

# ISC NIRScan GUI User's Guide

**Nov. 18, 2019**

# Contents



- Introduction
- Performing A Scan
- Update Built-in Reference Data
- Firmware Update

# INTRODUCTION

# Main Window

Page Selection InnoSpectra Information

ISC NIRScan GUI SDK WinForm v1.0.12

Scan Utility About

Device Config: Column 1 Est. Device Scan Time: 2.691 secs.

Zoom and Pan Disabled  
Data Tooltip Disabled

Intensity

Wavelength (nm)

Reference Scan

Scan Setting Scan Config Saved Scans

Reference Select

☒ New ☐ Previous ☐ Built-in

Lamp Control

☐ Keep Lamp On ☐ Keep Lamp Off  
☒ Lamp Stable Time (Unit: ms, Default: 625) 625

GainControl

PGA Gain 64 ☒ Auto

Scan Average

Num Scans of Average : 6

Continuous Scan Select

Cont. Scan: 1 Scan Delay (s): 0

Save Scan As

☒ \*.csv ☐ -intensity.csv ☐ -intensity.jdx  
☒ \*.dat ☐ -absorbance.csv ☐ -absorbance.jdx  
☐ -one.csv ☐ -reflectance.csv ☐ -reflectance.jdx

C:\Users\iris.lin\Documents\InnoSpectra\Scan R Directory

☐ File Name Prefix

Other Options

☐ Enable Noise Filter

Clear Error Status Button

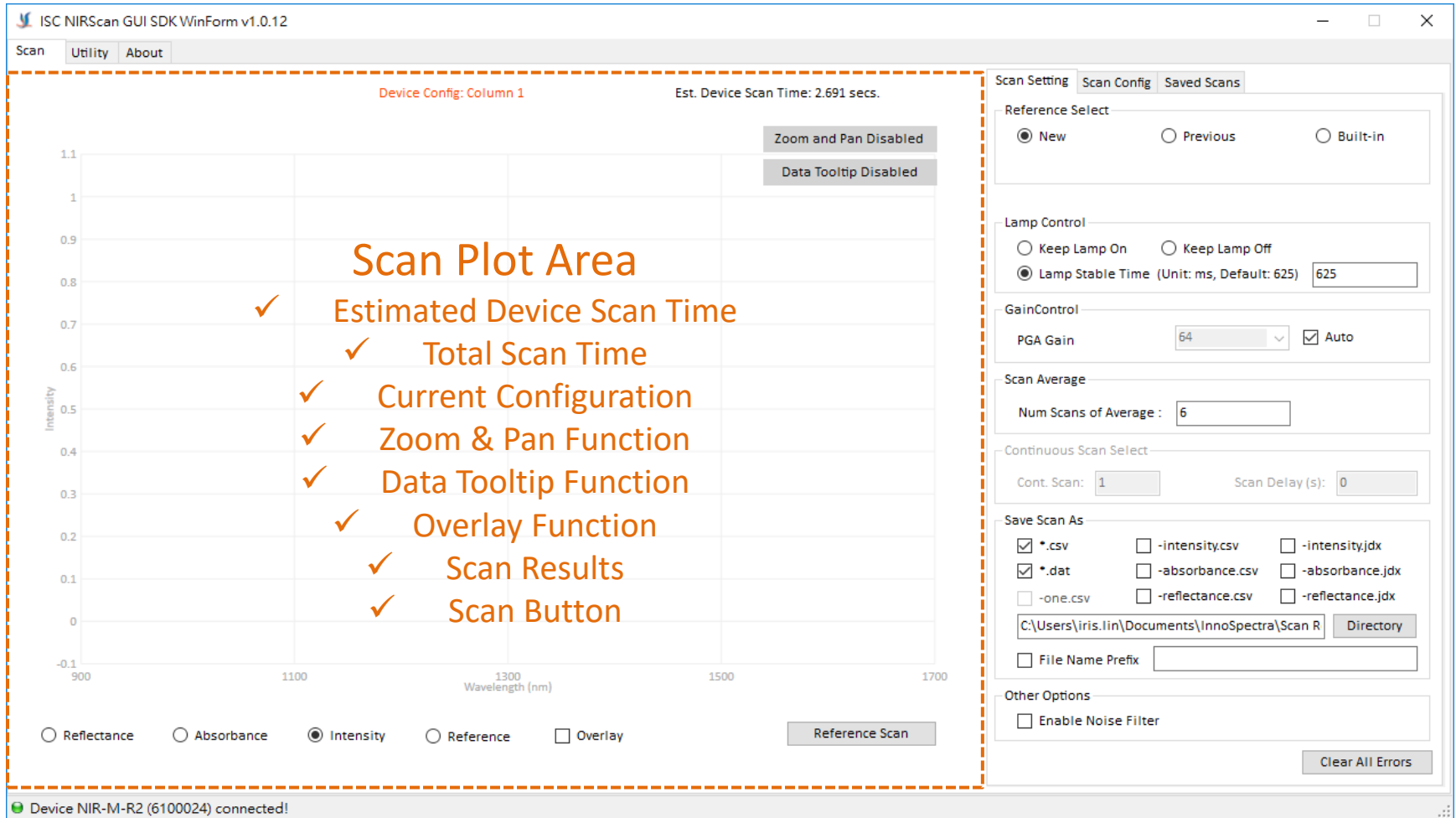
Clear All Errors

Device NIR-M-R2 (6100024) connected!

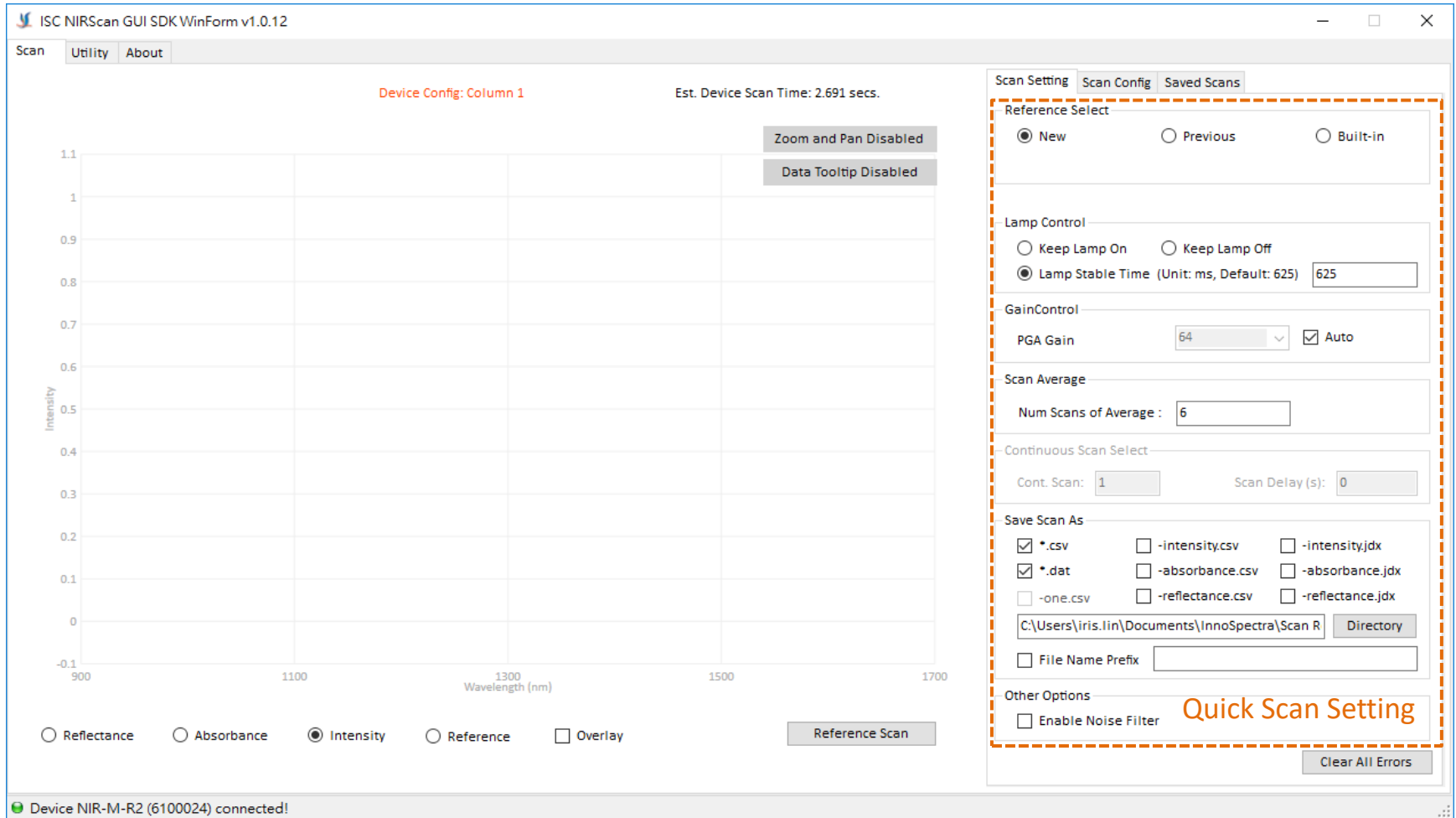
Device Status

Device Error Status

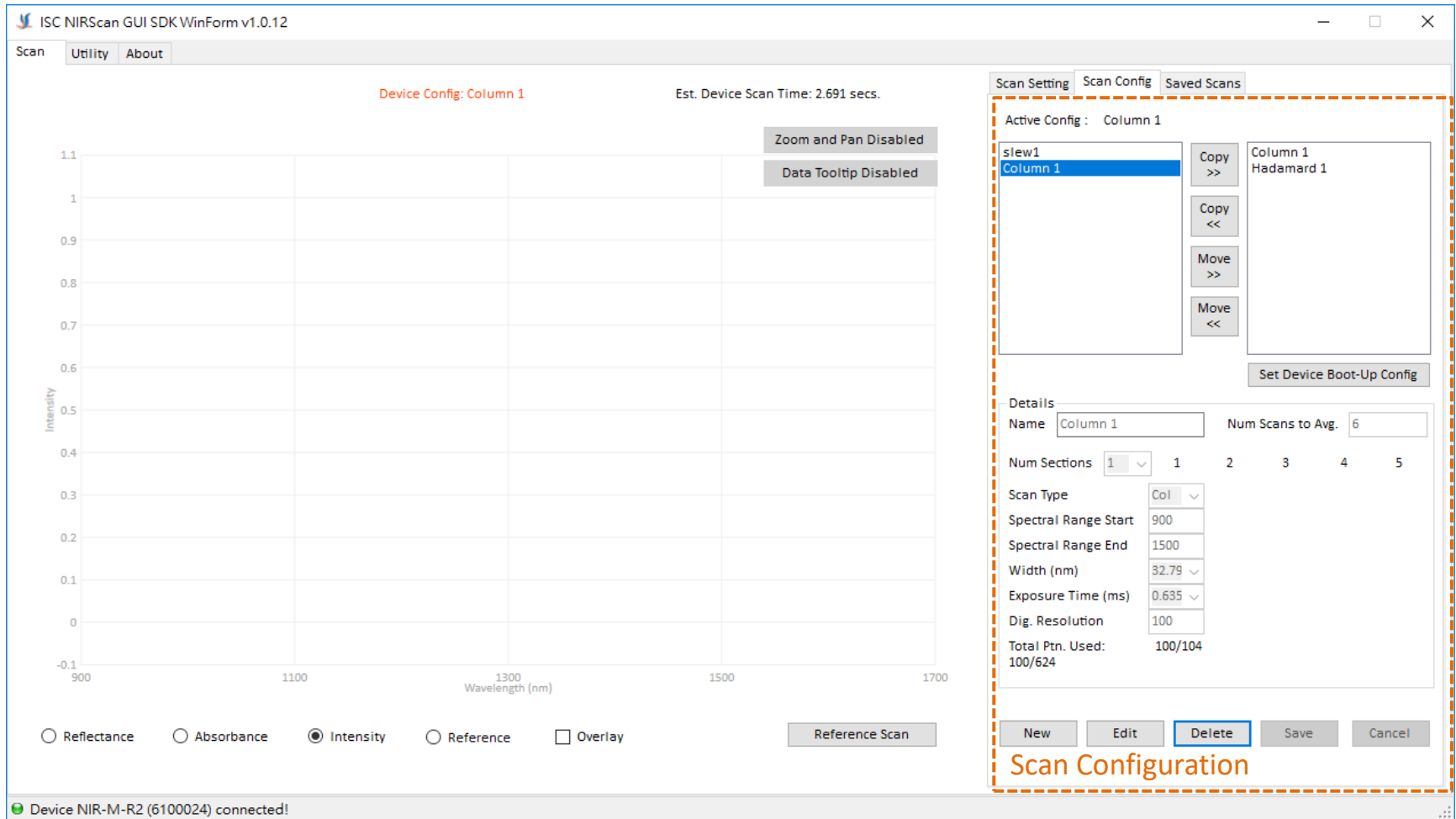
# Scan Page



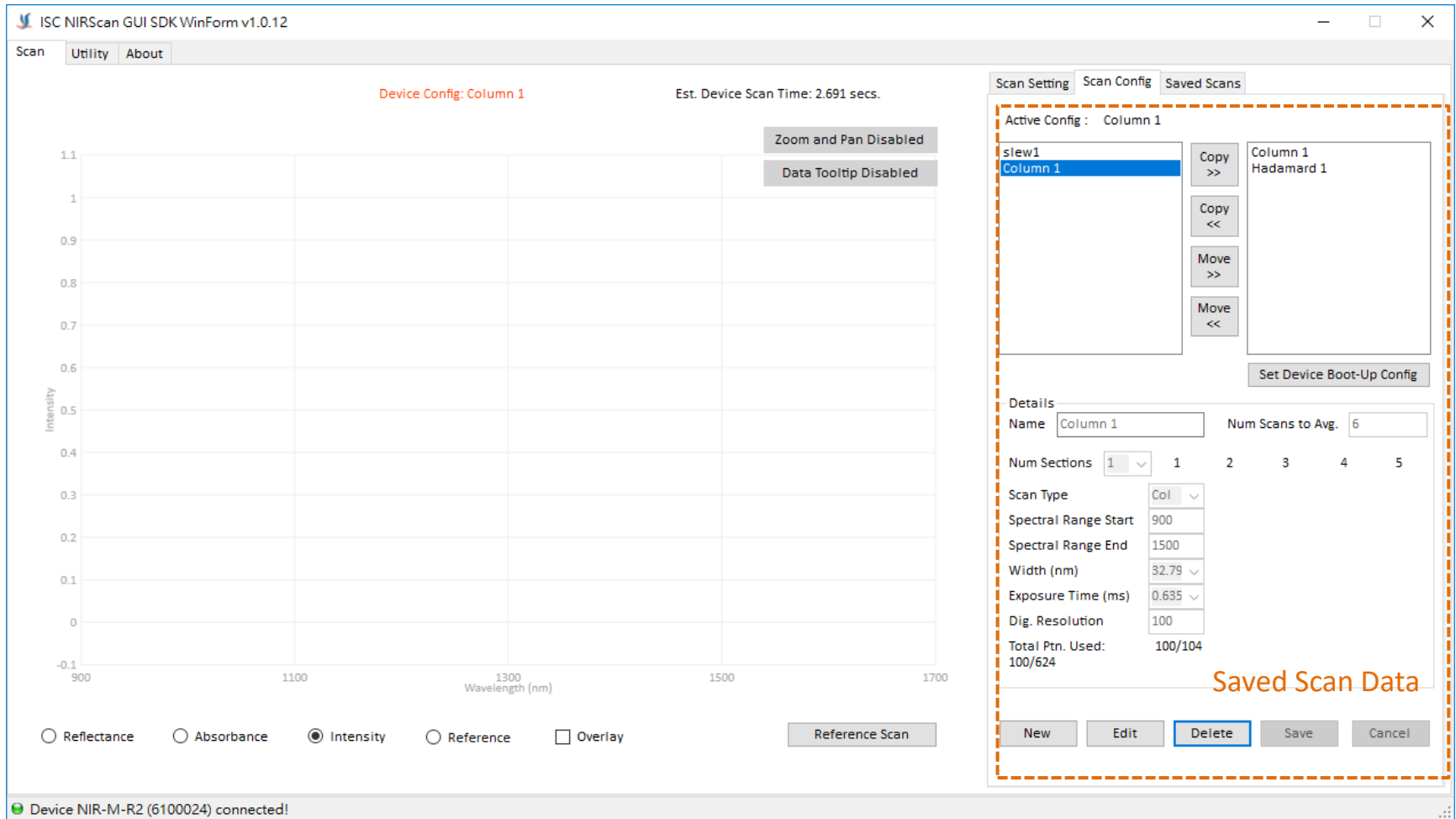
# Scan Page



# Scan Page



# Scan Page





# Utility Page

ISC NIRScan GUI SDK WinForm v1.0.12

Scan Utility About

Model Name  
  
Set Get

Serial Number  
  
Set Get

Date and Time  
  
Sync Get

Lamp Usage  
 (hours)  
Set Get

Sensors  
Battery Changer Status  
Battery Capacity  
System Humidity  
System Temp  
Tiva Temp  
Lamp Intensity

Read

TIVA Firmware Update  
File Name  Browse  
 Update

DLPC150 Firmware Update  
File Name  Browse  
 Update

Calibration Coefficients  
Cal Coeff Ver : 0 Pix-Wave Coeff 0   
Ref Cal Ver : 0 Pix-Wave Coeff 1   
Scan Cfg Ver : 0 Pix-Wave Coeff 2   
Shift Vect Coeff 0   
☐ Write Enable Shift Vect Coeff 1   
Write Generic Shift Vect Coeff 2   
Restore Factory Calibration Data Read Coeffs Write Coeffs

Device Information  
GUI Version 1.0.12  
Tiva SW Version 2.3.2  
DLPC Flash Version 2.2.0  
Spectrum Library Version 2.0.4  
Main Board Version D  
Detector Board Version B  
Model Name NIR-M-R2  
Device Serial Number 6100024  
Manufacturing Serial Number 70UB113G001AK6100024  
Device UUID D6:65:30:51:9A:82:3D:2A  
Lamp Usage NA

Activation Key  
Key  Set Clear  
Status : Not activated! Manage

Device  
Reset System Click  
Backup Factory Reference Click  
Update Reference Data Click  
Restore Factory Reference Click

Device NIR-M-R2 (6100024) connected but advanced functions locked!

- **Model Name:** Allows regex "a-zA-Z0-9\_-" to set, and  $\leq 16$  characters.
- **Serial Number:** Allows regex "a-zA-Z0-9\_-" to set, and  $\leq 7$  characters.
- **Date and Time:** Because there is no RTC battery in the device, the system time is written when the GUI is initialized.
- **Lamp Usage:** According to the module to determine whether the lamp usage can be read or write.

# Utility Page

ISC NIRScan GUI SDK WinForm v1.0.12

Scan Utility About

Model Name

Serial Number

Date and Time

Lamp Usage

 (hours)

Sensors

Battery Changer Status

Battery Capacity

System Humidity

System Temp

Tiva Temp

Lamp Intensity

TIVA Firmware Update

File Name  \*.bin

DLPC150 Firmware Update

File Name  \*.img

Calibration Coefficients

Cal Coeff Ver : 0 Pix-Wave Coeff 0

Ref Cal Ver : 0 Pix-Wave Coeff 1

Scan Cfg Ver : 0 Pix-Wave Coeff 2

Shift Vect Coeff 0

☐ Write Enable Shift Vect Coeff 1

Shift Vect Coeff 2

Device Information

GUI Version	1.0.12
Tiva SW Version	2.3.2
DLPC Flash Version	2.2.0
Spectrum Library Version	2.0.4
Main Board Version	D
Detector Board Version	B
Model Name	NIR-M-R2
Device Serial Number	6100024
Manufacturing Serial Number	70UB113G001AK6100024
Device UUID	D6:65:30:51:9A:82:3D:2A
Lamp Usage	NA

Activation Key

Key

Status : Not activated!

Device

Reset System

Backup Factory Reference

Update Reference Data

Restore Factory Reference

Device NIR-M-R2 (6100024) connected but advanced functions locked!

- **TIVA Firmware Update:** Binary File for main board.
- **DLPC150 Firmware Update:** Image File for detector board.

# Utility Page

ISC NIRScan GUI SDK WinForm v1.0.12

Scan Utility About

Model Name  
  
Set Get

Serial Number  
  
Set Get

TIVA Firmware Update  
File Name  Browse  
 Update

DLPC150 Firmware Update  
File Name  Browse  
 Update

Date and Time  
  
Sync Get

Lamp Usage  
 (hours)  
Set Get

Sensors

Battery Changer Status

Battery Capacity

System Humidity

System Temp

Tiva Temp

Lamp Intensity

Read

Calibration Coefficients

Cal Coeff Ver : 0 Pix-Wave Coeff 0

Ref Cal Ver : 0 Pix-Wave Coeff 1

Scan Cfg Ver : 0 Pix-Wave Coeff 2

Shift Vect Coeff 0

☐ Write Enable Shift Vect Coeff 1

Write Generic Shift Vect Coeff 2

Restore Factory Calibration Data Read Coeffs Write Coeffs

Device Information

GUI Version	1.0.12
Tiva SW Version	2.3.2
DLPC Flash Version	2.2.0
Spectrum Library Version	2.0.4
Main Board Version	D
Detector Board Version	B
Model Name	NIR-M-R2
Device Serial Number	6100024
Manufacturing Serial Number	70UB113G001AK6100024
Device UUID	D6:65:30:51:9A:82:3D:2A
Lamp Usage	NA

Activation Key

Key  Set Clear

Status : Not activated! Manage

Device

Reset System Click

Backup Factory Reference Click

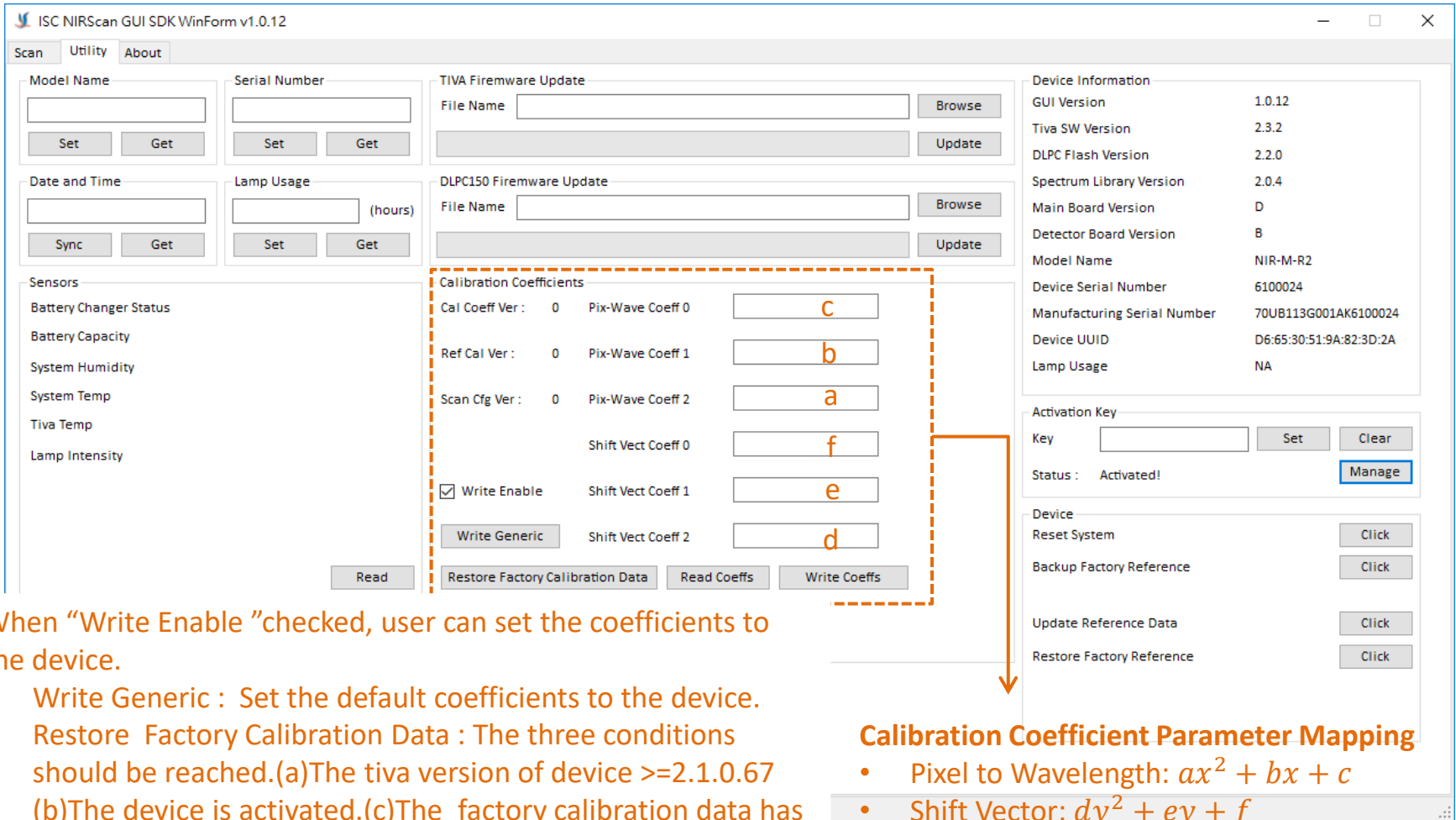
Update Reference Data Click

Restore Factory Reference Click

Device NIR-M-R2 (6100024) connected but advanced functions locked!

- **Battery Status:** If a Lithium-Ion or Lithium polymer single cell battery is connected.
- **Humidity / HDC Temperature:** Reads by the **HDC1000** in the Main Board.
- **Tiva Temperature:** Reads by the **Tiva internal sensor** in the Main Board.
- **Photodetector:** Reads the value of the lamp output.

# Utility Page



ISC NIRScan GUI SDK WinForm v1.0.12

Scan Utility About

Model Name: [Text Box] Set Get

Serial Number: [Text Box] Set Get

TIVA Firmware Update: File Name [Text Box] Browse Update

DLPC150 Firmware Update: File Name [Text Box] Browse Update

Date and Time: [Text Box] Sync Get

Lamp Usage: [Text Box] (hours) Set Get

Sensors:

- Battery Changer Status
- Battery Capacity
- System Humidity
- System Temp
- Tiva Temp
- Lamp Intensity

Calibration Coefficients:

Cal Coeff Ver : 0 Pix-Wave Coeff 0 [Text Box] c

Ref Cal Ver : 0 Pix-Wave Coeff 1 [Text Box] b

Scan Cfg Ver : 0 Pix-Wave Coeff 2 [Text Box] a

Shift Vect Coeff 0 [Text Box] f

Shift Vect Coeff 1 [Text Box] e

Shift Vect Coeff 2 [Text Box] d

☒ Write Enable

Write Generic

Restore Factory Calibration Data Read Coeffs Write Coeffs

Device Information:

GUI Version	1.0.12
Tiva SW Version	2.3.2
DLPC Flash Version	2.2.0
Spectrum Library Version	2.0.4
Main Board Version	D
Detector Board Version	B
Model Name	NIR-M-R2
Device Serial Number	6100024
Manufacturing Serial Number	70UB113G001AK6100024
Device UUID	D6:65:30:51:9A:82:3D:2A
Lamp Usage	NA

Activation Key:

Key [Text Box] Set Clear

Status : Activated! Manage

Device:

Reset System Click

Backup Factory Reference Click

Update Reference Data Click

Restore Factory Reference Click

**Calibration Coefficient Parameter Mapping**

- Pixel to Wavelength:  $ax^2 + bx + c$
- Shift Vector:  $dy^2 + ey + f$

When "Write Enable "checked, user can set the coefficients to the device.

- Write Generic : Set the default coefficients to the device.
- Restore Factory Calibration Data : The three conditions should be reached.(a)The tiva version of device  $\geq 2.1.0.67$  (b)The device is activated.(c)The factory calibration data has save in the device.
- Read Coeffs : Read coefficients from the device.
- Write Coeffs : Write coefficients to the device.

# Utility Page

ISC NIRScan GUI SDK WinForm v1.0.12

Scan Utility About

Model Name

Serial Number

TIVA Firmware Update

File Name

DLPC150 Firmware Update

File Name

Date and Time

Lamp Usage

 (hours)

Sensors

Battery Changer Status

Battery Capacity

System Humidity

System Temp

Tiva Temp

Lamp Intensity

Calibration Coefficients

Cal Coeff Ver : 0 Pix-Wave Coeff 0

Ref Cal Ver : 0 Pix-Wave Coeff 1

Scan Cfg Ver : 0 Pix-Wave Coeff 2

Shift Vect Coeff 0

☐ Write Enable Shift Vect Coeff 1

Shift Vect Coeff 2

Device Information

GUI Version	1.0.12
Tiva SW Version	2.3.2
DLPC Flash Version	2.2.0
Spectrum Library Version	2.0.4
Main Board Version	D
Detector Board Version	B
Model Name	NIR-M-R2
Device Serial Number	6100024
Manufacturing Serial Number	70UB113G001AK6100024
Device UUID	D6:65:30:51:9A:82:3D:2A
Lamp Usage	NA

Activation Key

Key

Status : Not activated!

Device

Reset System

Backup Factory Reference

Update Reference Data

Restore Factory Reference

Device NIR-M-R2 (6100024) connected but advanced functions locked!

**Device Information:** Display all information about firmware and hardware.

# Utility Page

ISC NIRScan GUI SDK WinForm v1.0.12

Scan Utility About

Model Name

Serial Number

TIVA Firmware Update

File Name

DLPC150 Firmware Update

File Name

Device Information

GUI Version	1.0.12
Tiva SW Version	2.3.2
DLPC Flash Version	2.2.0
Spectrum Library Version	2.0.4
Main Board Version	D
Detector Board Version	B
Model Name	NIR-M-R2
Device Serial Number	6100024
Manufacturing Serial Number	70UB113G001AK6100024
Device UUID	D6:65:30:51:9A:82:3D:2A
Lamp Usage	NA

Date and Time

Lamp Usage

 (hours)

Sensors

Battery Changer Status

Battery Capacity

System Humidity

System Temp

Tiva Temp

Lamp Intensity

Calibration Coefficients

Cal Coeff Ver :	0	Pix-Wave Coeff 0	<input type="text"/>
Ref Cal Ver :	0	Pix-Wave Coeff 1	<input type="text"/>
Scan Cfg Ver :	0	Pix-Wave Coeff 2	<input type="text"/>
		Shift Vect Coeff 0	<input type="text"/>
<input type="checkbox"/> Write Enable		Shift Vect Coeff 1	<input type="text"/>
		Shift Vect Coeff 2	<input type="text"/>

Activation Key

Key

Status : Not activated!

Device

Reset System

Backup Factory Reference

Update Reference Data

Restore Factory Reference

Key Activated Functions: Lamp Usage Set/Get, Restore Default Calibration Coefficients  
Key Not Activated: None

Device NIR-M-R2 (6100024) connected but advanced functions locked!

# Utility Page

ISC NIRScan GUI SDK WinForm v1.0.12

Scan Utility About

Model Name

Serial Number

TIVA Firmware Update

File Name

DLPC150 Firmware Update

File Name

Device Information

GUI Version	1.0.12
Tiva SW Version	2.3.2
DLPC Flash Version	2.2.0
Spectrum Library Version	2.0.4
Main Board Version	D
Detector Board Version	B
Model Name	NIR-M-R2
Device Serial Number	6100024
Manufacturing Serial Number	70UB113G001AK6100024
Device UUID	D6:65:30:51:9A:82:3D:2A
Lamp Usage	NA

Date and Time

Lamp Usage

 (hours)

Sensors

Battery Changer Status

Battery Capacity

System Humidity

System Temp

Tiva Temp

Lamp Intensity

Calibration Coefficients

Cal Coeff Ver :	0	Pix-Wave Coeff 0	<input type="text"/>
Ref Cal Ver :	0	Pix-Wave Coeff 1	<input type="text"/>
Scan Cfg Ver :	0	Pix-Wave Coeff 2	<input type="text"/>
		Shift Vect Coeff 0	<input type="text"/>
<input type="checkbox"/> Write Enable		Shift Vect Coeff 1	<input type="text"/>
		Shift Vect Coeff 2	<input type="text"/>

Activation Key

Key

Status : Not activated!

Device

Reset System

Backup Factory Reference

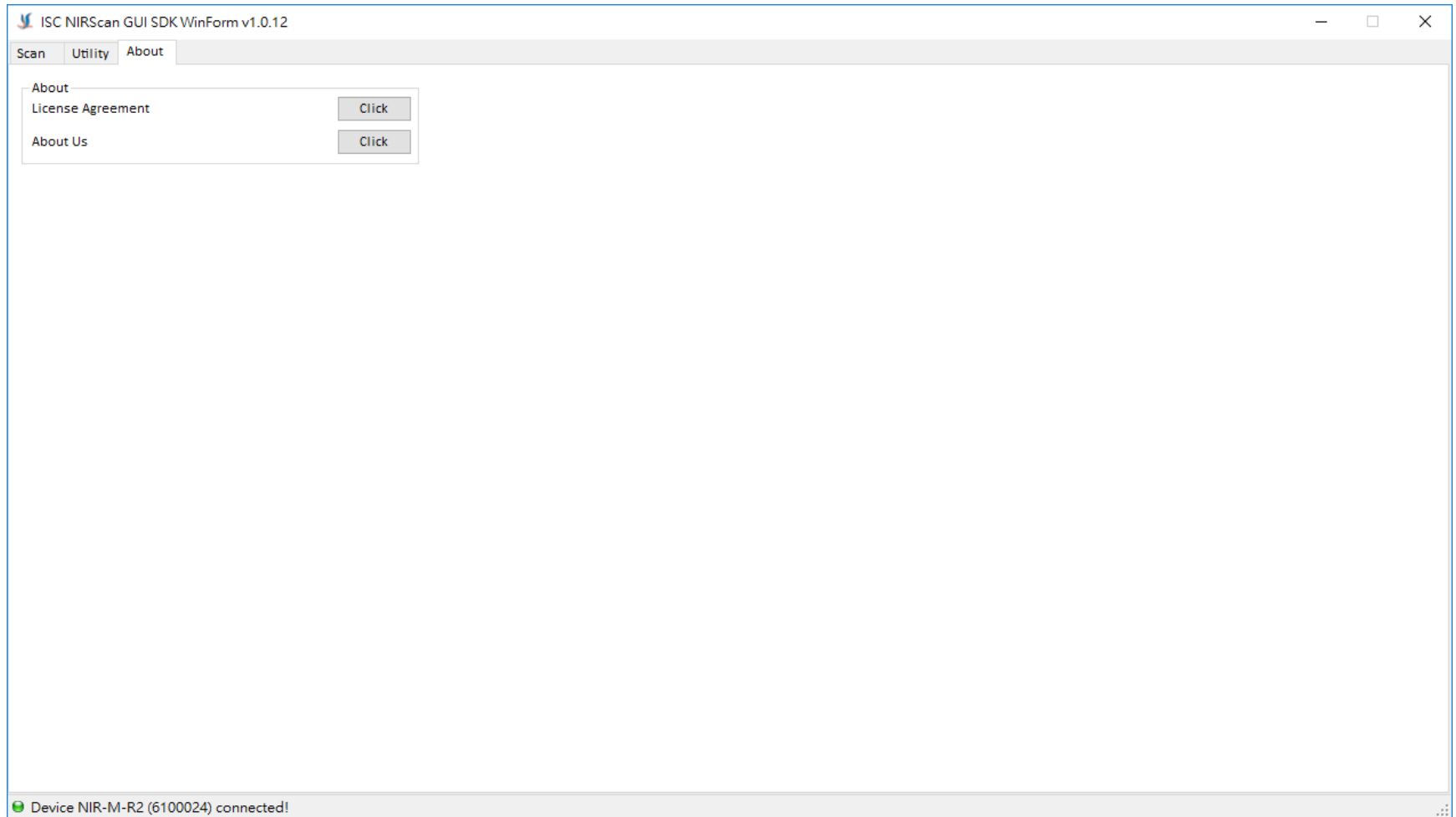
Update Reference Data

Restore Factory Reference

Device NIR-M-R2 (6100024) connected but advanced functions locked!

- **Reset System:** Reset firmware and application software.
- **Update Reference Data:** Replace factory reference data to customized reference data.
- **Backup/Restore:** Only can backup or restore factory reference data.

# Help

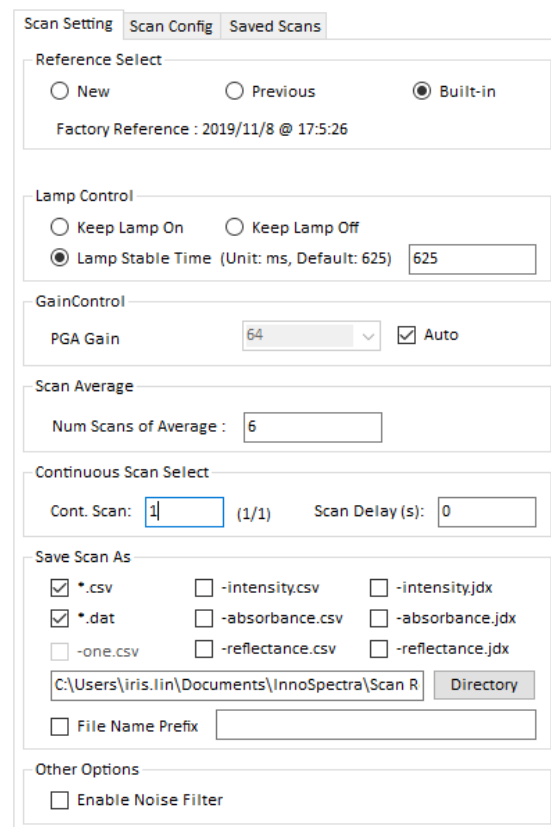




# PERFORMING A SCAN

# Scan Setting

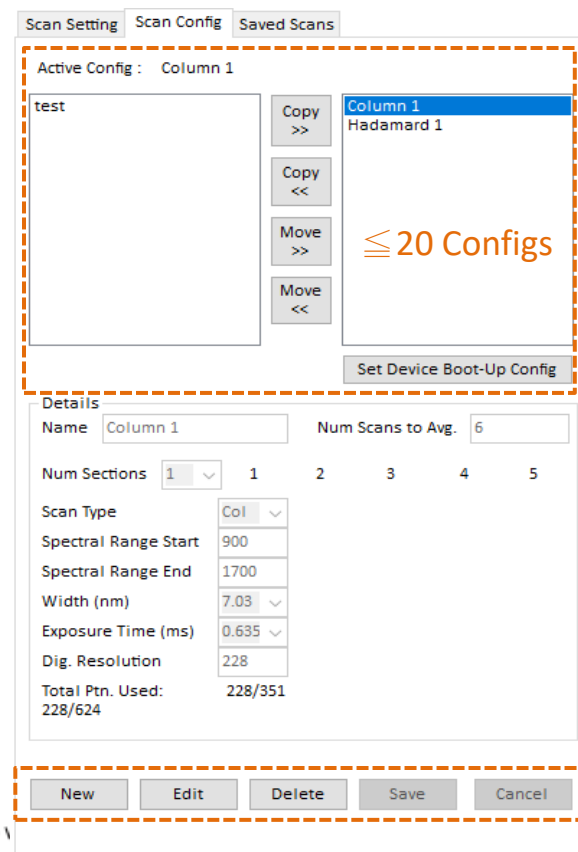
- **Reference Selection:** Allows the user to choose the reference for the absorbance or reflectance graph. The reference options include:
  - Built-In: Interpolates the reference stored on TIVA EEPROM at the factory to match the current scan configuration parameters.
  - Previous: Choose the reference from the previous use of the “New” option.
  - New: Place a highly reflective material like a metal coated with Spectralon on the sample window and perform a scan. This new scan is stored on the PC and can then be selected with the “Previous” reference radio button.
- **Lamp Control:** Controls lamp on/off and lamp stable time. When “Lamp Stable Time” is selected, user can set lamp stable time to extend lamp stabilization. This allows the user to avoid any lamp stability issues and reduce lamp wear caused by turning on and off the lamps, as well as the additional time needed to wait for the lamps to stabilize before executing a scan.
- **Scan Average:** Allow the user to change average times.
- **Gain Control:** Allows the user to choose the gain setting for scan.
  - Auto: System will calculate a suitable gain value.
  - Fixed: User select one gain value.
- **Continue Scan:** Allows the user to do auto repeat scan.
- **Save Scan As:** Allows the user to save which kind of file and where to store them.
- **Other Options:** The slew configuration has sections of column type and exposure time=0.635ms can enable this noise filter.



The screenshot shows the 'Scan Setting' window of the InnoSpectra software. It features several tabs: 'Scan Setting' (active), 'Scan Config', and 'Saved Scans'. The 'Reference Select' section has three radio buttons: 'New', 'Previous', and 'Built-in' (selected). Below it, the 'Factory Reference' is listed as '2019/11/8 @ 17:5:26'. The 'Lamp Control' section has three radio buttons: 'Keep Lamp On', 'Keep Lamp Off', and 'Lamp Stable Time' (selected). The 'Lamp Stable Time' is set to 625 ms. The 'GainControl' section has a 'PGA Gain' dropdown set to 64 and an 'Auto' checkbox checked. The 'Scan Average' section has a 'Num Scans of Average' input set to 6. The 'Continuous Scan Select' section has a 'Cont. Scan' input set to 1 and a 'Scan Delay (s)' input set to 0. The 'Save Scan As' section has checkboxes for file formats: \*.csv, \*.dat, \*.one.csv, \*.intensity.csv, \*.absorbance.csv, \*.reflectance.csv, \*.intensity.jdx, \*.absorbance.jdx, and \*.reflectance.jdx. The 'File Name Prefix' is set to 'C:\Users\iris.lin\Documents\InnoSpectra\Scan R'. The 'Other Options' section has an 'Enable Noise Filter' checkbox.

# Scan Configuration

- Local configuration saved to the PC. Device configuration saved on the device at most 20 sets.
- Built-in configurations: **Column 1, Hadamard 1.**
- *Italic* is the system boot-up configuration which can be set from “Set Device Boot-Up Config” button.
- The “Copy” and “Move” buttons allow copying or moving scan configurations stored on the PC to the device or **from the device to the PC.**
- Single click one configuration that can display data to the Details block.
- Double click one configuration that can set to the device, and display with orange color.
- “New” button can create a configuration.
- “Edit” button can edit the selected configuration.
- **“Delete” button can delete the selected configuration.**
- “Save” button can save editing to local or device.
- “Cancel” button can quit editing without saving.



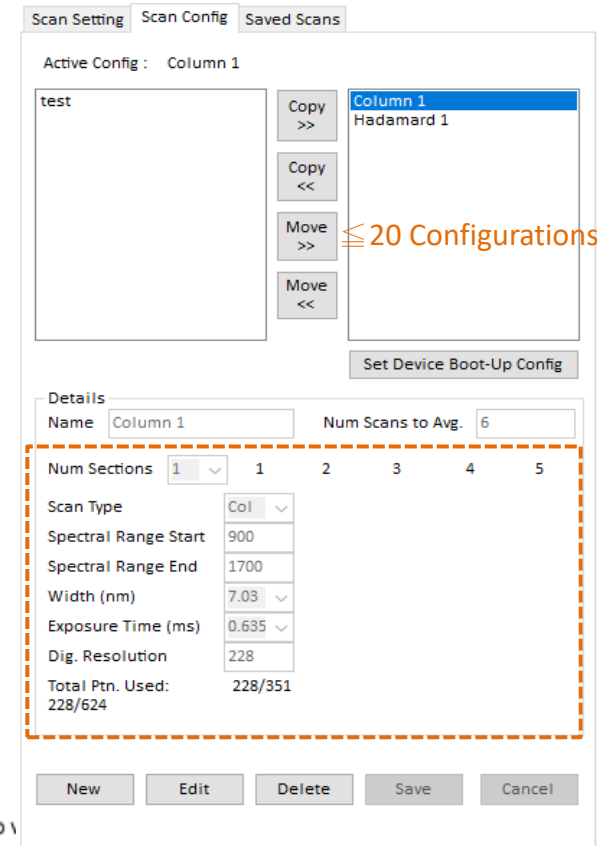
The screenshot shows the 'Scan Configuration' window with three tabs: 'Scan Setting', 'Scan Config', and 'Saved Scans'. The 'Scan Config' tab is active, showing a list of configurations. The 'Active Config' is 'Column 1'. The list contains 'test', 'Column 1', and 'Hadamard 1'. The 'Column 1' configuration is highlighted in blue. To the right of the list, there is a counter showing '≤ 20 Configs'. Below the list, there is a button labeled 'Set Device Boot-Up Config'. The 'Details' section below the list shows the following settings:

Name	Column 1	Num Scans to Avg.	6
Num Sections	1	2	3
Scan Type	Col	4	5
Spectral Range Start	900		
Spectral Range End	1700		
Width (nm)	7.03		
Exposure Time (ms)	0.635		
Dig. Resolution	228		
Total Ptn. Used:	228/351		
	228/624		

At the bottom of the window, there are five buttons: 'New', 'Edit', 'Delete', 'Save', and 'Cancel'.

# Scan Configuration

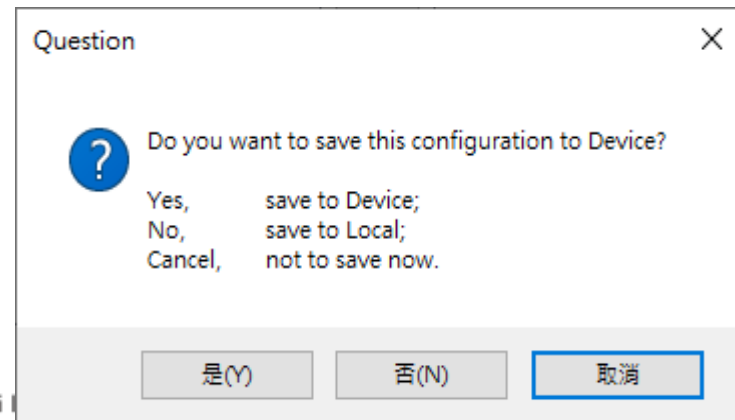
- **Name:** Configuration name which display to the list.
- **Number of Scans to Average:** This is the repeated continuous scans that are averaged together.
- **Number of Sections:** A scan can be broken up into 1 ~ 5 sections. Each section can have individual set of the following parameters:
  - **Scan Type:**
    - Column: Selects one wavelength at a time.
    - Hadamard: Creates a set with several wavelengths multiplexed at a time and then decodes the individual wavelengths.
  - **Spectral Range (nm):** Start and End wavelengths or spectral range of interest for the scan between 900 nm to 1700 nm.
  - **Width (nm):** This number selects the width of the groups of pixels in the generated **Column** or **Hadamard** patterns.
  - **Exposure Time (ms):** The exposure time can be individually set for each section in the range of **0.635ms** to **60.960ms**.
  - **Digital resolution:** This number defines how many wavelength points are captured across the defined spectral range. Each wavelength point corresponds to a pattern that is displayed on the DMD.
- **Total Patterns Used:** The GUI computes the maximum number of wavelength points and indicates then in the bottom of each section. The total maximum number of patterns for all sections of a scan is 624.



The screenshot shows the 'Scan Config' tab of the InnoSpectra software. The 'Active Config' is 'Column 1'. A list on the right shows 'Column 1' and 'Hadamard 1'. Below this is a 'Details' section with various parameters: Name (Column 1), Num Scans to Avg. (6), Num Sections (1), Scan Type (Col), Spectral Range Start (900), Spectral Range End (1700), Width (nm) (7.03), Exposure Time (ms) (0.635), Dig. Resolution (228), and Total Ptn. Used: 228/624. A dashed orange box highlights the 'Details' section. A note '≤ 20 Configurations' is written next to the list. At the bottom are buttons for 'New', 'Edit', 'Delete', 'Save', and 'Cancel'.

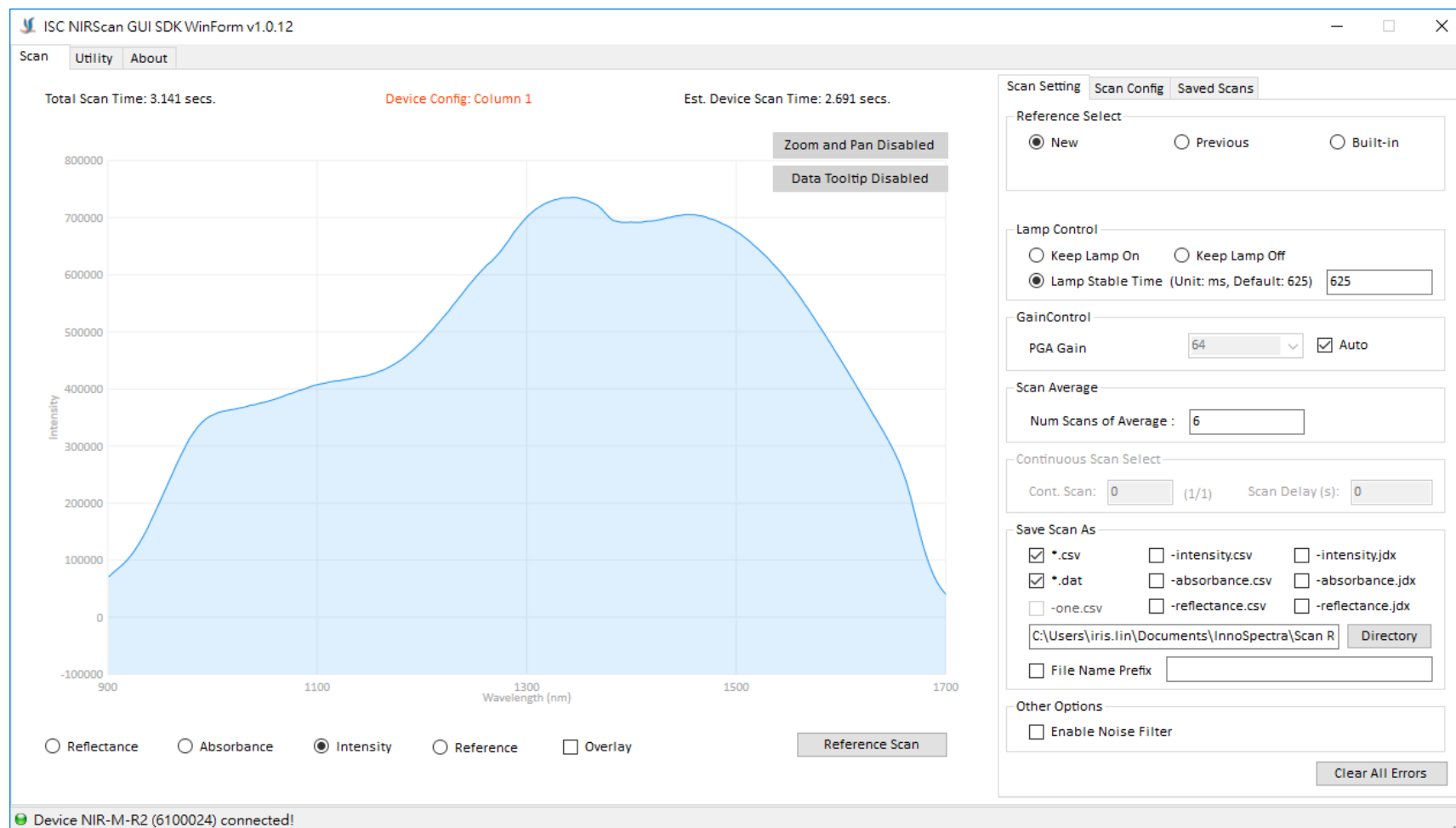
# Create A Scan Configuration

1. Click “New” button.
2. Enter the configuration name.
3. Enter the number of scans to average for corresponding back-to-back scans averaged together.
4. Enter the number of sections. The section number doesn’t exceed 5 sections. Sections can overlap in start and end wavelengths.
5. For each section:
  - a. Select the scan type: column or hadamard.
  - b. Type in the desired spectral range between 900 and 1700 nm.
  - c. Select the width that corresponds to the smallest wavelength content that you want to resolve.
  - d. Enter the desired exposure time.
  - e. Enter the desired digital resolution which is number of wavelength points captured across the spectral range.
6. Select saving to local or device or cancel to continue editing. After saving the configuration, it will synchronize to Configuration List.



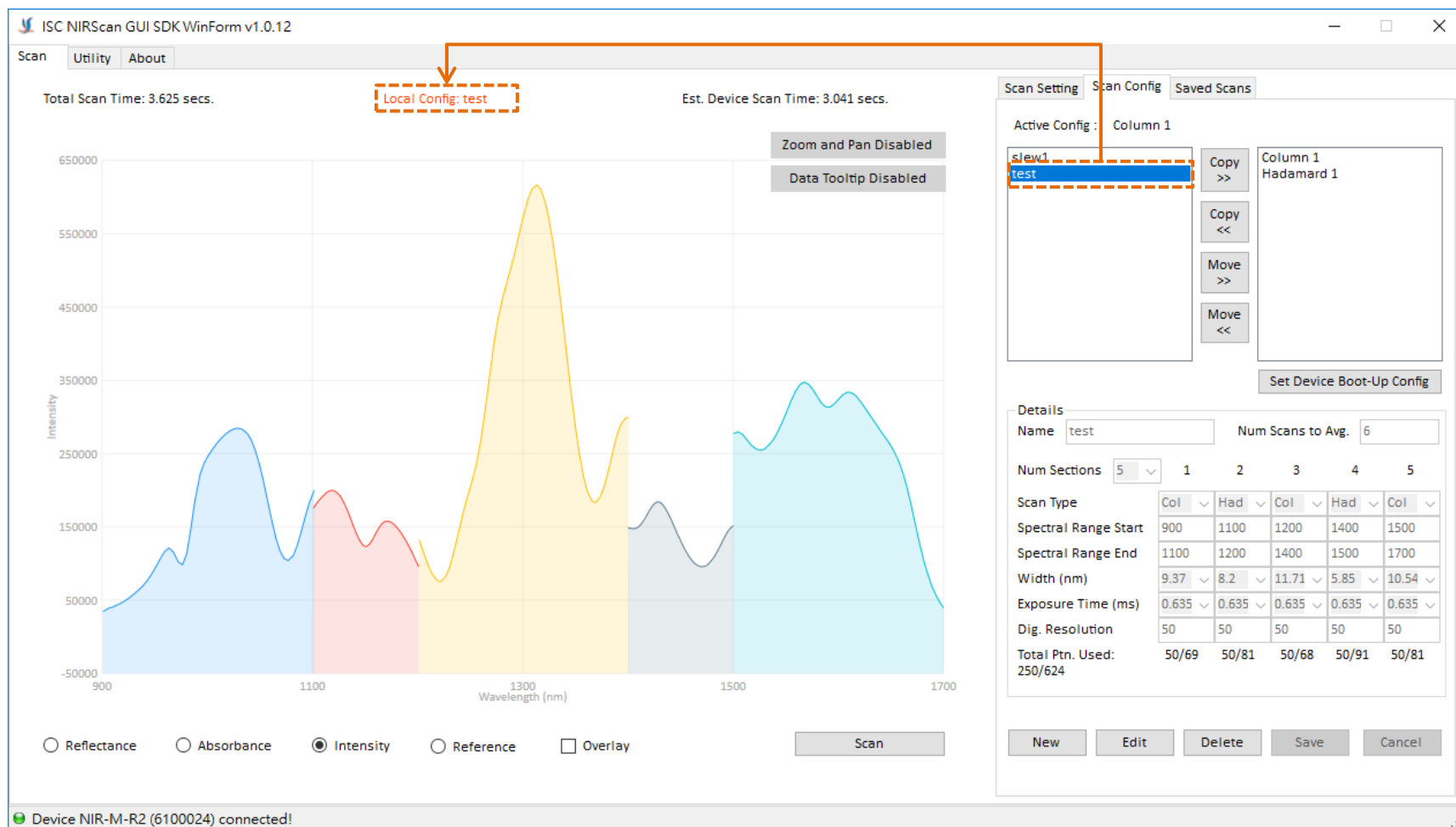
# Scanning A Local Reference

- Select a configuration and double click to set to the device.
- Select “New” reference to perform a scan.
- This new scan is stored on the PC and can then be selected with the “Previous” reference radio button.



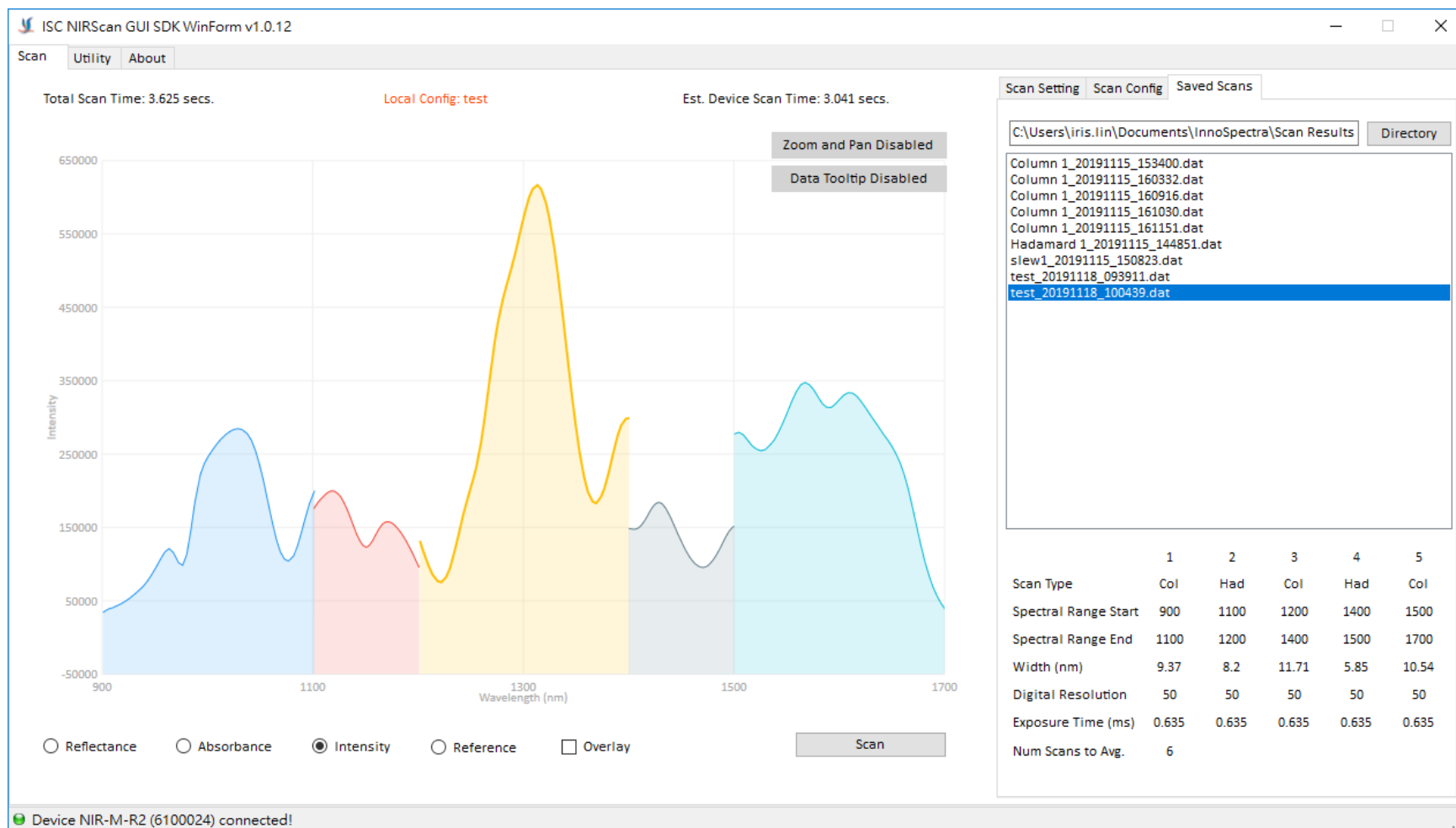
# Scanning A Sample

- Select a configuration and double click to set to the device.
- Select the reference from built-in or previous.
- The location of the scan is saved under the “Save Scan As.”
- Click “Scan” button to perform a new scan.



# Saved Scans

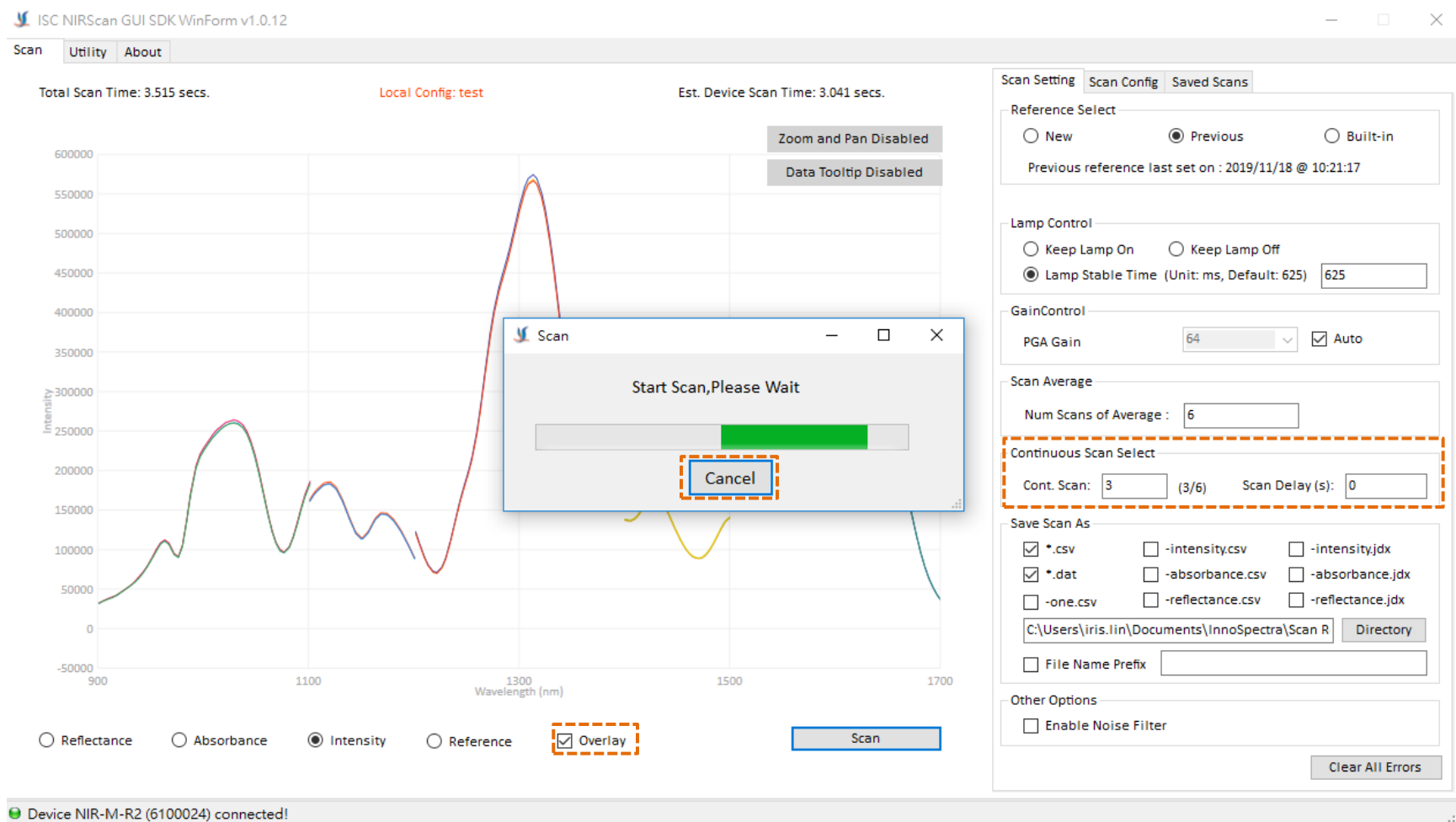
- To display previous scans, select “Saved Scans” tab. The files are stored with the name of the scan configuration and date and time of the scan.
- To plot a file, select one of the files as shown in below.
- The “Saved Scans” tab can read the file offline.





# Continuous Scan

- In addition to a single scan also provides continuous scanning, and can overlay the scan results to view trends.
- Input the number of Continuous Scans and Scan Delay Time, and click “Scan” button to perform scans. Press “Cancel” to stop continuous scan if user wants.



# UPDATE BUILT-IN REFERENCE DATA

# Backup Factory Reference

- This function only backs up the factory reference data and can not be executed once the built-in reference data has been modified.
- Before replacing device's factory reference data, user needs to back up the data. This data will be saved to the PC.

ISC NIRScan GUI SDK WinForm v1.0.12

Scan Utility About

Model Name

Serial Number

Set Get Set Get

Date and Time

Sync Get

Lamp Usage

 (hours)

Set Get

Sensors

Battery Changer Status

Battery Capacity

System Humidity

System Temp

Tiva Temp

Lamp Intensity

Read

TIVA Firmware Update

File Name

Browse Update

DLPC150 Firmware Update

File Name

Browse Update

Calibration Coefficients

Cal Coeff Ver : 0 Pix-Wave Coeff 0

Ref Cal Ver : 0 Pix-Wave Coeff 1

Scan Cfg Ver : 0 Pix-Wave Coeff 2

Shift Vect Coeff 0

Shift Vect Coeff 1

Shift Vect Coeff 2

Write Enable

Write Generic

Restore Factory Calibration Data

Read Coeffs

Write Coeffs

Device Information

GUI Version	1.0.12
Tiva SW Version	2.3.2
DLPC Flash Version	2.2.0
Spectrum Library Version	2.0.4
Main Board Version	D
Detector Board Version	B
Model Name	NIR-M-R2
Device Serial Number	6100024
Manufacturing Serial Number	70UB113G001AK6100024
Device UUID	D6:65:30:51:9A:82:3D:2A
Lamp Usage	NA

Activation Key

Key

Set Clear

Status : Activated!

Manage

Device

Reset System

Click

Backup Factory Reference

Click

Update Reference Data

Click

Restore Factory Reference

Click

Device NIR-M-R2 (6100024) connected!

# Restore Factory Reference

- This function only restores the factory reference data, which can not be performed without backing up the data.
- The factory reference data is restored from the PC.

ISC NIRScan GUI SDK WinForm v1.0.12

Scan Utility About

Model Name

Serial Number

Set Get

Date and Time

Sync Get

Lamp Usage

 (hours)
 

Set Get

Sensors

Battery Changer Status

Battery Capacity

System Humidity

System Temp

Tiva Temp

Lamp Intensity

Read

TIVA Firmware Update

File Name

Browse

Update

DLPC150 Firmware Update

File Name

Browse

Update

Calibration Coefficients

Cal Coeff Ver : 0 Pix-Wave Coeff 0

Ref Cal Ver : 0 Pix-Wave Coeff 1

Scan Cfg Ver : 0 Pix-Wave Coeff 2

Shift Vect Coeff 0

Shift Vect Coeff 1

Shift Vect Coeff 2

Write Enable

Write Generic

Restore Factory Calibration Data

Read Coeffs

Write Coeffs

Device Information

GUI Version	1.0.12
Tiva SW Version	2.3.2
DLPC Flash Version	2.2.0
Spectrum Library Version	2.0.4
Main Board Version	D
Detector Board Version	B
Model Name	NIR-M-R2
Device Serial Number	6100024
Manufacturing Serial Number	70UB113G001AK6100024
Device UUID	D6:65:30:51:9A:82:3D:2A
Lamp Usage	NA

Activation Key

Key

Set Clear

Status : Activated!

Manage

Device

Reset System

Click

Backup Factory Reference

Click

Update Reference Data

Click

Restore Factory Reference

Click

Device NIR-M-R2 (6100024) connected!

# Replace Built-In Reference

- Before replacing stored reference data, preparing a highly reflective material. A 99% reflective material can be created by coating a metal with Spectralon®.
- Before replacing stored reference data, user needs to read User Agreements to agree to bear the consequences.

Question

?

IMPORTANT!!!

This will REPLACE your FACTORY REFERENCE DATA and could NOT be REVERTED.

Are you sure you want to do this ?

Step 1

是(Y) 否(N)

Question

?

User Agreements:

1. I am well aware of the purpose of factory reference data and have been well trained to replace it.
2. I fully understand that the factory reference data can be replaced but not revertible.
3. I agree to pay extra fee to recover the factory reference data if I make anything wrong.

I agree with above terms and would like to continue the process.

Step 2

是(Y) 否(N)

Question

?

IMPORTANT!!!

Please confirm again with this process.

Do you still want to do this?

Step 3

是(Y) 否(N)

Question

?

Please place the reference sample and press 'OK' to start the reference scan...

Step 4

確定 取消

# FIRMWARE UPDATE

# Tiva Firmware Update

- To update the TIVA FW, click the “Browse” button to search for the TIVA FW file (for example, \\ISC-NIRScan-Tiva-v2.3.2.bin). Then, click the “Update” button. The firmware will be flashed on the TIVA internal Flash while the progress bar indicates the update process.
- The “Tiva Flash is empty/erased” check box needs to be enabled if no firmware was previously stored on the system or if the TIVA Flash was erased.

TIVA Firmware Update

File Name

# DLPC Firmware Update

- To update the DLPC150 firmware, click the “Browse” button to search for the DLPC150 firmware file (for example, \\DLPR150PROM\_2.0.0.img). Then, click the “Update” button. The firmware will be flashed to the board while the progress bar indicates the update process.

DLPC150 Firmware Update

File Name

Browse

Update



# Thank You



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