

```
#define TESTAPP_GEN

/* $Id: xuartlite_selftest_example.c,v 1.1.2.1 2009/11/24 05:14:25 svemula Exp $ */
/*****
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 *
 *****/
/*****
/**
 * @file xuartlite_selftest_example.c
 *
 * This file contains a design example using the UartLite driver (XUartLite) and
 * hardware device.
 *
 * @note
 *
 * None
 *
 * MODIFICATION HISTORY:
 * <pre>
 * Ver   Who   Date       Changes
 * -----
 * 1.00a ecm   01/25/04   First Release.
 * 1.00a sv    06/13/05   Minor changes to comply to Doxygen and Coding guidelines
 * 2.00a ktn   10/20/09   Minor changes as per coding guidelines.
 * </pre>
 *****/

/***** Include Files *****/

#include "xparameters.h"
#include "xuartlite.h"

/***** Constant Definitions *****/

/*
 * The following constants map to the XPAR parameters created in the
 * xparameters.h file. They are defined here such that a user can easily
 * change all the needed parameters in one place.
 */
```

```
#define UARTLITE_DEVICE_ID          XPAR_UARTLITE_0_DEVICE_ID

/***** Type Definitions *****/

/***** Macros (Inline Functions) Definitions *****/

/***** Function Prototypes *****/
int UartLiteSelfTestExample(u16 DeviceId);

/***** Variable Definitions *****/
XUartLite UartLite;          /* Instance of the UartLite device */

/*****
**
* Main function to call the example. This function is not included if the
* example is generated from the TestAppGen test tool.
*
* @param      None.
*
* @return     XST_SUCCESS if successful, otherwise XST_FAILURE.
*
* @note       None.
*****/
#ifndef TESTAPP_GEN
int main(void)
{
    int Status;

    /*
     * Run the UartLite self test example, specify the Device ID that is
     * generated in xparameters.h
     */
    Status = UartLiteSelfTestExample(UARTLITE_DEVICE_ID);
    if (Status != XST_SUCCESS) {
        return XST_FAILURE;
    }

    return XST_SUCCESS;
}
#endif

/*****
**
* This function does a minimal test on the UartLite device and driver as a
* design example. The purpose of this function is to illustrate
* how to use the XUartLite component.
*
* @param      DeviceId is the XPAR_<uartlite_instance>_DEVICE_ID value from
*              xparameters.h.
*
* @return     XST_SUCCESS if successful, otherwise XST_FAILURE.
*
* @note       None.
*****/
int UartLiteSelfTestExample(u16 DeviceId)
{
    int Status;

    /*
     * Initialize the UartLite driver so that it is ready to use.
     */
    Status = XUartLite_Initialize(&UartLite, DeviceId);
    if (Status != XST_SUCCESS) {
        return XST_FAILURE;
    }
}
```

```
/*
 * Perform a self-test to ensure that the hardware was built correctly.
 */
Status = XUartLite_SelfTest(&UartLite);
if (Status != XST_SUCCESS) {
    return XST_FAILURE;
}

return XST_SUCCESS;
}
```