



Programming Library SmartLibrary™

Product Overview

The SmartLibrary programming library is a powerful programming tool that helps developers create custom applications for testing networks and network devices using SmartBits® chassis. SmartLibrary controls all SmartBits equipment and is the foundation for all SmartBits applications (except SmartWindow) and automation tools. The SmartLibrary programming library includes library files for all supported platforms (Solaris, Linux, and Microsoft Windows®), plus extensive code examples and detailed documentation.

Benefits

- Automates complex suites of tests.
- Allows the creation of simplified GUIs using Tcl/Tk specifically tailored to simplify basic pass/fail production line tests.
- Customizes tests for unique network components.
- Helps developers create suites of tests that run automatically without constant human interaction.
- Allows for repeatable tests for duplicate iterations against many device revisions.
- Provides flexibility for quick changes and the addition of features, and allows tests to be tailored to fit specific test needs.

- Includes example code, including Tcl scripts and a Visual Basic source with a Visual Basic window containing many sample tests and C/C++ source code for test executables. All test scripts are full of helpful comments and console messages. Code examples can be incorporated into customized tests.

Key Features

- Supports the SmartBits 200, 2000, 600x, and 6000x chassis.
- Controls Ethernet 10/100/1000, 10 Gigabit Ethernet, POS, Fibre Channel, ATM, WAN, and Frame Relay SmartCards/modules.
- Supports all controllable module parameters.
- Offers Tcl/Tk, C/C++, Visual Basic interfaces. Can be installed on Solaris, Linux, and Microsoft Windows platforms.
- Includes comprehensive documentation, consisting of in-depth manuals, many code examples, and well-commented source code.

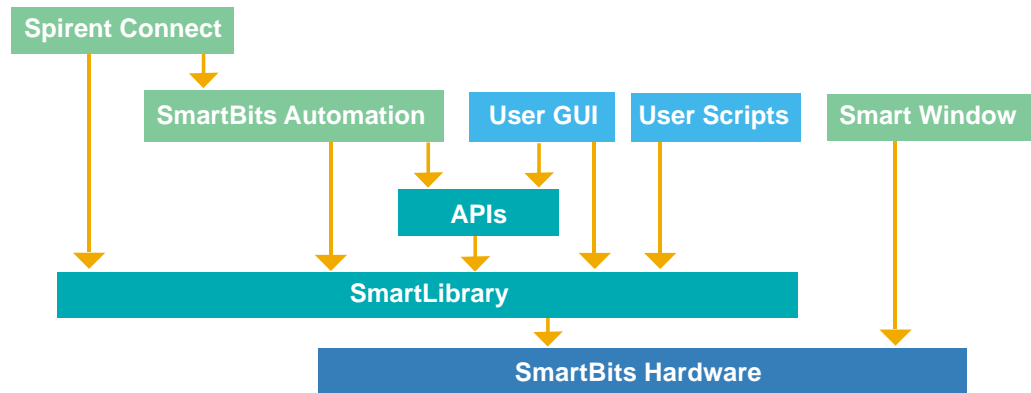
Example Code and Scripting

Example code (provided in Tcl, Visual Basic, and C/C++) is bundled with the SmartLibrary CD or can be downloaded from the Spirent Communications Developers' Network (SCDN) area of the Spirent Communications Customer Service website at <http://support.spirentcom.com>.

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Relationship of SmartLibrary to other SmartBits products



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Supported Interfaces

- Ethernet 10 Mbps, 100 Mbps, and 1000 Mbps (Fiber and Copper)
- 10 Gigabit Ethernet
- Fibre Channel 1G and 2G
- Packet over SONET OC-3/12, OC-48, and OC-192
- ATM technologies including DS1, E1, 25 MB, E3, DS3, OC-3c, and OC-12c with signaling control, as well as traffic generation
- WAN E1 and T1 (Frame Relay V.35 and RS-45)

Development Environments

SmartLibrary is designed to work in most environments, including:

- RedHat Linux, and Solaris
- Microsoft Windows 2000, NT, and XP
- C/C++ for Microsoft Visual and GNU
- Microsoft Visual Basic 5.0 and 6.0
- Tcl 8.3.5 and 8.4.5

Requirements

- A PC or workstation equipped with a Pentium™ III 500 MHz and 256 MB of RAM.
- An SVGA monitor – 1024 x 768 pixels.
- At least 70 MB of available hard drive space.

Ordering Information

SmartLibrary is included with each SmartBits chassis.

Spirent Communications offers a variety of ServiceEdge™ maintenance and support packages. For more information, visit the Spirent website at www.spirentcom.com or contact your Spirent sales representative.

```
#####
#
# L3Basic.tcl
#
# - This sample creates 10 IP streams (frame blue-prints), and sends out a single #
# burst of 20 IP frames. It will then display the packets captured on the #
# receiver.
#
# - This sample applies to SmartMetrics cards that handle stream generation, #
# including ML-7710 and LAN-6101A. It uses the first two Ethernet ports in a #
# chassis, connected back to back.
#
# NOTE: This script works on the following cards:
# - L3-67XX
# - ML-7710
# - ML-5710
# - LAN-6101A
#
#####
```

```
# If smartlib.tcl is not loaded, attempt to locate it at the default location.
# The actual location is different on different platforms.
if {$tcl_platform(platform) == "windows"} {
    set libPath "../..../tcl/tclfiles/smartlib.tcl"
} else {
    set libPath "../..../include/smartlib.tcl"
}
# if "smartlib.tcl" is not loaded, try to source it from the default path
if { ![info exists __SMARTLIB_TCL__] } {
    if {[file exists $libPath]} {
        source $libPath
    } else {
        #Enter the location of the "smartlib.tcl" file or enter "Q" or "q" to quit
        while {1} {
            puts "Could not find the file $libPath."
            puts "Enter the path of smartlib.tcl, or q to exit."
            gets stdin libPath
            if {$libPath == "q" || $libPath == "Q"} {
                exit
            }
            if {[file exists $libPath]} {
                source $libPath
                break
            }
        }
    }
}
```

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Excerpt of sample SmartLibrary script