

Foxit PDF SDK for C API 11.1 Upgrade Warnings

This document contains a list of items that developers looking to upgrade to Foxit PDF SDK for C API 11.1 from previous version should pay attention to. Changes to code may be required in order for your projects to compile using the new version.

Upgrading to version 11.1 from version 11.0

If you are upgrading from version 11.0 to version 11.1, please take note of the changes that occurred between version 11.0 and version 11.1.

- In **FSActionCallback** struct, add some new callback functions as below:

```
void (*NotifyBeginDoJob)(void* user_data, const FS_PDFDOC_HANDLE document,
FSJavascriptEventType event_type);

void (*NotifyAfterDataChange)(void* user_data, const FS_PDFDOC_HANDLE document,
FSJavascriptModifyItemInfo modify_item_info);

void (*NotifyEndDoJob)(void* user_data, const FS_PDFDOC_HANDLE document,
FSJavascriptEventType event_type);

FS_BOOL (*InitModifyItem)(void* user_data, const FS_PDFDOC_HANDLE document,
FSModifyItemType item_type, int page_index, const wchar_t*dict_name);

void (*ResetModifyItem)(void* user_data, const FS_PDFDOC_HANDLE document);

int (*GetVisiblePageCount)(void* user_data, const FS_PDFDOC_HANDLE document);

int (*GetVisiblePage)(void* user_data, const FS_PDFDOC_HANDLE document, int index);
```

- In **FSDocProviderCallback** struct, add a new callback function as below:

```
void (*NotifyWidgetChangeInfo)(void* user_data, const FS_XFADOC_HANDLE doc,
FSXFAWidgetModifyInfo change_info);
```

- In **FSOCRCallback**, add a new callback function as below:

```
FS_BOOL (*IsImageIgnored)(void* user_data, FS_IMAGEOBJECT_HANDLE* image_object);
```

- In **FSPDF2WordSettingData** struct, add a new member as below:

```
int max_blank_paragraphs_per_page_bottom;
```

- In **FSPDF2ExcelSettingData** struct, add two new members as below:

```
FS_BOOL enable_aggressive_table_repair;
FS_BOOL include_watermarks;
```

- In **FSPDF2PowerPointSettingData** struct, add a new member as below:

```
FS_BOOL enable_adapt_to_largest_page;
```

- In **FSPDF2OfficeSettingData** struct, add a new member as below:

```
FS_BOOL enable_matching_system_fonts;
```

- In **FSOCRConfig** struct, add three new members as below:

```
FS_BOOL is_auto_overwrite_resolution;
```

```
int resolution_to_overwrite;
```

```
int confidence;
```

- Some functions have been changed in version 11.1. The following table lists the functions mapping between version 11.0 and 11.1.

Struct/Function	SDK 11.0	SDK 11.1
FSActionCallback	FSRectF (*GetPageWindowRect)(void* user_data)	FSRectF (*GetPageWindowRect)(void* user_data, const FS_PDFDOC_HANDLE document, int page_index);
FSIconProviderCallback	FS_PDFPAGE_HANDLE (*GetIcon)(void* user_data, FSAnnotType annot_type, const char* icon_name, FSDK_ARGB color);	FS_PDFPAGE_HANDLE (*GetIcon)(void* user_data, FSAnnotType annot_type, const char* icon_name, FSDK_ARGB color, FS_PDFDICTIONARY_HANDLE annot_dict);
FSDK_Convert_FromWord	FSErrorCode FSDK_Convert_FromWord(const wchar_t* src_word_file_path, const wchar_t* src_file_password, const wchar_t* saved_pdf_path, const FSWord2PDFSettingData setting_data)	FSErrorCode FSDK_Convert_FromWord(const wchar_t* src_word_file_path, const wchar_t* src_file_password, const wchar_t* saved_pdf_path, const FSWord2PDFSettingData setting_data, FSoOffice2PdfEngine engine)
FSDK_Convert_FromExcel	FSErrorCode FSDK_Convert_FromExcel(const wchar_t* src_excel_file_path, const wchar_t* src_file_password, const wchar_t* saved_pdf_path, const FSExcel2PDFSettingData setting_data)	FSErrorCode FSDK_Convert_FromExcel(const wchar_t* src_excel_file_path, const wchar_t* src_file_password, const wchar_t* saved_pdf_path, const FSExcel2PDFSettingData setting_data, FSoOffice2PdfEngine engine)
FSDK_Convert_FromPowerPoint	FSErrorCode FSDK_Convert_FromPowerPoint(const wchar_t* src_ppt_file_path, const wchar_t* src_file_password, const wchar_t* saved_pdf_path, const FSPowerPoint2PDFSettingData setting_data)	FSErrorCode FSDK_Convert_FromPowerPoint(const wchar_t* src_ppt_file_path, const wchar_t* src_file_password, const wchar_t* saved_pdf_path, const FSPowerPoint2PDFSettingData setting_data, FSoOffice2PdfEngine engine)

Struct/Function	SDK 11.0	SDK 11.1
FSDK_OCR_OCRPDFPage	FSErrorCode FSDK_OCR_OCRPDFPage(FS_OCR_HANDLE ocr_handle, FS_PDFPAGE_HANDLE pdf_page, FS_BOOL is_editable)	FSErrorCode FSDK_OCR_OCRPDFPage(FS_OCR_HANDLE ocr_handle, FS_PDFPAGE_HANDLE pdf_page, FS_BOOL is_editable, FSOCRProgressCallback* callback)
FSDK_OCR_OCRPDFPage0	FSErrorCode FSDK_OCR_OCRPDFPage0(FS_OCR_HANDLE ocr_handle, FS_PDFPAGE_HANDLE pdf_page, FS_BOOL is_editable, const FSOCRConfig config)	FSErrorCode FSDK_OCR_OCRPDFPage0(FS_OCR_HANDLE ocr_handle, FS_PDFPAGE_HANDLE pdf_page, FS_BOOL is_editable, const FSOCRConfig config, FSOCRProgressCallback* callback)
FSDK_OCR_OCRPDFDocument	FSErrorCode FSDK_OCR_OCRPDFDocument(FS_OCR_HANDLE ocr_handle, FS_PDFDOC_HANDLE pdf_doc, FS_BOOL is_editable)	FSErrorCode FSDK_OCR_OCRPDFDocument(FS_OCR_HANDLE ocr_handle, FS_PDFDOC_HANDLE pdf_doc, FS_BOOL is_editable, FSOCRProgressCallback* callback)
FSDK_OCR_OCRPDFDocument0	FSErrorCode FSDK_OCR_OCRPDFDocument0(FS_OCR_HANDLE ocr_handle, FS_PDFDOC_HANDLE pdf_doc, FS_BOOL is_editable, const FSOCRConfig config)	FSErrorCode FSDK_OCR_OCRPDFDocument0(FS_OCR_HANDLE ocr_handle, FS_PDFDOC_HANDLE pdf_doc, FS_BOOL is_editable, const FSOCRConfig config, FSOCRProgressCallback* callback)
FSDK_OCR_OCRConvertTo	FSErrorCode FSDK_OCR_OCRConvertTo(FS_OCR_HANDLE ocr_handle, FSOCRConvertFormat format, const wchar_t* src_pdf_path, const wchar_t* password, const wchar_t* saved_file_path, FS_RANGE_HANDLE page_range, FS_BOOL is_retain_flow_text)	FSErrorCode FSDK_OCR_OCRConvertTo(FS_OCR_HANDLE ocr_handle, FSOCRConvertFormat format, const wchar_t* src_pdf_path, const wchar_t* password, const wchar_t* saved_file_path, FS_RANGE_HANDLE page_range, FS_BOOL is_retain_flow_text, FSOCRProgressCallback* callback)
FSDK_OCR_OCRConvertTo0	FSErrorCode FSDK_OCR_OCRConvertTo0(FS_OCR_HANDLE ocr_handle, FSOCRConvertFormat format, const wchar_t* src_pdf_path, const wchar_t* password, const wchar_t* saved_file_path, FS_RANGE_HANDLE page_range, FS_BOOL is_retain_flow_text, const FSOCRConfig config)	FSErrorCode FSDK_OCR_OCRConvertTo0(FS_OCR_HANDLE ocr_handle, FSOCRConvertFormat format, const wchar_t* src_pdf_path, const wchar_t* password, const wchar_t* saved_file_path, FS_RANGE_HANDLE page_range, FS_BOOL is_retain_flow_text, const FSOCRConfig config, FSOCRProgressCallback* callback);
FSDK_OCR_OCRPDFDocuments	FSErrorCode FSDK_OCR_OCRPDFDocuments(FS_OCR_HANDLE ocr_handle, const FSOCRSettingData* ocrdatasetting_array, FS_UINT32 array_length_settingdata_array)	FSErrorCode FSDK_OCR_OCRPDFDocuments(FS_OCR_HANDLE ocr_handle, const FSOCRSettingData* ocrdatasetting_array, FS_UINT32 array_length_settingdata_array, FSOCRProgressCallback* callback)

Upgrading to version 11.0 from version 10.1

If you are upgrading from version 10.1 to version 11.0, please take note of the changes that occurred between version 10.1 and version 11.0.

- The multi-thread-safe API [FSErrorCode](#) [FSDK_Library_EnableThreadSafety\(FS_BOOL is_enable_thread_safety\)](#) is being gradually deprecated. Foxit PDF SDK will further enhance support for document-level thread safety. This requires users to ensure that each document runs on only one thread.

Furthermore, given the particularities of XFA and JavaScript, Foxit PDF SDK has introduced the parameter [enable_js_xfa_threadsafety](#) in [FSErrorCode](#) [FSDK_Library_Initialize0\(const char* sn, const char* key, FS_BOOL is_optimize_memory, FS_BOOL enable_js_xfa_threadsafety\)](#), allowing users to enable document-level thread safety for XFA and JavaScript.

- In **FSTableGeneratorCallback** struct, add a new callback function as below:

```
FSPageBasicInfo (*GetNewPageBasicInfo)(void* user_data, int page_index, float
rest_table_height, float table_width);
```

- Some functions have been changed in version 11.0. The following table lists the functions mapping between version 10.1 and 11.0.

Struct/Function	SDK 10.1	SDK 11.0
FSDK_PDFDoc_AddPagingSealSignature	FSErrorCode FSDK_PDFDoc_AddPagingSealSignature(FS_PDFDOC_HANDLE pdfdoc_handle, const FS_RANGE_HANDLE page_range, float width, float height, FS_PAGINGSEALSIGNATURE_HANDLE* return_value)	FSErrorCode FSDK_PDFDoc_AddPagingSealSignature(FS_PDFDOC_HANDLE pdfdoc_handle, const FS_RANGE_HANDLE page_range, float width, float height, FS_BOOL to_check_permission , FS_PAGINGSEALSIGNATURE_HANDLE* return_value)
FSOCRConfig	typedef struct _FSOCRConfig { FS_BOOL is_detect_pictures; FS_BOOL is_remove_noise; FS_BOOL is_correct_skew; FS_BOOL is_enable_text_extraction_mode; }FSOCRConfig;	typedef struct _FSOCRConfig { FS_BOOL is_detect_pictures; FS_BOOL is_remove_noise; FS_BOOL is_correct_skew; FS_BOOL is_enable_text_extraction_mode; FS_BOOL is_sequentially_process ; }FSOCRConfig;
FSDocProviderCallback	void (*SetFocus)(void* user_data, FS_XFAWIDGET_HANDLE xfa_widget)	void (*SetFocus)(void* user_data, FS_XFAWIDGET_HANDLE xfa_widget, FS_BOOL is_relayout)

Struct/Function	SDK 10.1	SDK 11.0
FSDK_Library_Initialize0	FSDK_Library_Initialize0(const char* sn, const char* key, FS_BOOL is_optimize_memory)	FSDK_Library_Initialize0(const char* sn, const char* key, FS_BOOL is_optimize_memory, FS_BOOL enable_js_xfa_threadsafety)
FSHTML2PDFSettingData	<pre>typedef struct _FSHTML2PDFSettingData { float page_width; float page_height; FS_BOOL is_to_page_scale; FSRectF page_margin; FSRotation rotate_degrees; FS_BOOL is_convert_link; FS_BOOL is_generate_tag; FSHTML2PDFPageMode page_mode; FS_BOOL to_generate_bookmarks; FSHTML2PDFScalingMode scaling_mode; FSHTML2PDFEncodingFormat encoding_format; FS_BOOL to_render_images; FS_BOOL to_remove_underline_for_link; FS_BOOL to_set_headerfooter; FS_WSTR headerfooter_title; FS_WSTR headerfooter_url; FS_WSTR bookmark_root_name; FS_BOOL to_resize_objects; FS_BOOL to_print_background; FS_BOOL to_optimize_tag_tree; FSHTML2PDFMediaStyle media_style; FS_BOOL to_load_active_content; FS_BOOL to_disable_sandbox; FS_BOOL to_use_blacklist; }FSHTML2PDFSettingData;</pre>	<pre>typedef struct _FSHTML2PDFSettingData { float page_width; float page_height; FS_BOOL is_to_page_scale; FSRectF page_margin; FSRotation rotate_degrees; FS_BOOL is_convert_link; FS_BOOL is_generate_tag; FSHTML2PDFPageMode page_mode; FS_BOOL to_generate_bookmarks; FSHTML2PDFScalingMode scaling_mode; FSHTML2PDFEncodingFormat encoding_format; FS_BOOL to_render_images; FS_BOOL to_remove_underline_for_link; FS_BOOL to_set_headerfooter; FS_WSTR headerfooter_title; FS_WSTR headerfooter_url; FS_WSTR bookmark_root_name; FS_BOOL to_resize_objects; FS_BOOL to_print_background; FS_BOOL to_optimize_tag_tree; FSHTML2PDFMediaStyle media_style; FS_BOOL to_load_active_content; FS_BOOL to_disable_sandbox; FS_BOOL to_use_blacklist; FS_BOOL to_hide_header; FS_BOOL to_hide_footer; FS_BOOL to_deny_local_file_access; }FSHTML2PDFSettingData;</pre>

Upgrading to version 10.1 from version 10.0

If you are upgrading from version 10.0 to version 10.1, please take note of the changes that occurred between version 10.0 and version 10.1.

- From version 10.1, the **FSTiledWatermarkSettings** struct has introduced a new member called **flags**. By default, the tiled watermark is no longer positioned at the top. To retain the original behavior, where the watermark appears at the top, you

need to set the `flags` member to `FSTiledWatermarkFlags.e_FSTiledWatermarkFlagsFlagOnTo`.

- The `FSDK_ImageObject_CloneBitmap(FS_IMAGEOBJECT_HANDLE imageobject_handle, const FS_GRAPHICSOBJECTS_HANDLE graphics_objects, FS_BITMAP_HANDLE* return_value)` function has been deprecated and replaced with `FSDK_ImageObject_CloneBitmap0(FS_IMAGEOBJECT_HANDLE imageobject_handle, const FS_PDFPAGE_HANDLE page, const FS_GRAPHICSOBJECTS_HANDLE graphics_objects, FS_BITMAP_HANDLE* return_value)`.
- In `FSPDF2OfficeSettingData` struct, the member "`metrics_data_folder_path`" has been deprecated. Instead, metrics data will be included in the dynamic library of Foxit PDF Conversion SDK.

Upgrading to version 10.0 from version 9.2

If you are upgrading from version 9.2 to version 10.0, please take note of the changes that occurred between version 9.2 and version 10.0.

- For Compliance module, the compliance resource files have been updated, please contact Foxit support team or sales team to get the latest resource files package.

Only the latest engine can be used with version 10.0, using the older engine will cause errors. Version 9.2 is not compatible with the latest engine, it will throw errors in multi-threading situations.

- If you are using an older version of Windows (for example, Windows 7 and Windows Server 2008), you may need to visit this link <https://support.microsoft.com/en-us/help/4019990/update-for-the-d3dcompiler-47-dll-component-on-windows> to download and install the "D3DCOMPILER_47.dll". If you do not do this, you may encounter errors.
- In `FSPDF2WordSettingData` struct, add two new members as below:

```
FS_BOOL enable_generate_headers_and_footers;  
FS_BOOL enable_generate_footnotes_and_endnotes;
```

- In `FSPDF2OfficeSettingData` struct, add two new members as below:

```
FSPDF2PowerPointSettingData power_point_setting_data;  
FSPDF2ExcelSettingData excel_setting_data;
```

Upgrading to version 9.2 from version 9.1

If you are upgrading from version 9.1 to version 9.2, please take note of the changes that occurred between version 9.1 and version 9.2.

- For PDF to Office module, the version of the PDF to Office resource files package naming Foxit PDF Conversion SDK (C++) should be 1.5 or higher.
- In **FSPDF2OfficeSettingData** struct, add three new members as below:

```
FS_RANGE_HANDLE page_range;  
FS_BOOL include_pdf_comments;  
FSPDF2WordSettingData word_setting_data;
```

- In **FSActionCallback** struct, add five new callback functions as below:

```
void (*EnablePageLoop)(void* user_data, FS_BOOL is_loop);  
FS_BOOL (*IsPageLoop)(void* user_data);  
void (*SetDefaultPageTransitionMode)(void* user_data, const wchar_t* trans_type,  
const wchar_t* trans_di);  
FS_BOOL (*IsCurrentDocOpenedInBrowser)(void* user_data);  
void (*PostMessageToHtml)(void* user_data, FS_WSTR* message_array, FS_UINT32  
message_array_length);
```

Upgrading to version 9.1 from version 9.0

If you are upgrading from version 9.0 to version 9.1, please take note of the changes that occurred between version 9.0 and version 9.1.

- For Compliance module, the compliance resource files have been updated, please contact Foxit support team or sales team to get the latest resource files package.
- In **FSActionCallback** struct:

1. add a new callback function as below:

```
FSSOAPResponseInfo (*SoapRequest)(void* user_data, const FSSOAPRequestProperties  
request_params);
```

2. the function **OpenDoc** has been changed as below:

SDK 9.0:

```
FS_BOOL (*OpenDoc)(void* user_data, const wchar_t* file_path, const FS_WSTR*  
password);
```

SDK 9.1:

```
FS_PDFDOC_HANDLE (*OpenDoc)(void* user_data, const wchar_t* file_path, const
FS_WSTR* password);
```

- The APIs of Foxit PDF SDK C language has been modified to support pure C language. The following are the changes to the pure C interface:

1. Only use C's standard libraries and headers, remove C++ Specific Features, Classes and Objects.
2. Change interface parameters from references to pointers.
3. Change the file extensions of simple demos from **.cpp** to **.c** to explicitly indicate that these files now exclusively contain C code.
4. Design the pure C interface using function pointers or similar constructs to pass callback functions, rather than relying on C++ Class with virtual functions.

The following are two examples of using the Foxit PDF SDK pure C interface:

▪ Load a document

```
wchar_t input_file[MAX_FILE_PATH] = { 0 };
swprintf_s(input_file, MAX_FILE_PATH, L"annotation_input.pdf");
FS_PDFDOC_HANDLE doc;
FSErrorCode error_code = FSDK_PDFDoc_Create0(input_file, &doc);
if (error_code != e_FSErrSuccess) return 1;

error_code = FSDK_PDFDoc_Load(doc, NULL);
if (error_code != e_FSErrSuccess) {
    FSDK_PDFDoc_Release(doc);
    return 1;
}
```

▪ Use FSReaderCallback

```
FILE* file = NULL;
FS_BOOL is_large_file = FALSE;
FS_INT64 gGetSize(void* user_data) {
    if (!user_data) return 0;
    if (is_large_file) {
        long long size_long;
        _fseeki64(file, 0, SEEK_END);
        size_long = _ftelli64(file);
        return size_long;
    } else {
        fseek(file, 0, SEEK_END);
        return (FS_INT64)ftell(file);
    }
    return 0;
}

FS_BOOL gReadBlock(void* user_data, void* buffer, FS_INT64 offset, size_t size) {
```



```

if (is_large_file) {
    long long read_size;
    _fseeki64(file, offset, SEEK_SET);

    read_size = fread(buffer, 1, size, file);
    return read_size == size ? TRUE : FALSE;
} else {
    if (!file)
        return FALSE;
    if (0 != fseek(file, (long)offset, 0))
        return FALSE;
    if (0 == fread(buffer, size, 1, file))
        return FALSE;
    return TRUE;
}
return FALSE;
}

static void gRelease(void* user_data) {
    if (file) {
        fclose(file);
        file = NULL;
    }
    if (user_data)
        free(user_data);
}

filereadercallback = (FSReaderCallback*)malloc(sizeof(FSReaderCallback));
filereadercallback->user_data = filereadercallback;
filereadercallback->GetSize = gGetSize;
filereadercallback->ReadBlock = gReadBlock;
filereadercallback->Release = gRelease;
_wfopen_s(&file, "AboutFoxit.pdf", L"rb");

```

Upgrading to version 9.0 from version 8.4.2

If you are upgrading from version 8.4.2 to version 9.0, please take note of the changes that occurred between version 8.4.2 and version 9.0.

- For HTML to PDF module, the HTML to PDF engine has been upgraded, please contact Foxit support team or sales team to get the latest engine files package.
- For OCR module, the OCR engine for Windows has been upgraded, please contact Foxit support team or sales team to get the latest engine files package.
- In **FSActionCallback** struct:
 1. add four new callback functions as below:

```

void (*Query)(void* user_data, const wchar_t* keywords, FSSearchScope search_scope,
const FSSearchOption& search_option, const wchar_t* di_path);

```

```

FSSearchIndexConfig (*AddSearchIndex)(void* user_data, const wchar_t* di_path,
FS_BOOL is_selected);

FS_BOOL (*RemoveSearchIndex)(void* user_data, const FSSearchIndexConfig&
search_index_config);

void (*GetSignatureAPStyleNameList)(void* user_data, FS_WSTR*& return_stringarray,
FS_UINT32& return_stringarray_length);

```

- the function **SelectPageNthWord** has been changed as below:

SDK 8.4.2:

```

void (*SelectPageNthWord)(void* user_data, int page_index, int word_index, FS_BOOL
is_show_selection);

```

SDK 9.0:

```

void (*SelectPageNthWord)(void* user_data, int page_index, int start_offset, int end_offset,
FS_BOOL is_show_selection);

```

Upgrading to version 8.4.2 from version 8.4.1

There is only one minor upgrade warning in this release when moving from version 8.4.1 to version 8.4.2:

- For OCR module, the OCR engine has been upgraded, please contact Foxit support team or sales team to get the latest engine files package.

Upgrading to version 8.4.1 from version 8.4

There is only one minor upgrade warning in this release when moving from version 8.4 to version 8.4.1:

- For HTML to PDF module, the HTML to PDF engine has been upgraded, please contact Foxit support team or sales team to get the latest engine files package.

Upgrading to version 8.4 from version 8.3

If you are upgrading from version 8.3 to version 8.4, please take note of the changes that occurred between version 8.3 and version 8.4.

- For OCR module, the OCR engine has been upgraded, please contact Foxit support team or sales team to get the latest engine files package.
- In **FSActionCallback** struct:

1. Add thirty-one new callback functions as below:

```
void (*SetCurrentPage0)(void* user_data, const FS_PDFDOC_HANDLE& document,
const FS_DESTINATION_HANDLE& destination);
void (*CloseDoc)(void* user_data, const FS_PDFDOC_HANDLE& document, FS_BOOL
is_prompt_to_save);
FS_BOOL (*IsLocalFile)(void* user_data, const FS_PDFDOC_HANDLE& document);
FS_WSTR (*GetAttachmentsFilePath)(void* user_data, const FS_PDFDOC_HANDLE&
pdf_doc, const wchar_t* name);
FS_WSTR (*GetExtractedEmbeddedFilePath)(void* user_data, const FS_PDFDOC_HANDLE&
pdf_doc, const wchar_t* name);
FS_BOOL (*Print0)(void* user_data, const FS_PDFDOC_HANDLE& document, const
FSPrintParams& print_params);
FS_WSTR (*GetUntitledBookmarkName)(void* user_data);
void (*GetPrinterNameList)(void* user_data, FS_WSTR*& return_stringarray, FS_UINT32&
return_stringarray_length);
FS_BOOL (*AddToolButton)(void* user_data, const FSButtonItem& button_item);
FS_BOOL (*RemoveToolButton)(void* user_data, const wchar_t* button_name);
void (*GetMenuItemNameList)(void* user_data, FSMenuList*& return_menulistarray,
FS_UINT32& return_menulistarray_length);
FS_BOOL (*AddMenuItem)(void* user_data, const FSMenuItemConfig& menu_item_config,
FS_BOOL is_prepend);
FS_BOOL (*AddSubMenu)(void* user_data, const FSMenuItemConfig& menu_item_config);
FS_BOOL (*ShowDialog)(void* user_data, const FSDialogDescriptionConfig& dlg_config);
FS_BOOL (*GetFullScreen)(void* user_data);
void (*SetFullScreen)(void* user_data, FS_BOOL is_full_screen);
void (*OnFieldValueChanged)(void* user_data, const wchar_t* field_name,
FSJSFieldValueChangeType type, const FS_WSTR *value_before_changed, FS_UINT32
value_before_changed_array_length_, const FS_WSTR *value_after_changed, FS_UINT32
value_after_changed_array_length_);
void (*UpdateLogicalLabel)(void* user_data);
FSJsMailResult (*MailDoc)(void* user_data, const FS_PDFDOC_HANDLE& document,
const wchar_t* to_address, const wchar_t* cc_address, const wchar_t* bcc_address, const
wchar_t* subject, const wchar_t* message, FS_BOOL is_ui);
FS_WSTR (*GetTemporaryFileName)(void* user_data, const FS_PDFDOC_HANDLE&
document, const wchar_t* file_suffix_name);
FSMediaPlayerCallback* (*OpenMediaPlayer)(void* user_data, const FSPlayerArgs&
player_args);
FS_WSTR (*GetTemporaryDirectory)(void* user_data);
void (*Scroll)(void* user_data, const FSPointF& point);
```

```
void (*SelectPageNthWord)(void* user_data, int page_index, int word_index, FS_BOOL
is_show_selection);
FSPointF (*GetMousePosition)(void* user_data);
FSRectF (*GetPageWindowRect)(void* user_data);
FSLayoutMode (*GetLayoutMode)(void* user_data);
void (*SetLayoutMode)(void* user_data, FSLayoutMode layout_mode, FS_BOOL
is_cover_mode);
float (*GetPageScale)(void* user_data);
void (*SetPageScale)(void* user_data, FSZoomMode zoom_mode, const
FS_DESTINATION_HANDLE& dest);
FSZoomMode (*GetPageZoomMode)(void* user_data);
```

- In **fs_pdfpage.c.h** header file:

1. The function **FSDK_PDFPage_Transform** has added a new parameter as below:

SDK 8.3:

```
FSErrorCode FSDK_PDFPage_Transform(FS_PDFPAGE_HANDLE& pdfpage_handle,
const FSMatrix& matrix, FS_BOOL need_transform_clip_path, FS_BOOL& return_value);
```

SDK 8.4:

```
FSErrorCode FSDK_PDFPage_Transform(FS_PDFPAGE_HANDLE& pdfpage_handle,
const FSMatrix& matrix, FS_BOOL need_transform_clip_path, FS_BOOL
need_transform_annotations, FS_BOOL& return_value);
```

- In **fs_annot.c.h** header file:

1. Remove FSDK_PagingSeal_* functions from fs_annot.c.h.

Upgrading to version 8.3 from version 8.2

If you are upgrading from version 8.2 to version 8.3, please take note of the changes that occurred between version 8.2 and version 8.3.

- For HTML to PDF module, the HTML to PDF engine has been upgraded, please contact Foxit support team or sales team to get the latest engine files package.
- In **fs_annot.c.h** header file, the following two functions have been deprecated:

```
FSErrorCode FSDK_FreeText_GetAlignment(FS_FREETEXTANNOT_HANDLE& freetext_handle,
FSAlignment& return_value);
FSErrorCode FSDK_FreeText_SetAlignment(FS_FREETEXTANNOT_HANDLE& freetext_handle,
FSAlignment alignment);
```

- In **FSActionCallback** struct:

1. the function **PopupMenu** has added a new parameter as below:

SDK 8.2:

```
FS_WSTR (*PopupMenu)(void* user_data, FSMenuList* menulist_array, FS_UINT32
array_length_menus);
```

SDK 8.3:

```
FS_WSTR (*PopupMenu)(void* user_data, FSMenuList* menulist_array, FS_UINT32
array_length_menus, FS_BOOL& is_selected_item);
```

2. the function **SubmitForm** has added a new parameter as below:

SDK 8.2:

```
FS_BOOL (*SubmitForm)(void* user_data, const FS_PDFDOC_HANDLE& document, void*
form_data, FS_UINT32 length, const char* url);
```

SDK 8.3:

```
FS_BOOL (*SubmitForm)(void* user_data, const FS_PDFDOC_HANDLE& document, void*
form_data, FS_UINT32 length, const char* url, FSFileType file_format_type);
```

3. add a new function as below:

```
FSMenuItemEx (*PopupMenuEx)(void* user_data, FSMenuItemEx* menuitem_array,
FS_UINT32 array_length_menus, FS_BOOL& is_selected_item);
```

- The struct of **FSHTML2PDFSettingData** has been changed:

SDK 8.2:

```
struct FSHTML2PDFSettingData {
    float page_width;
    float page_height;
    FS_BOOL is_to_page_scale;
    FSRectF page_margin;
    FSRotation rotate_degrees;
    FS_BOOL is_convert_link;
    FS_BOOL is_generate_tag;
    FSHTML2PDFPageMode page_mode;
    FS_BOOL to_generate_bookmarks;
    FSHTML2PDFScalingMode scaling_mode;
};
```

SDK 8.3:

```
struct FSHTML2PDFSettingData {
```

```

float page_width;
float page_height;
FS_BOOL is_to_page_scale;
FSRectF page_margin;
FSRotation rotate_degrees;
FS_BOOL is_convert_link;
FS_BOOL is_generate_tag;
FSHTML2PDFPageMode page_mode;
FS_BOOL to_generate_bookmarks;
FSHTML2PDFScalingMode scaling_mode;
FSHTML2PDFEncodingFormat encoding_format;
FS_BOOL to_render_images;
FS_BOOL to_remove_underline_for_link;
FS_BOOL to_set_headerfooter;
FS_WSTR headerfooter_title;
FS_WSTR headerfooter_url;
FS_WSTR bookmark_root_name;
FS_BOOL to_resize_objects;
FS_BOOL to_print_background;
FS_BOOL to_optimize_tag_tree;
FSHTML2PDFMediaStyle media_style;
};

```

Upgrading to version 8.2 from version 8.1

If you are upgrading from version 8.1 to version 8.2, please take note of the changes that occurred between version 8.1 and version 8.2.

- For Compliance module, the compliance resource files have been updated, please contact Foxit support team or sales team to get the latest resource files package.
- For HTML to PDF module, the HTML to PDF engine has been upgraded, please contact Foxit support team or sales team to get the latest engine files package.
- In **FSFillerAssistCallback** struct, add a new callback function as below:

```

void (ReportInvalidValue)(void user_data, const wchar_t* form_field_name, const wchar_t*
invalid_value);

```

- The struct of **FSHTML2PDFSettingData** has been changed:

SDK 8.1:

```

struct FSHTML2PDFSettingData {
float page_width;
float page_height;
FS_BOOL is_to_page_scale;
FSRectF page_margin;
FSRotation rotate_degrees;
FS_BOOL is_convert_link;

```

```

FS_BOOL is_generate_tag;
FSHTML2PDFPageMode page_mode;
FS_BOOL to_generate_bookmarks;
};

```

SDK 8.2:

```

struct FSHTML2PDFSettingData {
    float page_width;
    float page_height;
    FS_BOOL is_to_page_scale;
    FSRectF page_margin;
    FSRotation rotate_degrees;
    FS_BOOL is_convert_link;
    FS_BOOL is_generate_tag;
    FSHTML2PDFPageMode page_mode;
    FS_BOOL to_generate_bookmarks;
    FSHTML2PDFScalingMode scaling_mode;
};

```

Upgrading to version 8.1 from version 8.0

If you are upgrading from version 8.0 to version 8.1, please take note of the changes that occurred between version 8.0 and version 8.1.

- In **FSFillerAssistCallback** struct, add seven callback functions as below:

```

void* (CreatePopupMenu)(void* user_data);

FS_BOOL (AppendPopupMenuitem)(void* user_data, const void* h_popup_menu,
FSPopupMenuitem popup_menu_item, const wchar_t* default_string);

FS_BOOL (EnablePopupMenuitem)(void* user_data, const void* h_popup_menu,
FSPopupMenuitem popup_menu_item, FS_BOOL is_enabled);

FS_BOOL (ShowPopupMenu)(void* user_data, const void* h_popup_menu, const FSPointF&
point);

void (DestroyPopupMenu)(void* user_data, const void* h_popup_menu);

void (SetClipboardText)(void* user_data, const wchar_t* text);

FS_WSTR (GetClipboardText)(void* user_data);

```

- In **FSIdentityProperties** struct, add four member variables as below:

```

FS_WSTR first_name;
FS_WSTR last_name;
FS_WSTR title;
FS_WSTR department;

```

- In **FSActionCallback** struct, add a new callback function as below:

```
FS_BOOL (SetIdentityProperties)(void* user_data, FSIdentityProperties identity_properties);
```

Upgrading to version 8.0 from version 7.6

There are two minor upgrade warnings in this release when moving from version 7.6 to version 8.0:

- The struct of **FSHTML2PDFSettingData** has been changed:

SDK 7.6:

```
struct FSHTML2PDFSettingData {
    float page_width;
    float page_height;
    FS_BOOL is_to_page_scale;
    FSRectF page_margin;
    FSRotation rotate_degrees;
    FS_BOOL is_convert_link;
    FS_BOOL is_generate_tag;
    FSHTML2PDFPageMode page_mode;
};
```

SDK 8.0:

```
struct FSHTML2PDFSettingData {
    float page_width;
    float page_height;
    FS_BOOL is_to_page_scale;
    FSRectF page_margin;
    FSRotation rotate_degrees;
    FS_BOOL is_convert_link;
    FS_BOOL is_generate_tag;
    FSHTML2PDFPageMode page_mode;
    FS_BOOL to_generate_bookmarks;
};
```

- The function **FSDK_PDFPage_AddSignature1** has added a new parameter as below:

SDK 7.6:

```
FSErrorCode FSDK_PDFPage_AddSignature1(FS_PDFPAGE_HANDLE& pdfpage_handle, const
FSRectF& rect, const wchar_t* field_name, FSSignatureType signature_type,
FS_SIGNATURE_HANDLE& return_value);
```

SDK 8.0:

```
FSErrorCode FSDK_PDFPage_AddSignature1(FS_PDFPAGE_HANDLE& pdfpage_handle, const
FSRectF& rect, const wchar_t* field_name, FSSignatureType signature_type, FS_BOOL
to_check_permission, FS_SIGNATURE_HANDLE& return_value);
```


Upgrading to version 7.6 from version 7.5

There are some minor upgrade warnings in this release when moving from version 7.5 to version 7.6:

- In **FSActionCallback** struct, add a new callback function as below:

```
FS_WSTR (*BrowseFile0)(void* user_data, FS_BOOL is_open_dialog, const wchar_t* file_format,
const wchar_t* file_filter);
```

- Remove the enumeration member (**e_FSVerifyModeETSI**) from the enumeration **FSVerifyMode**.
- The names of some functions have been changed in version 7.6. The following table lists the functions mapping between version 7.5 and 7.6.

Struct	SDK 7.5	SDK 7.6
FSSignatureCallback	FS_BSTR (* Sign1)(void* user_data, const void* digest, FS_UINT32 digest_length, const wchar_t* cert_path, const wchar_t* cert_password, FSDigestAlgorithm digest_algorithm, void* client_data);	FS_BSTR (* Sign)(void* user_data, const void* digest, FS_UINT32 digest_length, const wchar_t* cert_path, const wchar_t* cert_password, FSDigestAlgorithm digest_algorithm, void* client_data);
	FS_BSTR (* Sign)(void* user_data, const void* digest, FS_UINT32 digest_length, FSSStreamCallback* cert_file_stream, const wchar_t* cert_password, FSDigestAlgorithm digest_algorithm, void* client_data);	FS_BSTR (* Sign1)(void* user_data, const void* digest, FS_UINT32 digest_length, FSSStreamCallback* cert_file_stream, const wchar_t* cert_password, FSDigestAlgorithm digest_algorithm, void* client_data);
FSIFX_FileStream	FS_BOOL (* ReadBlock1)(void* user_data, void* buffer, FS_INT64 offset, size_t size);	FS_BOOL (* ReadBlock)(void* user_data, void* buffer, FS_INT64 offset, size_t size);
	size_t (* ReadBlock)(void* user_data, void* buffer, size_t size);	size_t (* ReadBlock0)(void* user_data, void* buffer, size_t size);

Upgrading to version 7.5 from version 7.4

There is only one minor upgrade warning in this release when moving from version 7.4 to version 7.5:

- The struct of **FSHeaderFooter** has been changed:

SDK 7.4:

```
struct FSHeaderFooter {
    FS_FONT_HANDLE font;
    float text_size;
    FS_RGB text_color;
    FSPageNumberRange page_range;
```

```
FSRectF page_margin;  
FS_BOOL has_text_shrunked;  
FS_BOOL has_fixedsize_for_print;  
int start_page_number;  
FSHeaderFooterContent content;  
FS_BOOL is_replace_font;  
};
```

SDK 7.5:

```
struct FSHeaderFooter {  
    FS_FONT_HANDLE font;  
    float text_size;  
    FS_RGB text_color;  
    FSPageNumberRange page_range;  
    FSRectF page_margin;  
    FS_BOOL has_text_shrunked;  
    FS_BOOL has_fixedsize_for_print;  
    int start_page_number;  
    FSHeaderFooterContent content;  
    FS_BOOL is_to_embed_font;  
    FS_BOOL is_underline;  
    FS_BOOL is_replace_font;  
};
```