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1 Important and general information

1.1 Important information

Please follow these instructions before and during the use and application on any IPETRONIK product!

1.1.1 Safety and Warning instructions

Please follow the instructions **and** information as contained in the user manual!

1. The user can **influence an electronic system by applying the IPETRONIK product**. This might cause risk of personal injury or property damages.
2. The **use and application of the IPETRONIK product is permitted only to qualified professional staff**, as well as, only in appropriate manner and in the designated use.
3. **Before using an IPETRONIK measurement system** in the vehicle it **has to be verified that no function of the vehicle, which is relevant for secure operation, might be influenced**:
 - by the installation of the IPETRONIK measurement system in the vehicle,
 - by an potential malfunction of the IPETRONIK system during the test drive.

In order to avoid possible danger or personal injury and property damages, appropriate actions are to be taken; such actions have to bring the entire system into a secured condition (e.g. by using a system for emergency stop, an emergency operation, monitoring of critical values).

Please check the following points to avoid errors:

- Adaption of sensors to components of the electrical system / electronics, brake system, engine and transmission control, chassis, body.
- Tap of one or several bus systems (CAN, LIN, ETHERNET) including the required electrical connection(s) for data acquisition.
- Communication with the vehicle's control units (ECUs), especially with such of the brake system and/or of the engine and transmission control (power train control system).
- Installation of components for remote data transmission (mobiles, GSM/GPRS modems, WiFi and Bluetooth components).



The products can be operated in extended temperature ranges greater 70 °C and therefore the operator has to take safety measures to avoid any skin burnings on hot surfaces while touching the products.

4. **Before** directly or indirectly using **the data acquired by an IPETRONIK measurement system to calibrate control units, please review the data regarding to plausibility**.
5. With regard to the application of IPETRONIK products in vehicles during use on public roads the manufacturer and/or registered user of the vehicle **has to ensure that all changes/modifications have no influence concerning the license of the vehicle or its license of operation**.
6. **User does agree to the instructions and regulations as mentioned above**. In case the user does not agree with the instructions and regulations as mentioned above, he has to notify this expressly and immediately in writing to IPETRONIK before confirming the sales contract.

1.2 Terms and conditions

See IPETRONIK website for details: www.ipetronik.com

1.2.1 Legend of used icons

**Tip**

This icon indicates a useful tip that facilitates the application of the software.

**Information**

This icon indicates additional information for a better understanding.

**Attention!**

This icon indicates important information to avoid potential error messages.

1.2.2 Support

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No. 202089
CEOs: A. Wocke, C. Buchholz

Technical support and product information e-mail: support@ipetronik.com

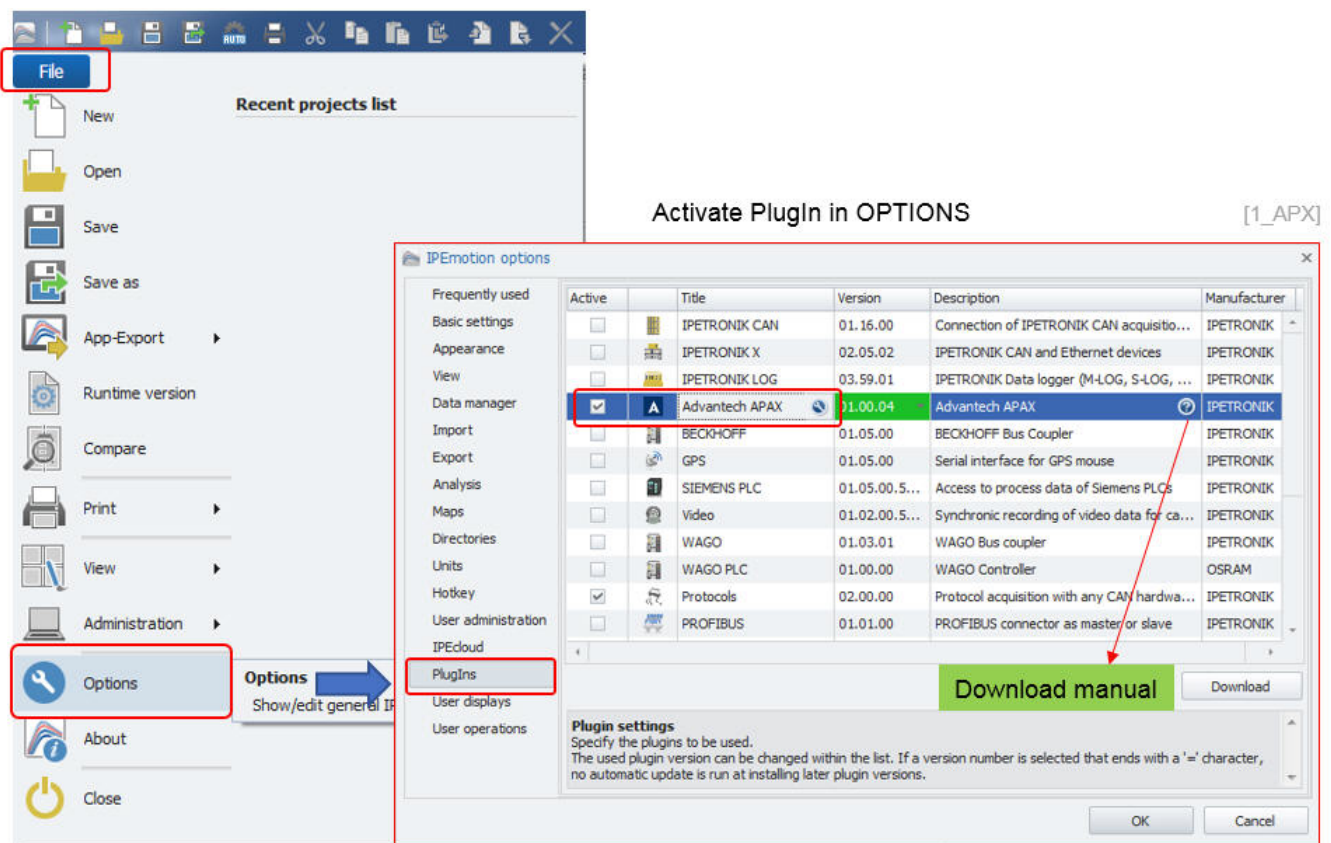
2 PlugIn overview

2.1 PlugIn description

With the APAX PlugIn you access to the APAX 5070 Modbus coupler and a selected range of IO modules.

2.2 PlugIn installation

In order to use the PlugIn together with IPEmotion you need to install it. The PlugIn is available for download from the IPETRONIK website: <https://www.ipetronik.com/> When you have installed the PlugIn, you need to launch the IPEmotion software. Then you need to access the application menu and open the OPTIONS. In the OPTIONS you can activate the PlugIn as indicated below.



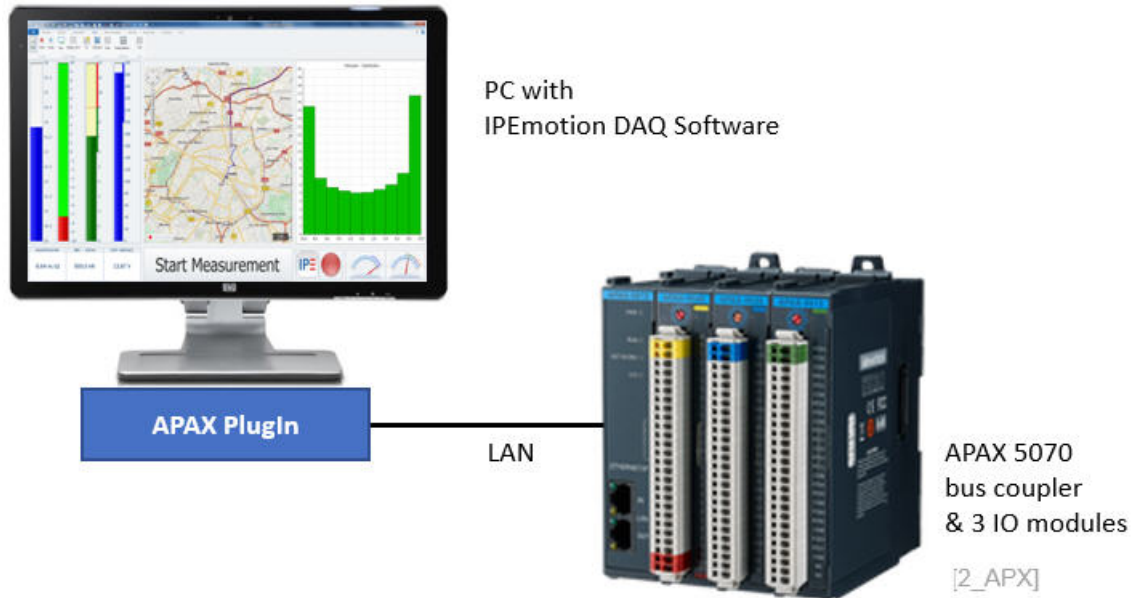
The PlugIn is supporting the following operating systems:

- ▶ 32 bit

3 PlugIn configuration

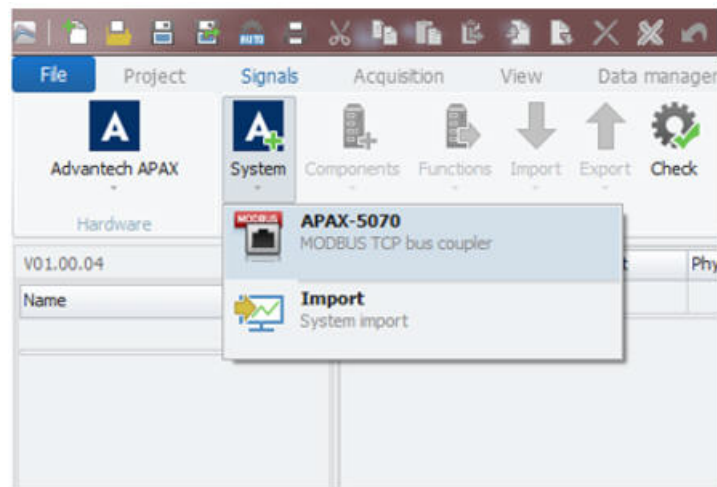
3.1 Functional architecture

To get started, you need to create an Ethernet connection between the APAX 5070 coupler and the PC. The APAX 5070 system needs a power supply to operate.



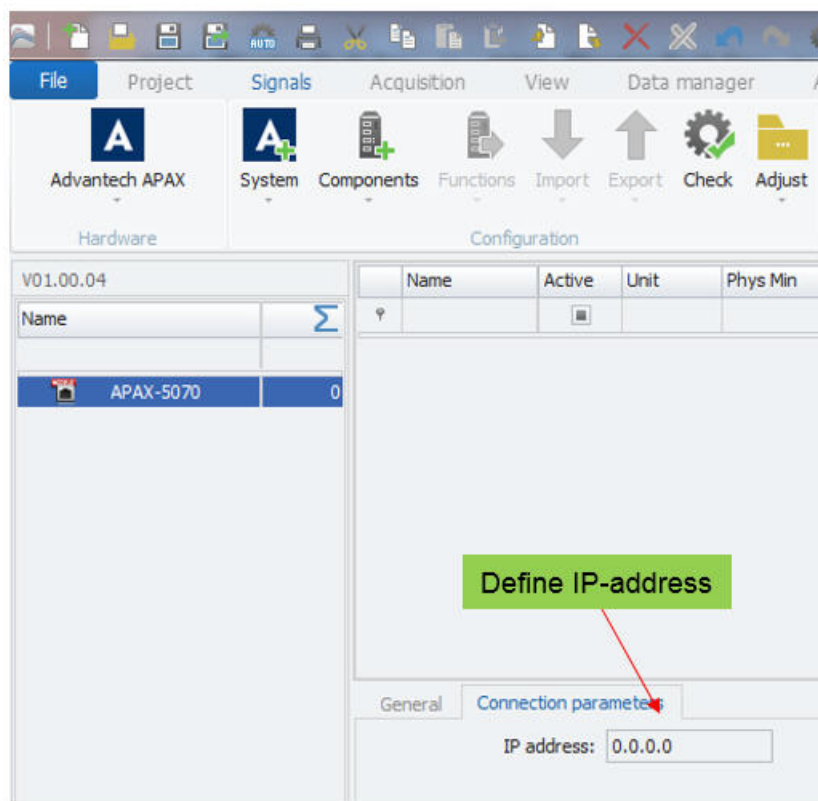
3.2 Creating interface system

The field bus couplers are based on Modbus TCP protocol. The PlugIn is not supporting an auto detect functions. You need to create the coupler interface manually and define the IP-address of your bus coupler.



Create APAX-5070 coupler [3_APX]

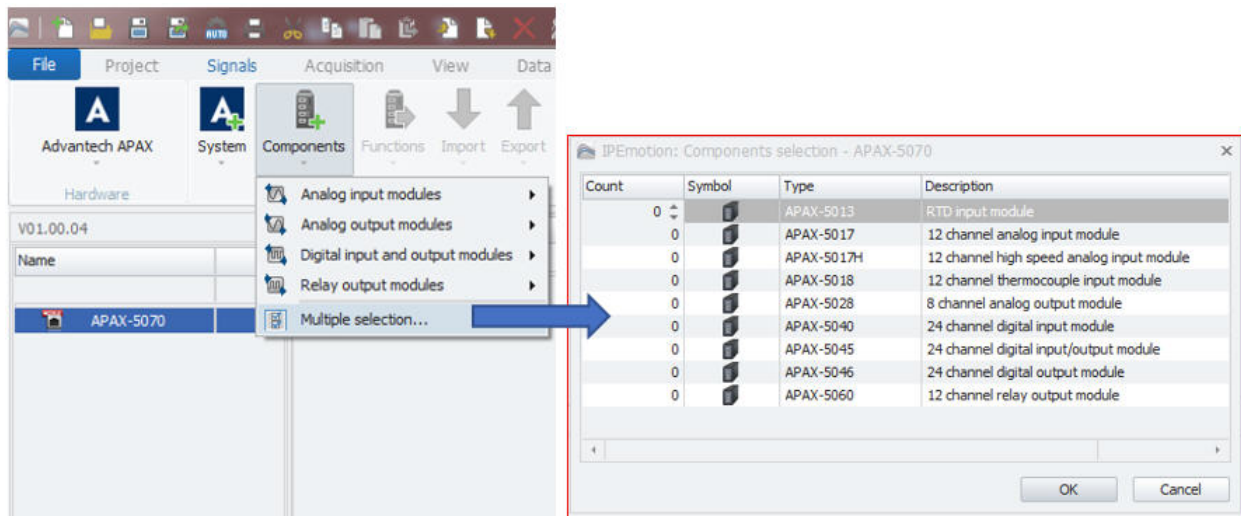
The IP-address of the coupler is configured with the APAX .NET Utility software which is available from the ADVANTECH website <http://www.advantech.com/>



[4_APX]

3.3 Creating IO modules

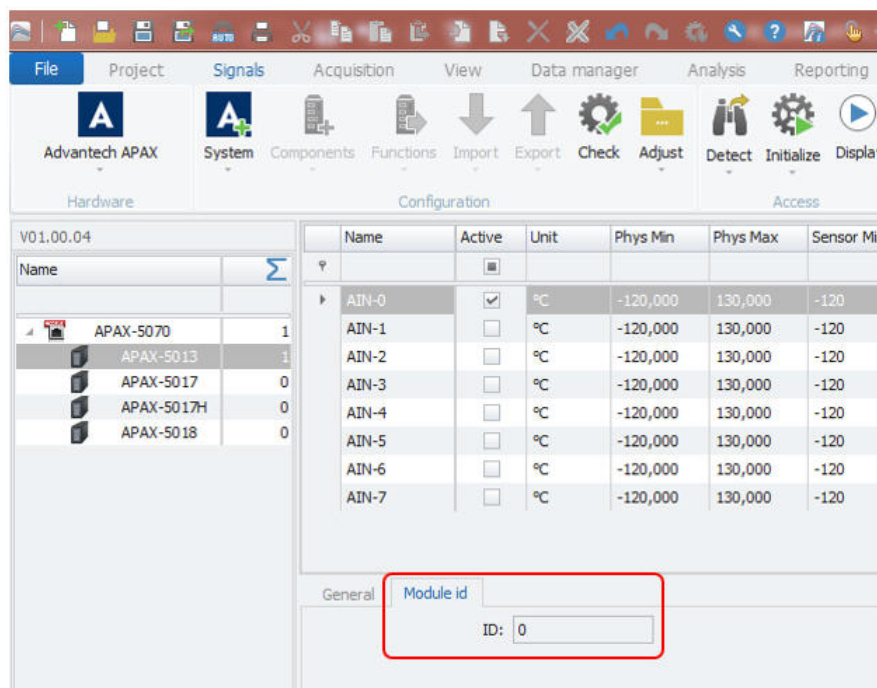
In the next step you have to create IO modules. The order of the IO modules should match to the order of the hardware setup. The following device are supported:



Create IO modules

[5_APX]

When the modules are created you have to define the module ID in the module ID tab sheet. Each module must have a unique module ID which is configured with a dip switch on the device. When you change the ID you need to power down and power up the device again in order to register the new ID in the device. The device IDs cover a range from 0 to 31. You can check the module IDs also with the APAX .NET Utility software.



Define module address number

[6_APX]

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