PC BLE SDK API

Version: 0.1

Date: 2025/7/15

Category

Revision History

Revision	Author	Date	Description
0.1	Iris	2025/7/15	1. Initial version

Discover ISC devices

Scenario1_Discovery.cs

Press **Start enumerating** button to discover BLE device. It call **StartBleDeviceWatcher()**.Press **Stop enumerating** button to stop discover BLE device. It call **StopBleDeviceWatcher()**.

Connect to a ISC device

Scenario2_Client.cs

Press Connect button to connect the device. It will retrieves the device's GATT services and characteristics, displays the supported properties (Read, Write, Notify) of each characteristic, attempts to read characteristics with Read support, subscribes to characteristics with Notify support and Saves important data based on the Service UUIDs (e.g., device info, battery level, configurations).

Show Device Information

Scenario3_DeviceInfo.cs

Press **Refresh** button to refresh device information.

Process	UUID
Get device name.	00002A00-0000-1000-8000-00805F9B34FB
Get manufacture name.	00002A29-0000-1000-8000-00805F9B34FB
Get model name.	00002A24-0000-1000-8000-00805F9B34FB
Get serial number.	00002A25-0000-1000-8000-00805F9B34FB
Get device uuid.	00002A23-0000-1000-8000-00805F9B34FB
Get hardware revision.	00002A27-0000-1000-8000-00805F9B34FB
Get tiva firmware revision.	00002A26-0000-1000-8000-00805F9B34FB
Get spectrum library revision.	00002A28-0000-1000-8000-00805F9B34FB
Get temperature.	43484101-444C-5020-4E49-52204E616E6F
Get humidity.	43484102-444C-5020-4E49-52204E616E6F
Get battery capacity.	00002A19-0000-1000-8000-00805F9B34FB
Get lamp usage.	43484109-444C-5020-4E49-52204E616E6F
Get activation status.	43484130-444C-5020-4E49-52204E616E6F

Set Scan Configuration

Scenario4_SetConfig.cs

Select a scan config from device

Call **RefreshDeviceConfigDataToUI(false)** to get scan config list. This API can call **Client.ReadNumOfConfig()** to get number of config and call **Client.ReadDeviceScanConfigList()** to get scan config index list and scan config parameter list.

Call **Client.WriteActiveScanConfigIndex(idxData)** to set config to default/active.

Call **ResetConfig()** to reset config.

API	Process	UUID
Client.ReadNumOfConfig()	Read number of scan configuration.	43484113-444C-5020-4E49-52204E616E6F
Client.ReadDeviceScanConfigList()	Get scan config index list and scan config parameter list	(Request)43484114-444C-5020-4E49-52204E616E6F (Notify) 43484115-444C-5020-4E49-52204E616E6F (Read) 43484116-444C-5020-4E49-52204E616E6F (Notify) 43484117-444C-5020-4E49-52204E616E6F
Client.WriteActiveScanConfigIndex(idxData)	Set config to default/active.	43484118-444C-5020-4E49-52204E616E6F
ResetConfig()	ResetConfig()	43484148-444C-5020-4E49-52204E616E6F

Set a config to device memory

Call **StartSetOrSaveScanConfig(true)** to set the scan configuration to the device. **(Note: This only set the configuration to the device memory and generating the scan patterns accordingly.)**

Call **StartSetOrSaveScanConfig(false)** to save config to the device.

API	Process	UUID
StartSetOrSaveScanConfig(true)	Set the scan configuration to the device.	(Write) 43484142-444C-5020-4E49-52204E616E6F (Notify) 43484143-444C-5020-4E49-52204E616E6F
StartSetOrSaveScanConfig(false)	Save the scan configuration to the device.	(Write) 43484142-444C-5020-4E49-52204E616E6F (Notify) 43484143-444C-5020-4E49-52204E616E6F

Read current active scan config

Call **StartReadCurrentScanConfig()** to read current scan config.

API	Process	UUID
StartReadCurrentScanConfig()	Read current scan config.	(Read) 43484140-444C-5020-4E49-52204E616E6F (Notify) 43484141-444C-5020-4E49-52204E616E6F

Perform Scan

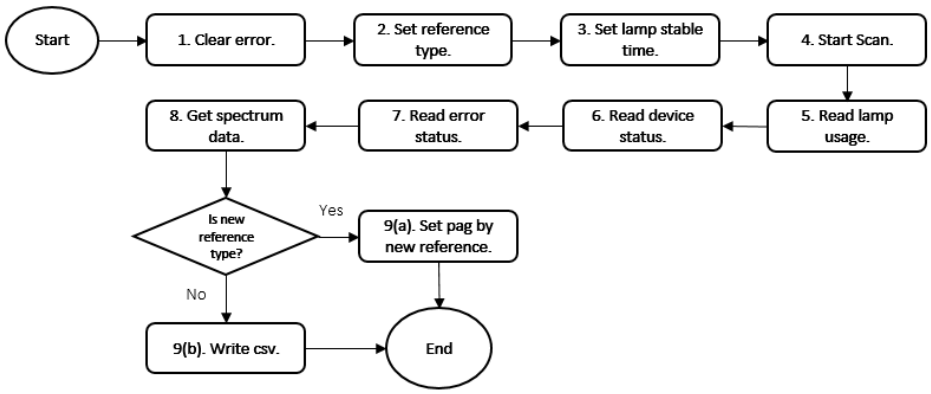
Scenario5_PerformScan.cs

Call **DownloadCoefficient()** to download coefficient. Call **Client.ReadRefCalCoefficients()** to get the calibration coefficient. Call **Client.ReadRefCalMatrix()** to get the calibration matrix parameter. Call **Client.ReadSpecCalCoefficients()** to get the spectrum calibration coefficient.

Call **DeviceSetting()** to set device. Call **Client.SetCurrentTime()** to set current time. Call **Client.SetPGA(0)** to set PGA. Call **Client.SetLampStableTime(625)** to set lamp stable time. Call **Client.SetLampMode(Client.LampState.AUTO)** to set lamp mode.

API	Process	UUID
Client.ReadRefCalCoefficients()	Get the calibration coefficient.	(Read) 4348410F-444C-5020-4E49-52204E616E6F (Notify)43484110-444C-5020-4E49-52204E616E6F
Client.ReadRefCalMatrix()	Get the calibration matrix parameter.	(Read)43484111-444C-5020-4E49-52204E616E6F (Notify)43484112-444C-5020-4E49-52204E616E6F
Client.ReadSpecCalCoefficients()	Get the spectrum calibration coefficient.	(Read)4348410D-444C-5020-4E49-52204E616E6F (Notify)4348410E-444C-5020-4E49-52204E616E6F
Client.SetCurrentTime()	Set current time.	4348410C-444C-5020-4E49-52204E616E6F
Client.SetPGA(0)	Set PGA.	43484146-444C-5020-4E49-52204E616E6F
Client.SetLampStableTime(625)	Set lamp stable time.	43484145-444C-5020-4E49-52204E616E6F
Client.SetLampMode(Client.LampState.AUTO)	Set lamp mode.	43484144-444C-5020-4E49-52204E616E6F

Call **StartScan()** to scan data.



1. Call **Client.ClearError()** to clear error.
2. Call **SetReferenceType()** to set reference type.
3. Call **Client.SetLampStableTime(StableTime)** to set lamp stable time.
4. Call **Client.StartScan()** to start scan.
5. Call **Client.ReadLampUsage()** to read lamp usage.
6. Call **Client.ReadDeviceStatus()** to read device status.
7. Call **Client.ReadErrorStatus()** to read error status.
8. Call **GetSpectrumData()** to get spectrum data.
9. (a)Call **SetPgaByNewReference()** to set pga by reference. (b)Call **WriteCSV()** to write scan report.

API	Process	UUID
Client.ClearError()	Clear error.	43484104-444C-5020-4E49-52204E616E6F2
Client.SetLampStableTime(StableTime)	Set lamp stable time.	43484145-444C-5020-4E49-52204E616E6F
Client.StartScan()	Start scan.	4348411D-444C-5020-4E49-52204E616E6F
Client.ReadLampUsage()	Read lamp usage.	43484109-444C-5020-4E49-52204E616E6F
Client.ReadDeviceStatus()	Read device status.	43484103-444C-5020-4E49-52204E616E6F
Client.ReadErrorStatus()	Read error status.	43484104-444C-5020-4E49-52204E616E6F