PC Software
SW 1203 Metrel SDK

Metrel SDK is a Software Development Kit prepared for clients who wants to exchange and manipulate data measured with Metrel instrument in non MESM (Metrel ES Manager) environment, where clients use their own applications or/and services.

Client can obtain MESM functionalities in his own applications or/and services by implementing Metrel SDK.
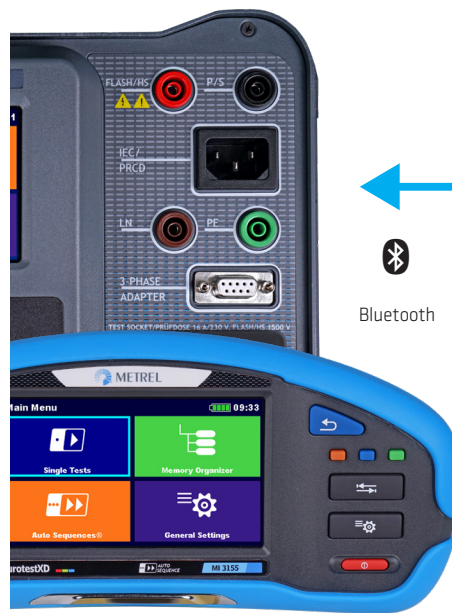

The Metrel SDK itself is a set of subroutine definitions, protocols, and tools for building application software. It is intended for those who want to develop software using .NET platform and need to interface with Metrel instruments. The Metrel SDK bundles client libraries for accessing Metrel instruments and provides a unified programming interface using C# programming language.

Metrel SDK includes a set of API calls which makes communication with Metrel instruments simple for the user. It provides a way to manipulate data from instruments using a generic data model and makes available a set of rules for extracting and viewing data.
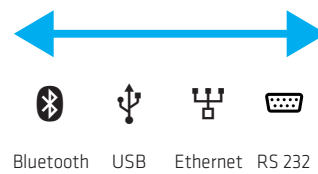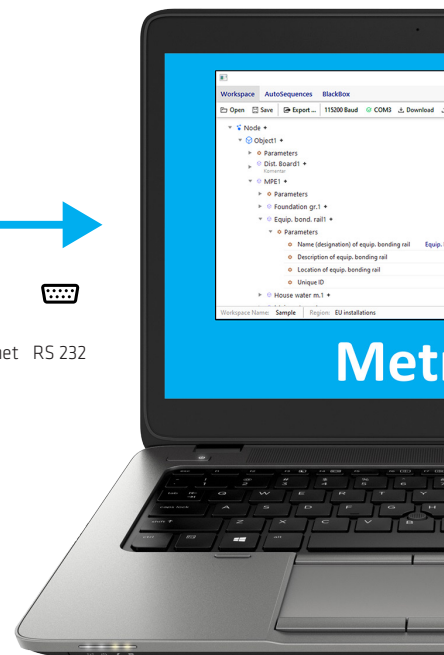
Metrel SDK is a .NET based SDK. Needed prerequisites for Metrel SDK implementation would be as follows:
- .NET or .NET Core development environment (Visual Studio, Visual Studio Code, JetBrains Raider...),
- Good knowledge of C# programming language.

METREL INSTRUMENTS

SOFTWARE WITH IMPLEMENTED METREL SDK

Bluetooth   USB   Ethernet   RS 232

Metrel SDK in interaction with Metrel instruments.

www.metrel.si

METREL®

SUPPORTED FUNCTIONALITIES OF METREL SDK

- Displays instrument information.
- Performs instrument Firmware update check.
- Lists workspaces in file or instrument.
- Creates empty measurements.
- Creates structure objects.
- Downloads Workspace or Auto Sequence® from instrument.
- Downloads measurements from instrument.
- Uploads Workspace or Auto Sequence® to instrument.
- Uploads measurements to instrument.
- Uploads license key to instrument.
- Exports Workspace data to selected target.
- Exports XML schemas from XML validation.
- Supports CLI (Command Line Interface):
  - Exports to XML and JSON format (Flat and tree structure).
- Supports Black-Box protocol for remote / online communication.
- Supports all available communication with Metrel instruments: Ethernet, RS232, USB and Bluetooth.

METREL SDK PACKAGE

Metrel SDK is included in Metrel SDK zip package which is available from Metrel free of charge. Metrel SDK alone is a set of libraries located in »libs« folder.
Content of Metrel SDK zip package is described in table below.

Metrel SDK zip package	
Folder name	**Folder content**
apps	cli folder Contents command line interface application. Run "ion.exe" in Command Prompt to start application.
	ddVisualizer folder Contents DataDisplay Framework Visualizer, which graphically describes basic entities and relations between them. Needed when programming Metrel SDK application. Run "DataDisplayFrameWorkVisualizer.exe" to start application.
demo	Example of Metrel SDK application. Run "Ion.Sdk.DemoApp.exe" to start application.
docs	Documents with presentations and guides for Metrel SDK package.
drivers	USB drivers for Metrel instruments.
libs	Metrel SDK Contents libraries needed to be included in Visual studio project when programming application with Metrel SDK. File "cp_win.dll" (x86 or x64) should be added to final .exe file.
source	Programming examples.

METREL SDK DEMO APPLICATION

Metrel SDK Demo application represents example of application with included Metrel SDK (although it does not include all possible functionality of Metrel SDK). SDK license is required for new generation of Metrel test instruments for Upload and Download functionalities.

This application is located in demo folder of Metrel SDK package. It can be started by running exe file "Ion.Sdk.DemoApp.exe".

The application consist of three tabs, as shown below: Workspace, AutoSequences and BlackBox.

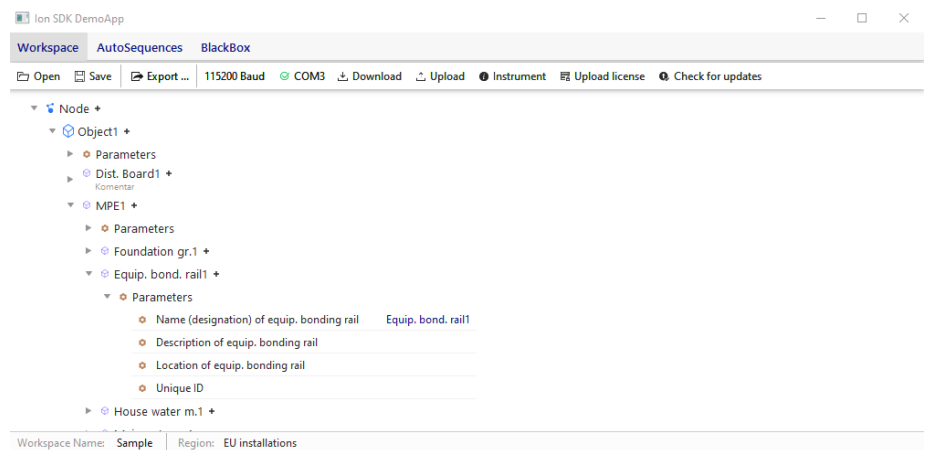*Metrel SDK Demo application*

Workspace
Functionalities available in Workspace tab:
- some basic manipulations of Workspace structure,
- opening, saving, exporting, downloading and uploading of Workspace,
- getting instrument info, uploading of license to the instrument, checking instrument's updates.

Autosequences
Functionality available in Autosequences tab:
- uploading AutoSequences to the instrument.

BlackBox
Functionalities available In BlackBox tab:
- running Single Test,
- running AutoSequences.

SUPPORTED INSTRUMENTS

Instruments supported by Metrel SDK are listed in table below.

Instrument	Support	Structure		Measurements		AutoSequence	
		Upload	Download	Upload	Download	Upload	Download
MI 3100 SE	Limited	•	•		•		
MI 3102 BT	Limited	•	•		•		
MI 3102H BT	Limited	•	•		•		
MI 3102H SE	Limited	•	•		•		
MI 3125 BT	Limited	•	•		•		
MI 3152	Full	•	•	•	•		•
MI 3152H	Full	•	•	•	•		•
MI 3154	Full	•	•	•	•		•
MI 3155	Full	•	•	•	•	•	•
MI 3280	Full	•	•	•	•	•	•
MI 3288	Full	•	•	•	•	•	•
MI 3290	Full	•	•	•	•	•	•
MI 3295	Limited	•	•		•		
MI 3309 BT	Limited		•		•	•	
MI 3325	Full	•	•	•	•	•	•
MI 3360	Full	•	•	•	•	•	•
MI 3394	Full	•	•	•	•	•	•

LICENSES FOR METREL SDK

Metrel SDK is included in Metrel SDK zip package which is available from Metrel free of charge.

However, SDK license is required for new generation of Metrel testers (listed below) for Upload and Download functionalities of Metrel SDK: MI 3152, MI 3152H, MI 3154, MI 3155, MI 3280, MI 3290, MI 3295, MI 3325, MI 3360, MI 3394.

The SDK is licensed in the same way as Metrel MESM PC SW and Metrel aMESM Android App. The SDK license is bound to a standard Metrel profile and serial number in the same way as any other Metrel licenses are.

ADDITIONAL INFO

Additional info regarding Metrel SDK can be also found on Metrel Knowledge Base internet site.