CC31xx P2P Application

Overview

This sample example demostrates how CC3100 connects to a P2P device. The application starts a TCP server on port 5001 and waits for P2P device to connect and send data on it.

Different supported P2P roles of CC3100 are:

- SL_P2P_ROLE_GROUP_OWNER: CC3100 will be configured in 'Group-Owner' mode
- SL_P2P_ROLE_CLIENT: CC3100 will be configured in 'Client' mode
- SL_P2P_ROLE_NEGOTIATE: CC3100 will negotiate with remote device for client/GO role.

CC3100 can be configure in below modes to initiate negotiation:

- SL_P2P_NEG_INITIATOR_ACTIVE: CC3100 will perform discovery - Once the remote device is found, it sends the negotiation request immediately
- SL_P2P_NEG_INITIATOR_PASSIVE: CC3100 will perform discovery - Once the remote device is found, CC3100 waits for it to start negotiation
- SL_P2P_NEG_INITIATOR_RAND_BACKOFF: CC3100 will perform discovery - Once the remote device is found, it triggers a random timer (1-7 seconds) and waits for the remote device to negotiate. On timer expiry, CC3100 starts negotiation itself

Supported security types used during p2p negotiation are:

- SL_SEC_TYPE_P2P_PBC
- SL_SEC_TYPE_P2P_PIN_DISPLAY
- SL_SEC_TYPE_P2P_PIN_KEYPAD

CC3100 can be configured in 'any_p2p' mode as well - When configured, CC3100 will perform discovery and connect to the first found device using security type 'SL_SEC_TYPE_P2P_PBC'

Application details

The example intends to demonstrate how p2p mode can be configured and used. Application configure the device with following settings:

- P2P role negotiate (SL_P2P_ROLE_NEGOTIATE)
- P2P negotiation initiation active (SL_P2P_NEG_INITIATOR_ACTIVE)
- P2P device listens on channel 11 and P2P device's operation channel is set to 6
- P2P connect security type 'PBC'

Usage

- Open a terminal program (like teraterm) and configure it w/ '9600' baud rate.
- Build and run the application
- Start remote P2P device

```
   CC3100 will be visible as P2P_DEVICE_NAME (which is set in the
sample application) to the remote P2P device
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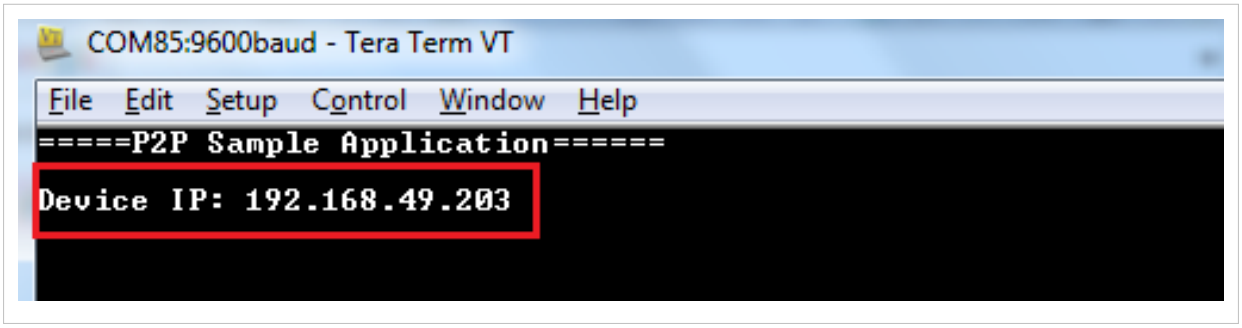
- Connect to CC3100. On successful connection, CC3100's IP address will be displayed on the terminal-program's console



- Open an 'Ipef' client on the remote P2P device and connect on 'PORT_NUM'

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Iperf.exe -c <DEST_IP_ADDR> -p <PORT_NUM> -i 1
```

Limitations/Known Issues

None

Article Sources and Contributors

CC31xx P2P Application *Source*: http://ap-fpdsp-swapps.dal.design.ti.com/index.php?oldid=188815 *Contributors*: A0131814, Giansway

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