

Debug Printing Module

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This module provides a lightweight printf function that can be enabled or disabled via configuration macros. Code can be declared to be within a “debug unit” (usually a module) and prints can be enabled/disabled per debug unit.

1 API

To use this module, include `module_logging` in the application’s `USED_MODULES` list and include the `debug_print.h` header file.

```
void debug_printf(char fmt[], ...)
```

A limited functionality version of printf that is low memory.

This function works like C-standard printf except that it only accepts d, x, s, u and c format specifiers with no conversions. The function uses the functions from `print.h` to do the underlying printing.

Unlike printf this function has no return value.

Whether the function does any output can be controlled via defines such as `DEBUG_PRINT_ENABLE` or `DEBUG_PRINT_ENABLE_[debug unit name]` in the application’s `debug_conf.h`.

2 Debug Units

A source file can be added to a debug unit by defining the `DEBUG_UNIT` macro before inclusion of `debug_print.h`. For example:

```
#define DEBUG_UNIT ETHERNET_MODULE
#include "debug_print.h"
```

To include all source files in a module in a particular debug unit, it is convenient to do it in the `module_build_info` file of the module e.g.:

```
MODULE_XCC_FLAGS = $(XCC_FLAGS) -DDEBUG_UNIT=ETHERNET_MODULE
```

If no `DEBUG_UNIT` is defined then the default debug unit is `APPLICATION`.

3 Enabling Printing

By default, debug printing is turned *off*. To enable printing you need to include a file called `debug_conf.h` in your application. Within this file you can set the following defines:

DEBUG_PRINT_ENABLE

Setting this define to 1 or 0 will control whether debug prints are output.

DEBUG_PRINT_ENABLE_[debug unit]

Enabling this define will cause printing to be enabled for a specific debug unit. If set to 1, this will override the default set by `DEBUG_PRINT_ENABLE`.

DEBUG_PRINT_DISABLE_[debug unit]

Enabling this define will cause printing to be disabled for a specific debug unit. If set to 1, this will override the default set by `DEBUG_PRINT_ENABLE`.



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