CC32xx HTTP Server

Overview

HTTP Server Application demonstrates interaction between HTTP Client(Browser) and SimpleLink Device. The SimpleLink device runs an HTTP Server and user can interact with the device using a Web Browser. User Can interact using Simple HTTP GET and POST Command



Using HTTP Server, User can do below:

- 1. Get Static Pages Stored on ROM/SFLash
- 2. Update Device Settings by filling Forms on Static HTML pages
- 3. Get Dynamic Data such as Device status etc using Tokens in HTML pages.
- 4. Send Command to Device using Tokens in HTML pages. For e.g User controls the LED on the Device.

Note: This wiki page is only applicable for CC3200-SDK v0.5.2 and upward releases. For documentation on older SDKs' examples, refer corresponding file in <cc3200-sdk-installation-location>\cc3200-sdk\docs\examples\

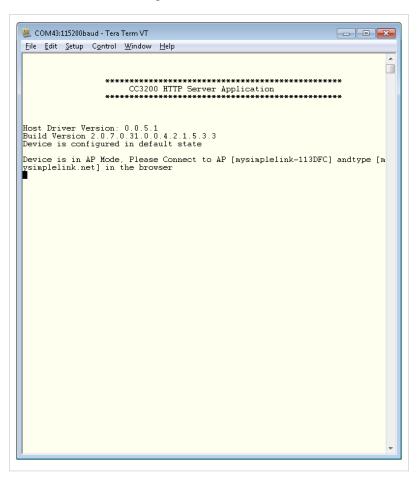
Usage

- Flash Example Content(html,image,Application binary)on serial flash by following below steps.
 - 1. If CC3200 SDK is installed at default location C:\ti\CC3200SDK
 - Open C:\ti\CC3200SDK\cc3200-sdk\example\httpserver\html\httpserver.ucf session file in Uniflash.
 - Flash the files to the device. Detailed instructions at Uniflash User Guide.
 - 2. If CC3200 SDK is not installed at default location C:\ti\CC3200SDK
 - Open <cc3200-sdk>\examples\httpserver\html\httpserver.ucf session file in Uniflash.
 - Modify Url for all the files in the list.
 - Flash the files to the device. Detailed instructions at Uniflash User Guide.
- Run the reference application
 - 1. Run From IDE (IAR/CCS)
 - Open the Project as mentioned in the <cc3200-sdk>\docs\CC3200-Getting Started Guide.pdf
 - Build and download the application to the board
 - 2. Run Flashed Binary
 - Remove SOP-2 Jumper on Board and Press Reset. Refer <cc3200-sdk>\docs\CC3200-Getting Started Guide.pdf for detailed Information
- Device starts and check for Force AP Jumper as shown below. If Jumper is placed, It starts in AP Mode



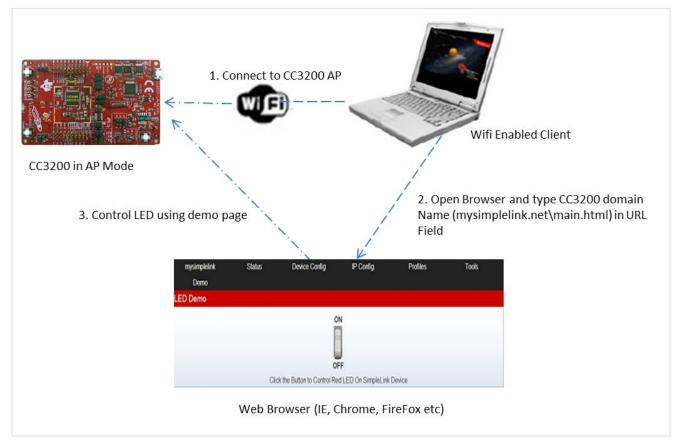
Case 1 - AP Mode

• CC3200 device will boot in AP Mode. It will print its SSID and HTTP Server domain name in UART Terminal



- User needs to connect its WIFI enabled device PC/MAC/Smartphone to the device AP(Default SSID: mysimplelink-MACAddr)
- User Opens the browser and type mysimplelink.net\main.html in browser URL field
- Browser displays the main page. User selects Demo Tab as shown below

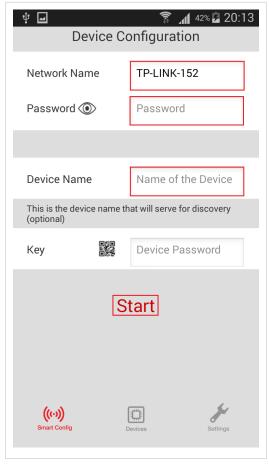
• Browser displays the demo web page as shown below



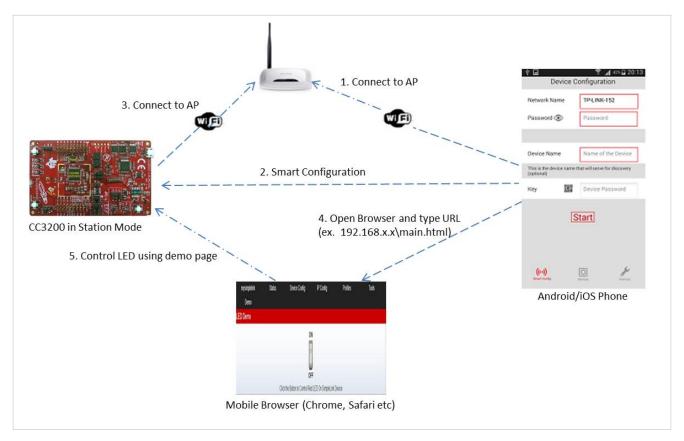
• User clicks on ON/OFF Switch button to control RED LED on the Device

Case 2 - STA Mode

- Install TI SmartConfig [1] Application on your Smartphone.
- CC3200 Device will try to Connect to AP(If already Configured using SmartConfig Application).
- For the First time when the AP is not configured, User needs to connect using SmartConfig Application
 - 1. Connect your Smartphone to the selected AP
 - 2. Launch TI SmartConfig Application
 - 3. The name of the network will automatically show up in **Network Name** field. Enter **Password** of the network. For open network leave the 'Password' field blank.
 - 4. Enter a **Device Name**. This will be used to identify your device.
 - 5. Press 'Start' button.



- **6.** Once the smartconfig process is completed, a pop-up windows shows up to indicate that the new device is connected to the network.
- Once SmartConfig is Successful, CC3200 device will connect to AP and print its IP address on UART Terminal
- User Opens the browser and type <ipaddr>\led_demo.html e.g. 192.168.1.100\main.html in browser URL field
- Browser displays the main page. User selects Demo Tab as shown below
- Browser displays the demo web page



• User clicks on ON/OFF Switch button to control RED LED on the Device

Source Files briefly explained

- main.c Handles HTTP Request, Controls LED and Send HTTP Response with LED Status
- gpio_if.c Handles GPIO related operations
- pinmux.c Generated by Pinmux utility pin out LED GPIOs.
- smartconfig.c Implements Smart Configuration Interface For Access Point Provisioning
- uart_if.c Implements the UART terminal.
- startup_*.c Implements tools specific interrupt vector table

Limitations/Known Issues

None.

References

[1] http://www.ti.com/tool/wifistarter

Article Sources and Contributors

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