 1);
        } while (p && (*p != '\0'));
        if (!p)
            return FDT_END; /* premature end */
        break;

```

```

case FDT_PROP:
    lenp = fdt_offset_ptr(fdt, offset, sizeof(*lenp));
    if (!lenp)
        return FDT_END; /* premature end */
    /* skip-name offset, length and value */
    offset += sizeof(struct fdt_property) - FDT_TAGSIZE
        + fdt32_to_cpu(*lenp);
    break;

case FDT_END:
case FDT_END_NODE:
case FDT_NOP:
    break;

default:
    return FDT_END;
}

if (!fdt_offset_ptr(fdt, startoffset, offset - startoffset))
    return FDT_END; /* premature end */

*nextoffset = FDT_TAGALIGN(offset);
return tag;
}

int _fdt_check_node_offset(const void *fdt, int offset)
{
    if ((offset < 0) || (offset % FDT_TAGSIZE)
        || (fdt_next_tag(fdt, offset, &offset) != FDT_BEGIN_NODE))
        return -FDT_ERR_BADOFFSET;

    return offset;
}

int _fdt_check_prop_offset(const void *fdt, int offset)
{
    if ((offset < 0) || (offset % FDT_TAGSIZE)
        || (fdt_next_tag(fdt, offset, &offset) != FDT_PROP))
        return -FDT_ERR_BADOFFSET;

    return offset;
}

int fdt_next_node(const void *fdt, int offset, int *depth)
{
    int nextoffset = 0;
    uint32_t tag;

```



```

if (offset >= 0)
if ((nextoffset = _fdt_check_node_offset(fdt, offset)) < 0)
return nextoffset;

do {
offset = nextoffset;
tag = fdt_next_tag(fdt, offset, &nextoffset);

switch (tag) {
case FDT_PROP:
case FDT_NOP:
break;

case FDT_BEGIN_NODE:
if (depth)
(*depth)++;
break;

case FDT_END_NODE:
if (depth && (--(*depth)) < 0)
return nextoffset;
break;

case FDT_END:
if ((nextoffset >= 0)
|| ((nextoffset == -FDT_ERR_TRUNCATED) && !depth))
return -FDT_ERR_NOTFOUND;
else
return nextoffset;
}
} while (tag != FDT_BEGIN_NODE);

return offset;
}

int fdt_first_subnode(const void *fdt, int offset)
{
int depth = 0;

offset = fdt_next_node(fdt, offset, &depth);
if (offset < 0 || depth != 1)
return -FDT_ERR_NOTFOUND;

return offset;
}

int fdt_next_subnode(const void *fdt, int offset)
{

```

```

int depth = 1;

/*
 * With respect to the parent, the depth of the next subnode will be
 * the same as the last.
 */
do {
    offset = fdt_next_node(fdt, offset, &depth);
    if (offset < 0 || depth < 1)
        return -FDT_ERR_NOTFOUND;
} while (depth > 1);

return offset;
}

const char *_fdt_find_string(const char *strtab, int tabsize, const char *s)
{
    int len = strlen(s) + 1;
    const char *last = strtab + tabsize - len;
    const char *p;

    for (p = strtab; p <= last; p++)
        if (memcmp(p, s, len) == 0)
            return p;
    return NULL;
}

int fdt_move(const void *fdt, void *buf, int bufsize)
{
    {
        FDT_CHECK_HEADER(fdt);

        if (fdt_totalsize(fdt) > bufsize)
            return -FDT_ERR_NOSPACE;

        memmove(buf, fdt, fdt_totalsize(fdt));
        return 0;
    }
}
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#

```

```

LIBFDT_SRCS := $(addprefix lib/libfdt/, \
    fdt.c \
    fdt_addresses.c \
    fdt_empty_tree.c \
    fdt_ro.c \
    fdt_rw.c \
    fdt_strerror.c \
    fdt_sw.c \
    fdt_wip.c) \

```

```

INCLUDES += -Iinclude/lib/libfdt

```

1.2 ATF v1.2 Marvell Patches 17.01.0

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1.3 Gobi Drivers SWI_2.25

1.3.1 Available under license :

```
/*=====
```

FILE:

GobiSerial.c

DESCRIPTION:

Linux Qualcomm Serial USB driver Implementation

PUBLIC DRIVER FUNCTIONS:

GobiProbe

GobiOpen

GobiClose

GobiReadBulkCallback

GobiSerialSuspend

GobiSerialResume (if kernel is less than 2.6.24)

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/*=====

FILE:

GobiUSBNet.c

DESCRIPTION:

Qualcomm USB Network device for Gobi 3000

FUNCTIONS:

- GobiNetSuspend
- GobiNetResume
- GobiNetDriverBind
- GobiNetDriverUnbind
- GobiUSBNetURBCallback
- GobiUSBNetTXTimeout
- GobiUSBNetAutoPMThread
- GobiUSBNetStartXmit
- GobiUSBNetOpen
- GobiUSBNetStop
- GobiUSBNetProbe
- GobiUSBNetModInit
- GobiUSBNetModExit

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