

Openview SDK 1.0 Release Notes

* **Important note:** InstallOpenViewSDK64.exe will include documentation and sample application. This executable should be used for development of your application. The InstallOpenView64.exe does not include the documentation and sample.
* **Important Installation note:** To update OpenView SDK from version 1.0R8 or earlier, Uninstall the older version then install the new version.

# OpenView SDK 1.0R46 2019-11-13

**Bug Fixed:**

* Fixed Memory leaks with Instrumentation library.
* Fixed memory leaks with Storage library (ovs, .ovd and .odat files).
* Give correct value for LastElementOfLastLaw.
* Adjust cells quantity with .ovd data files.
* Give correct value for compression factor with .odat data files.
* Sample Quantity is computed correctly when saving .odat as an .ovd.
* Better exception management with .fpd data files.

# OpenView SDK 1.0R45 2019-11-01

**New Features**

Change log

* Support open .odat data files while using debug with mixed mode.
* Support creating unlimited data files size. (see WriteDataFile snippet)

**Bug Fixed:**

* Fixed amplitude axes resolution.

# OpenView SDK 1.0R44 2019-10-21

**Bug Fixed:**

• Amplitude resolution was wrong with .odat files

• Sampling amplitude was wrong with fpd files including unrectified data

# OpenView SDK 1.0R43 2019-10-13

Version no available

# OpenView SDK 1.0R42 2019-10-13

**Bug Fixed:**

Bug with the data descriptors in a odat \_le with more than 2 contexts

# OpenView SDK 1.0R41 2019-10-08

**New Features**

* Added DLA DMA support for Odat files

**Bug Fixed:**

* Fixed the no data values problems that occured with some Odat files

# OpenView SDK 1.0R40 2019-09-27

**New Features**

* Storage: adjust the distinction between beam gain and beam set gain for FPD files
* Storage: Save inspection date and time automatically
* 2 new filters added in option (ETO 507) Note: This option needs to be unlocked by Olympus factory.

**Bug \_fixed:**

* OVSDK-722: Storage: some capabilities were doubled
* OVSDK-558: Instrumentation: remove potential problem with IP address 192.168.0.0
* OVSDK-696: Configuration Tool: Show log when application is started and improve

main buttons appearance

# OpenView SDK 1.0R39 2019-09-16

**New Features**

* Official release of the Unined Library File Format (Storage Library)
* Interpolate A-Scans with compression to retrieve maximums

# OpenView SDK 1.0R38 2019-08-21

**New Features**

* Add refracted angle parameter for conventional configuration
* Fix ascan amplitude limits for half-wave negative rectification in a FocusPC \_le
* Fix malformed openview registry key
* ODAT: Fix ascan and cscan data descriptor values
* ODAT: Add access to encoder parameters
* ODAT: Add device capabilities
* ODAT: Add exit points

# OpenView SDK 1.0R37 2019-08-14

**New Features**

* Installer correctly cleans installation folder when a version upgrade is done
* Revert to older version of Configuration Tool

# OpenView SDK 1.0R36 2019-08-08

**Note: Important to uninstall “**[InstallOpenViewSDK64](http://rdforge/frs/download.php/61273/InstallOpenViewSDK64-1.0R36.exe)” and “[InstallOpenView64](http://rdforge/frs/download.php/61274/InstallOpenView64-1.0R36.exe)” before install this version.

**New Features**

* Fixed: The AreEquals function on AcquisitionConfiguration with recurrence values.
* Fixed: The blocking ApplyConfiguration when using the encoder firing trigger mode.
* Data statuses when reading Ascan and Cscan data files.

# OpenView SDK 1.0R35 2019-08-06

**New Features**

* Storage project: Added Ultrasound and Amplitude for Ascan / Cscan data axis descriptors values with .ovd and .fpd files.
* Instrumentation: Fixed beam recurrence value is now in nanoseconds.
* Instrumentation / Storage: Logs improvement

# OpenView SDK 1.0R34 2019-07-30

Note:

Versions R31 to R3 (inclusively) are not compatible. (Need to compile your code)

**Bug \_fixed:**

* Fix binary compatibility.
* Installer now correctly update all libraries.

# OpenView SDK 1.0R33 2019-07-25

**New Features**

* Storage project:
  + Scan and Index offset now available from FPD, OVD and for new files

# OpenView SDK 1.0R32 2019-07-23

**New Features**

* Instrumentation: Modified the Equals function to use shared pointer and renamed AreEquals
* Instrumentation: Added FocusPxConstants.h definitions
* Storage project:
  + Added the new data access interface
  + Removed Dal.lib from the public interface

# OpenView SDK 1.0R31 2019-07-11

**New Features**

* New Configuration Tool
* Labview sample
* Storage project:
  + New interface for the data access
  + Added an Equality comparison between an AcquisitionConfiguration (Instrumentation) and a DeviceConfiguration (Storage)

# OpenView SDK 1.0R30 2019-05-28

**New Features**

* Maximum PRF conditional to a configuration setting
* Interpolation of Gate I C-scan data

# OpenView SDK 1.0R28(Unified Library File Format) 2019-04-25

**New Features**

* Official release of the Unified File Format library

# OpenView SDK 1.0R27(Unified Library File Format) 2019-04-11

**Bug \_fixed:**

* Releasing all objects maintains a Device over a TCP disconnect

# OpenView SDK 1.0R26(Unified Library File Format) 2019-04-08

**New Features**

* Ability to store a device's calibration has been added to the Storage Pre-Release Project.

# OpenView SDK 1.0R25(Unified Library File Format) 2019-03-25

**Bug Fixes**

* Acquisition state machine must be separated in 2
  + IAcquisition::Create**Ex**
  + IAcquisition::WaitForData**Ex**

# OpenView SDK 1.0R24(Unified Library File Format) 2019-03-19

**New Features**

* Unified Library File Format
  + Indications were added
  + A File Container was added to facilitate the packing of indications with acquired data

**Bug Fixes**

* Unified Library File Format
  + Installer will not update the registry key

# OpenView SDK 1.0R23 (Unified Library File Format) 2019-02-25

**New Features**

* Pre-release of the Storage project.
  + Added Data Access Layer to the storage library.

# OpenView SDK 1.0R22 (Unified Library File Format) 2019-02-07

**New Features**

* Improved the ICScan class to simplify retrieval of the CScan. GetCrossingTime and GetBeamFiringOrder are the new functions added.
  + Note: If you upgraded your version from R19 to R22 or higher, recompilation is required.

**Bug Fixes**

* Binary compatibility with version R18 and previous restored. Version R19 to R21 not binary compatible.

# OpenView SDK 1.0R21 (Unified Library File Format) 2019-01-31

**New Features**

* Pre-release of the Storage project.

# OpenView SDK 1.0R20 2019-01-22

**New Features**

* 36085 - Silent installer does not upgrade from a previous version.
  + Note: Before installing this new version, un-install the previous OpenView version. This will be valid for all previous version but will not necessary for future version.
* 35927 - Negative start time crash.

**Bug Fixes**

* Add the possibility to separate the A-Scan start and TCG start, allowing to have an A-Scan starting at the main bang while the TCG starts at the front wall.

# OpenView SDK 1.0R19 2018-12-11

**New Features**

* 35949 - Add 25 ns pulse width option and extended BW option;
* 35949 - Add band pass Filter 11 MHz (1.1-20.5MHz) option

Note: These options need to be unlocked by Olympus factory.

# OpenView SDK 1.0R18 2018-11-29

* Demo version

# OpenView SDK 1.0R17 2018-11-19

**Bug Fixes**

* 35748 - When Focus PX hard drive D is full the Software cannot be Deploy.
* 36078 - Encoder does not reset.

# OpenView SDK 1.0R16 2018-10-31

* Pre-release version for storage demo,

# OpenView SDK 1.0R15 2018-10-10

**Bug Fixes**

* 36006: Exception on acquisition start while switching contexts.

# OpenView SDK 1.0R14 2018-09-24

**Bug Fixes**

* 36001: Switching from UT to PA back to UT may restrict Pitch-Catch selection

# OpenView SDK 1.0R13 2018-09-19

* Removed 32 bits support

**Bug Fixes**

* 35984: Beam with amplitude near to 0 give a gain problem.
* 35930: Installing the 1.0R13 will now correctly uninstall previous versions of OpenView
* Enforce a device to be reprogrammed when switching acquisitions to prevent undefined behavior
* Fix crash that happened while changing layouts too quickly.

# OpenView SDK 1.0R11 2018-08-21

**Bug Fixes**

* 35838: DigitalOutput: SetState; Getting the state of digital output pin did not have always the good value.
* 35880: Change from Log to Lin Fix.

# OpenView SDK 1.0R10 2018-08-15

**Bug Fixes**

* 35854: Law file element offset is not taken into account.

# OpenView SDK 1.0R9 2018-07-19

**New Features**

* Sample application
* support private IP addresses other than 192.168.0.1
* Noticed we were not using the extra feature set from the .Net 4.5 framework so we lowered our references from 4.5 to 4.0 which means that if you wish to use the SDK in .Net it would work in Visual Studio 2010.

**Bug Fixes**

* 35786 - Echo synchronisation mode with TCG

# OpenView SDK 1.0R8 2018-07-12

**New Features**

* Configuration Tool (FocusPC version)
* Diagnostic tools
* Support 65535 flag in law file import (TTU)
* Need an installer containing only runtime libraries
* New installer has slightly changed as it comes in 4 versions
  + 32 and 64 bits
  + Programmer and End-User

**\***To integrate them correctly refer to technical note in the

Appendix for OpenView SDK 1.0R8 and newest version: of this document.

We deprecated some functions from the previous version. The functions can still be used but will generate a “warning: deprecated” indication. If this creates compiler errors, please verify the following in the project’s properties:

* *Treat Warnings As Errors* should be set to *No*
* *SDL Checks* should be set to *No*

**Bug Fixes**

* None

# OpenView SDK 1.0R7 2018-06-21

**New Features**

* High Dynamic range
* Multi-device support

**Bug Fixes**

* 35617 - No beams have been applied error (manual recurrence)
* 35406 - Code snippets fix
* 35682 - [UT Settings] Pulse Width value causes ApplyConfig error

# OpenView SDK 1.0R6 2018-05-22

**New Features**

* Library integration compilation specificity
* Multi-user accounts environment

**Bug Fixes**

* 35413 Recurrence in Manual Mode
* 35538 Installation shows error 1152
* 35539 Encoders going backward issue
* 35615 Improvement of the deployment process stability

# OpenView SDK 1.0 2018-03-28

# General information:

The OpenView SDK (SDK: Software Development Kit) is designed for the integration of FocusPX in custom software environments. OpenView SDK is mainly used for the development of application-dedicated software interface and system automation.

# Compatible Programming Languages (64-bit)

* C++
* C#
* LabVIEW

# Supported Acquisition Units

* UT4
* FOCUS PX 16:64PR
* FOCUS PX 16:128PR
* FOCUS PX 32:128PR

# Supported Operating Systems

* Microsoft Windows 10 (64-bit)
* Microsoft Windows 7 (32-bit and 64-bit)

**Note:** You must have administrator privileges to install Openview SDK and configure the computer for data acquisition.

# Computer Requirements

* **CPU:** Intel Core i7 or Xeon E3
* **RAM:** 16 GB (DDR3 or better)

# Data storage drive: SSD

* **Network adaptor:** Gigabit Ethernet card (dedicated for FOCUS PX)
* **Display:** 1280 × 1024 or higher
* One USB port for the HASP security hardware key
* A keyboard and a pointing device

# Available in standard Languages

# Appendix for OpenView SDK 1.0R8 and newest version:

# End-user requirements for software using OpenView SDK

This section promotes the best practices recommended while integrating OpenView SDK to your software.

## Required Firewall Rules

The following table lists all ports to enable during the installation of your software. The second column shows the command to execute when adding a firewall rule for the corresponding port.

|  |  |
| --- | --- |
| Port | Command |
| 21 | netsh advfirewall firewall add rule name=”Olympus OpenView SDK”  dir=in action=allow protocol=TCP localport=21 |
| 67 | netsh advfirewall firewall add rule name=”Olympus OpenView SDK”  dir=in action=allow protocol=UDP localport=67 |
| 68 | netsh advfirewall firewall add rule name=”Olympus OpenView SDK”  dir=out action=allow protocol=UDP remoteport=68 |
| 9994 | netsh advfirewall firewall add rule name=”Olympus OpenView SDK”  dir=out action=allow protocol=TCP remoteport=9994,10994,12000,27015 |
| 10994 |
| 12000 |
| 27015 |

## End-user Installer

There are 2 installers available for OpenView.

|  |  |
| --- | --- |
| Installer | Description |
| InstallOpenViewSDK-1.0RXXX.exe | To be installed on the programmer’s computer. Includes libraries, documentation and code snippets. This installs on C:\OlympusNDT. |
| InstallOpenView-1.0RXXX.exe | To be installed on the end-user’s computer. Includes libraries only. This installs on C:\Program Files. |

Integrators must integrate the end-user’s installer into their own installer. Locating and accessing the libraries at runtime requires the use of one of those keys:

|  |  |
| --- | --- |
| Installer | Key |
| InstallOpenViewSDK-1.0RXXX.exe | HKEY\_LOCAL\_MACHINE\SOFTWARE\OlympusNDT\OpenView SDK\1.0\VersionPath |
| InstallOpenView-1.0RXXX.exe | HKEY\_LOCAL\_MACHINE\SOFTWARE\OlympusNDT\OpenView\1.0\VersionPath |

Each installer automatically configures the value of those keys.

To make an installer silent you need to add the command line arguments: /s /v/qn

## Firmware Package

SDK versions and software packages used by the FocusPX are bundled together. Since the SDK always uses the package used on the computer, the application code should search for the latest version installed. Here is a sample code showing good practice.

// Select the latest version of firmware packages.

shared\_ptr<IFirmwarePackage> package;

auto packages = IFirmwarePackageScanner::GetFirmwarePackageCollection();

if (!packages.empty() )

package = packages->GetFirmwarePackage(0);

if (package == nullptr)

throw std::exception("Could not find the firmware package.");

// Start the package on the device.

if (!device->HasPackage(package))

device->Download(package);

device->Start(package);

## Config Tool

The configuration tools is installed by the end-user’s installer and the root directory is located at the content of registry key :

|  |  |
| --- | --- |
| Installer | Key |
| InstallOpenViewSDK-1.0RXXX.exe | HKEY\_LOCAL\_MACHINE\SOFTWARE\OlympusNDT\OpenView SDK\1.0\VersionPath |
| InstallOpenView-1.0RXXX.exe | HKEY\_LOCAL\_MACHINE\SOFTWARE\OlympusNDT\OpenView\1.0\VersionPath |

The folders “\Tools\Configuration” must be added to this root directory. The program name is ConfigurationTool.exe.

We recommend adding a link in your software to call this configuration tool. The link should show Microsoft shield icon indicating the administrative rights may be required.



IMPORTANT: The tool should be called prior to any other SDK calls since it may change some network settings and test connection with devices.

# Appendix A – Matlab

The Matlab code below has been validated. However during our limited tests, we were not able to reach data throughputs of more than 0.1 Mb/s, which is very limitative. We believe this problem could be resolved with more investigation.

% Import OpenView

asmInfo = NET.addAssembly('C:\Program Files\Olympus NDT\OpenView\1.0\Bin\v141\OlympusNDT.Instrumentation.NET.dll');

OlympusNDT.Instrumentation.NET.Utilities.ResolveDependenciesPath()

% Discover device

discovery = OlympusNDT.Instrumentation.NET.IDeviceDiscovery.Create('192.168.0.1');

result = discovery.DiscoverFor(1000);

device = result.device;

% Setup

firmwarePackage = OlympusNDT.Instrumentation.NET.IFirmwarePackageScanner.GetFirmwarePackageCollection().GetFirmwarePackage(0)

device.Start(firmwarePackage)

utConfig = device.GetConfiguration().GetUltrasoundConfiguration()

firingBeamSets = utConfig.GetFiringBeamSetCollection()

convTechno = utConfig.GetDigitizerTechnology(OlympusNDT.Instrumentation.NET.UltrasoundTechnology.Conventional)

beamSetFactory = convTechno.GetBeamSetFactory()

connectorCollection = convTechno.GetConnectorCollection()

connector = connectorCollection.GetConnector(4)

beamSet = beamSetFactory.CreateBeamSetConventional('BS')

firingBeamSets.Add(beamSet, connector, 0, 0)

% Start acquisition

acquisition = OlympusNDT.Instrumentation.NET.IAcquisition.Create(device)

acquisition.SetRate(1);

acquisition.ApplyConfiguration()

acquisition.Start();

% Acquire cycles

for iCycle = 0:5

waitForDataResult = acquisition.WaitForData();

cycleData = waitForDataResult.cycleData;

aScanCollection = cycleData.GetAscanCollection();

for iAscan = 0:aScanCollection.GetCount() - 1

aScan = aScanCollection.GetAscan(iAscan);

ascanSampleQty = int32(aScan.GetSampleQuantity()); % Marshal from uint32 to int32

aScanPtr = aScan.GetData();

% Matlab indexes start at 1.

% OpenView indexes start at 0

matlabArray = zeros(1, ascanSampleQty);

for iAscanSample = 1:ascanSampleQty

% We read the IntPtr by offsetting it by sampleIndex \* 4 bytes

matlabArray(iAscanSample) = System.Runtime.InteropServices.Marshal.ReadInt32(aScanPtr, (iAscanSample - 1)\*4);

end

aScan.Dispose();

end

aScanCollection.Dispose();

cycleData.Dispose();

waitForDataResult.Dispose(); % This is VERY important, or memory will overflow

end

acquisition.Stop()

# Appendix B – Network Diagnostic

The following tools can be used for advanced diagnostic on network errors:

* C:\OlympusNDT\OpenView SDK\1.0\Tools\Configuration\InstrumentConfig.exe will verify the general parameters of the network
* If the previous tool identifies a port cannot be acquired, start a command prompt as admin and run:  
  > netstat -a -b