New Features in ibaPDA v8.12.0

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iba AG • Königswarterstr. 44 • D-90762 Fürth • Germany • www.iba-ag.com

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1 CAN Interface

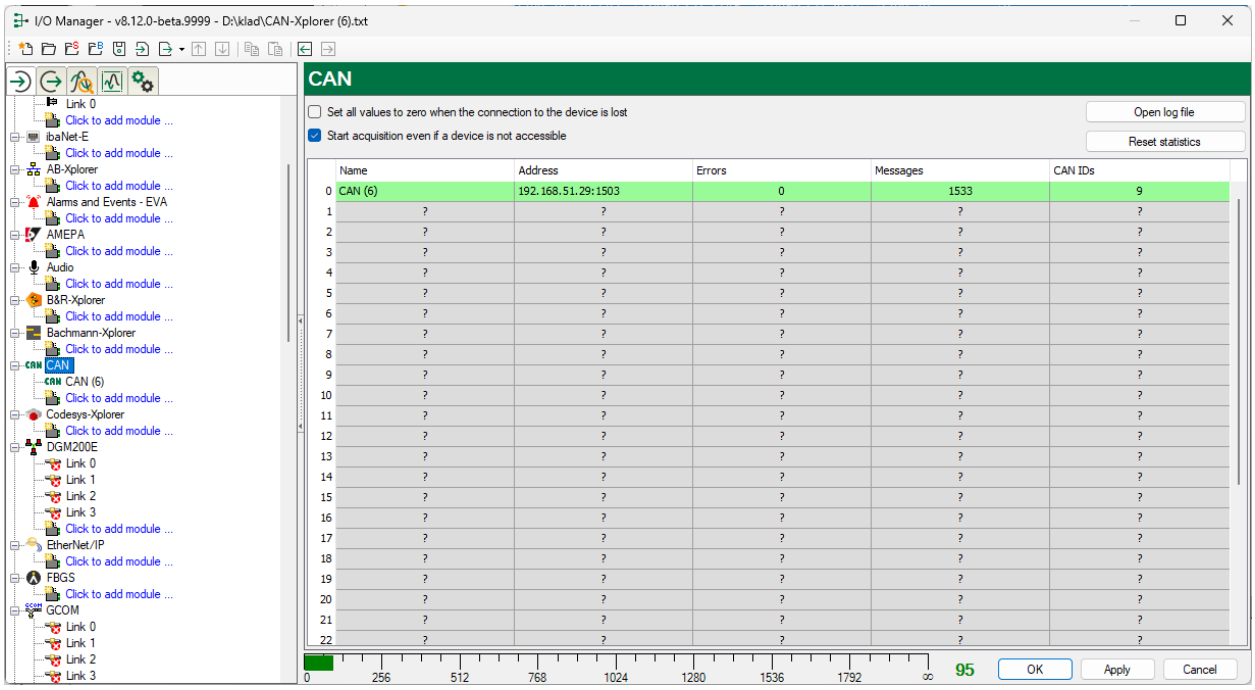
In ibaPDA there was already support for measuring data from a CAN bus using the ibaBM-CAN device. Since this device is end of life there is now an alternative using a CAN to Ethernet gateway. IbaPDA supports the EtherCAN CI-ARM9/RMD-IBA gateway (Order number: 12-20-383-20) of EMS Thomas Wünsche.

The gateway is also offered by iba AG as “CAN-Ethernet-Gateway” (19.000040).

Order Information	
Order no.	31.001027
Name	ibaPDA-Interface-CAN
License	2 connections, max. 256
Order no.	31.101027
Name	one-step-up-Interface-CAN
License	+2 connections, max. 256

1.1 Interface

On the CAN interface you can configure how to handle connection loss during the acquisition and how to handle a broken connection during acquisition start.



The table shows the current connections to the gateways. Each row corresponds to one connection. The color of a row has the following meaning:

- Green: The connection is established and data is being received
- Red: The connection is not established
- Grey: No connection is configured

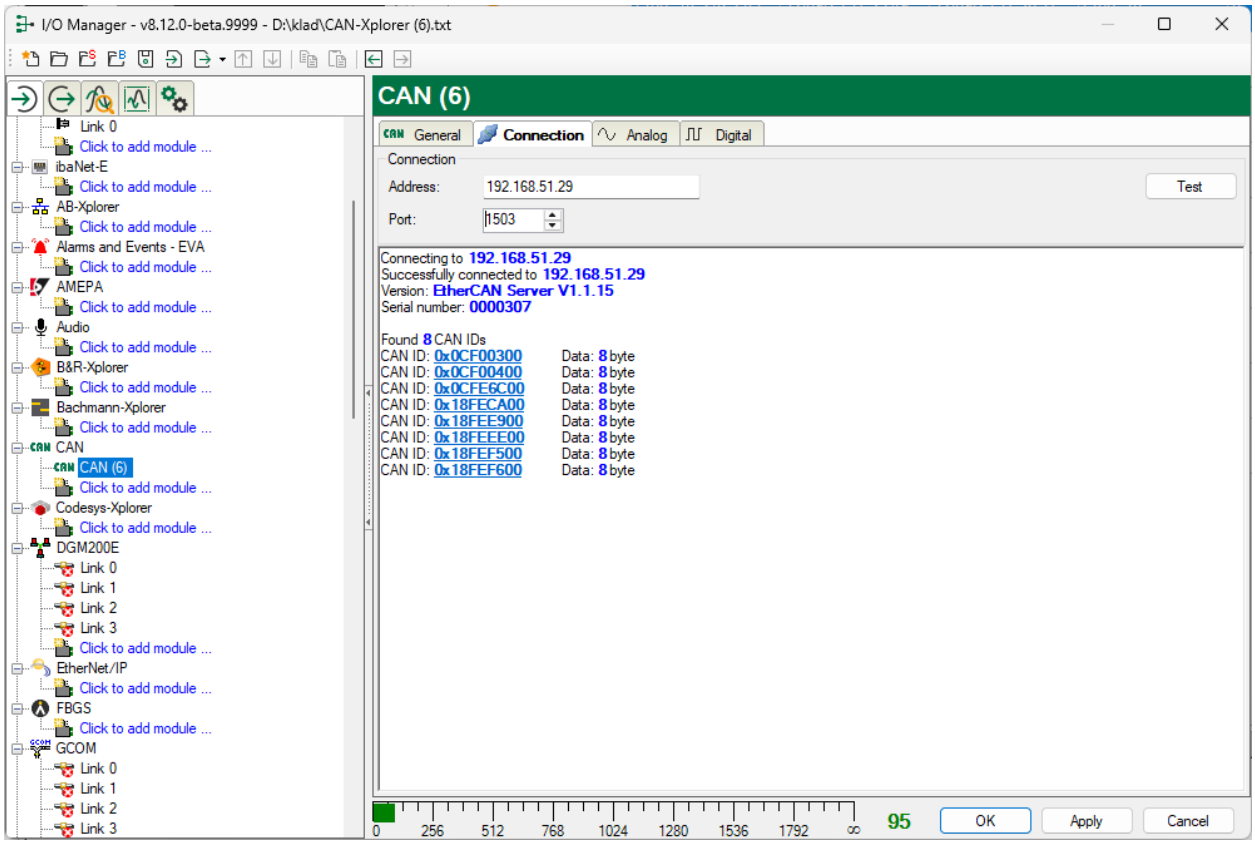
The table has the following columns:

- Name: The name of the corresponding module
- Address: The IP address or host name of the gateway
- Errors: This counter increments each time a connection attempt to the gateway fails. It also increments when the gateway reports an error on the CAN bus.
- Messages: This counter increments each time a CAN message is received.
- CAN IDs: This shows how many different CAN IDs messages have been received.

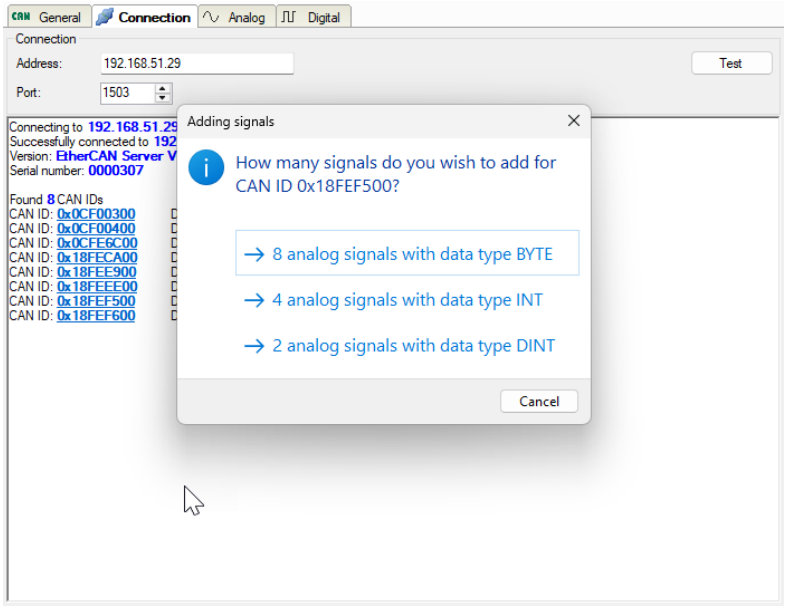
The *Reset statistics* button can be used to reset the counters.

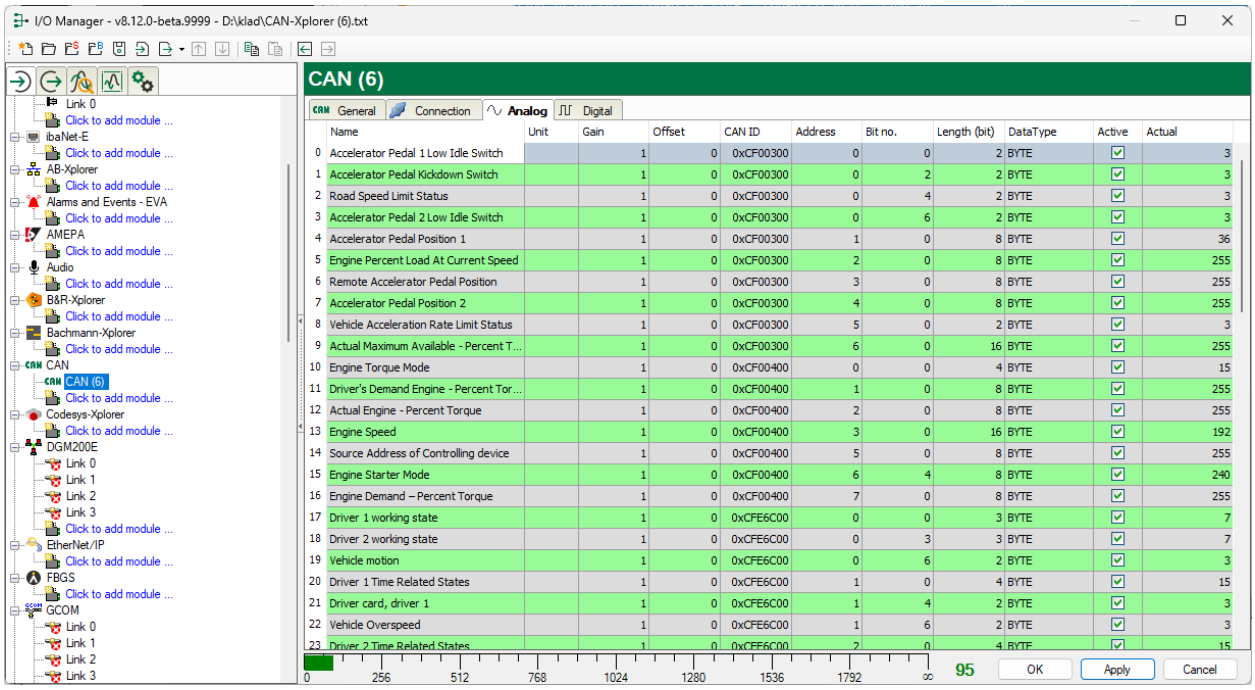
1.2 Module

On the Connection tab of the module you configure how to connect to the gateway. The port number will determine which CAN bus on the device to monitor.



Use the Test button to test the connection. IbaPDA will read some information from the device. It will also scan the bus for 3 seconds and shows the found CAN IDs. When you click on such a CAN ID then ibaPDA will ask if you want to add analog signals for the data of the CAN ID.





The analog signal grid has the following columns specific for CAN:

- CAN ID: The ID of the CAN message
- Address: The byte address within the 8 data bytes of a CAN message
- Bit no.: The bit number where the data starts. This is normally 0.
- Length (bit): The length in bits of the data. If you change the DataType then this length will automatically change if it was equal to the bit length of the DataType. It can be used to use only a few bits from a byte.
- DataType: The data type of the signal

The digital signal grid doesn't have the Length and DataType columns.

It is up to the user to determine what the data in the CAN messages means.

2 Energy aggregation module

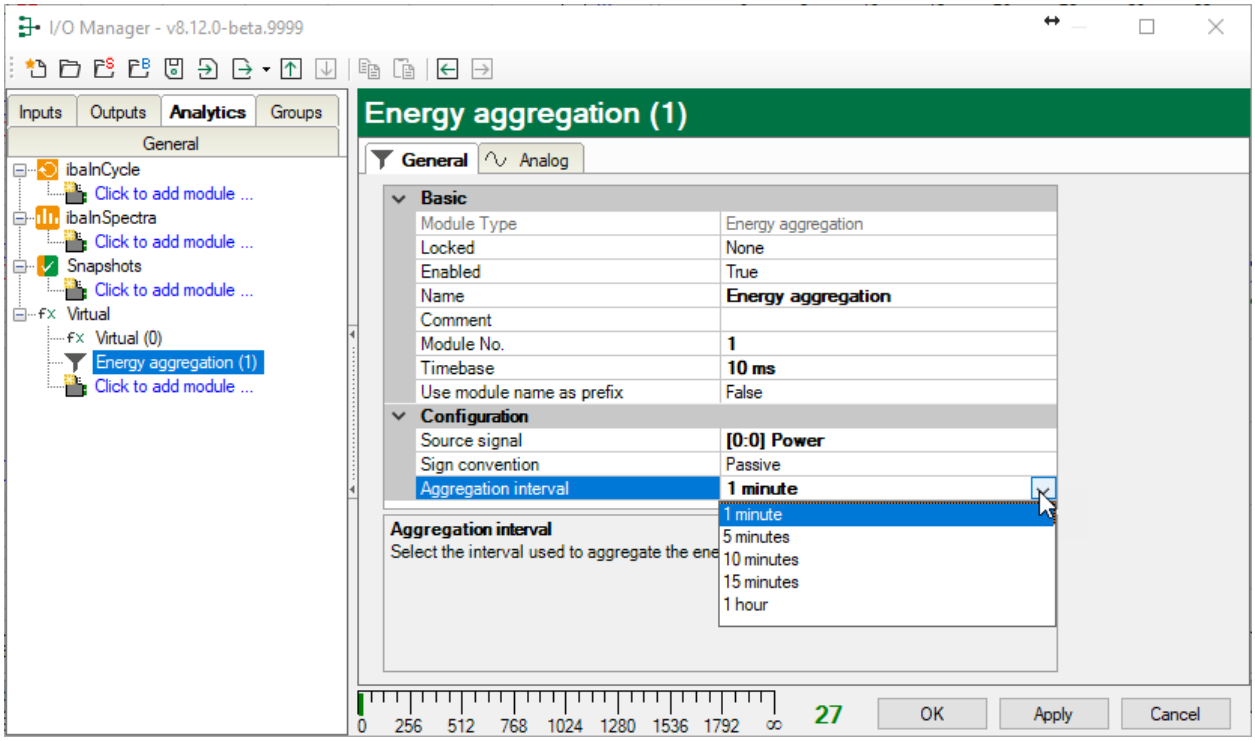
This module allows calculating energy out of power, by integrating a power input during a certain time interval.

The following time intervals are supported:

- 1 minute
- 5 minutes
- 10 minutes
- 15 minutes
- 1 hour

The source signal is the power signal to aggregate.

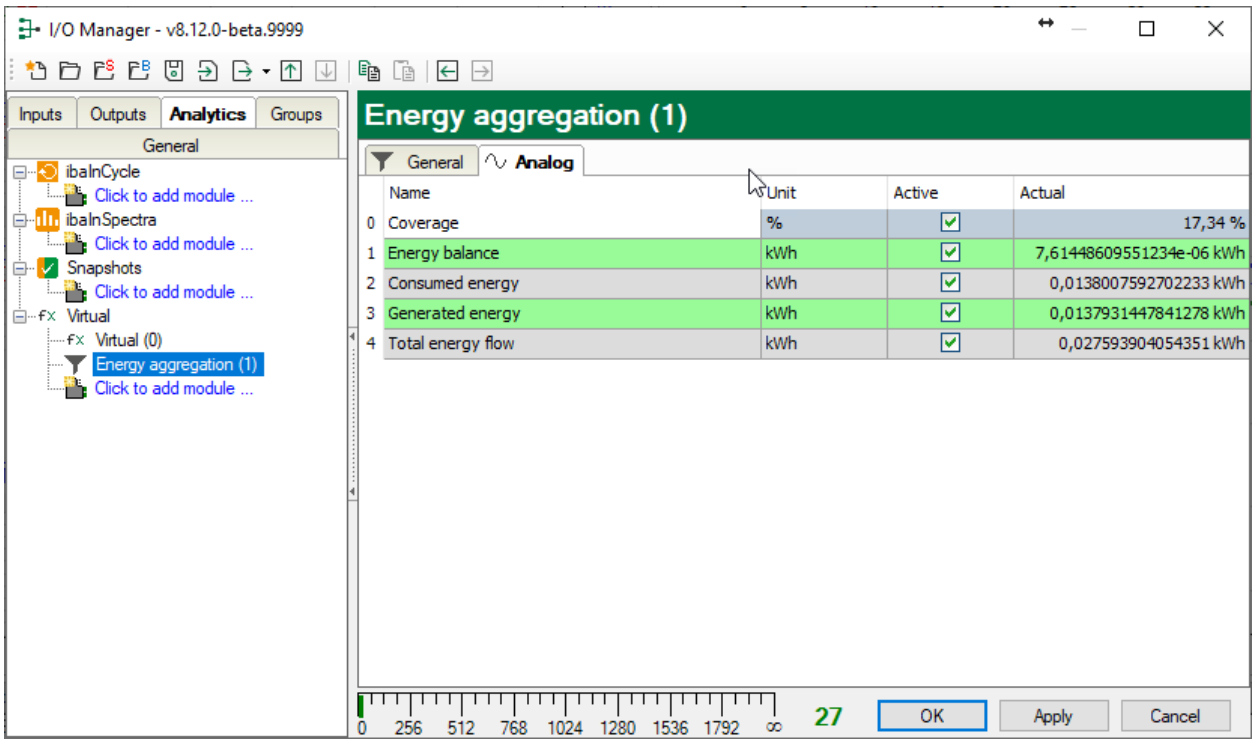
The sign convention allows specifying if the measured system is a passive or active system. A passive system is a system that consumes energy, while an active system produces energy. In case of a passive system, the power signal should be positive in case the system consumes energy and negative in case the system produces energy. In case of an active system, it is the other way around.



The module has 5 analog signals:

- Coverage: The percentage of the interval that is used to calculate the current values. The unit is always %. In steady state, this value will always be 100%.
- Energy balance: For a passive system, this is the consumed energy minus the produced energy. For an active system, this is the produced energy minus the consumed energy.
- Consumed energy: The energy consumed by the system; the value is always positive.
- Generated energy: The energy generated by the system; the value is always positive.
- Total energy flow: The sum of the customed energy and the generated energy, so it is the sum of the energy that goes out and goes in.

The units of the signals are generated automatically, based on the unit of the configured power signal.



The timestamps of the aggregation interval are synchronized against the local time. For example, the 5 minutes interval will cause the module to generate new energy values at 9:00 9:05, 9:10, … 10:00, 10:05, …

The module is also retentive: It remembers the last calculated values when the acquisition is stopped and builds further on them when the acquisition is restarted:

- When the acquisition is stopped and immediately restarted within the same interval, the initial results will be the ones from the interval previously fully completed; the next results will make use of the power values in the previous and current acquisition.
- When the acquisition is stopped in one interval and restarted in the next interval, the partial results of the first interval will be used for the initial results after restart, and the system will start aggregating to calculate partial results for the current interval.
- When acquisition is stopped in one interval and restarted after the end of the next interval, all remembered last values are thrown away and the calculation starts from scratch.

3 Time periods: AutoClosed and DataMissing info fields

There are 2 modes to trigger time periods:

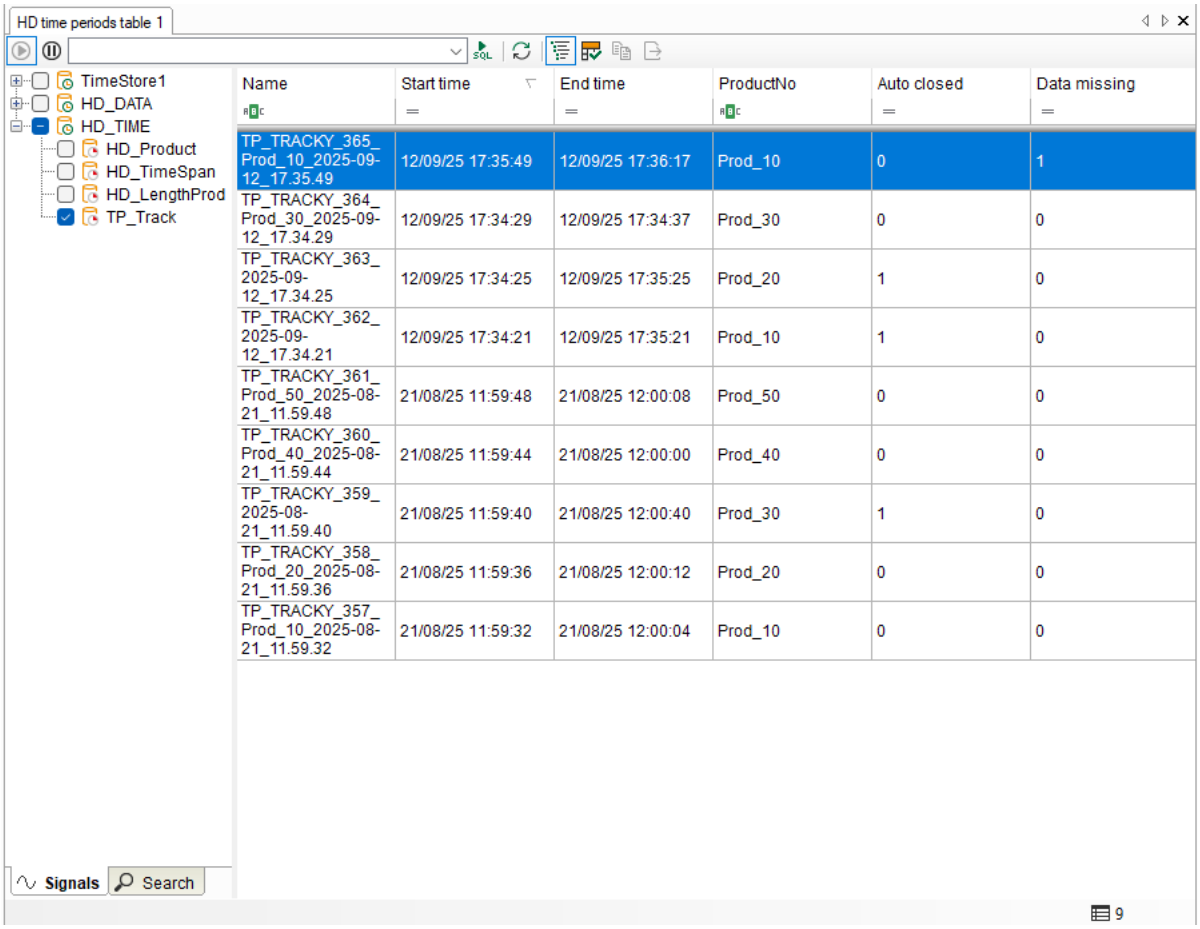
- Standard mode: Time periods are closed in the same order as they are opened.
- Tracking mode: Time periods can be closed in any order. The time periods need to be identifiable over a unique combination of info field values.

In both modes you have to configure a start and stop trigger. You also have to configure the maximum duration of a time period. When a stop trigger hasn't occurred within this maximum duration then ibaPDA will automatically close the time period. In previous versions this only happened in standard mode. In version 8.12.0 ibaPDA now also automatically closes time periods in tracking mode. This requires ibaHD-Server v3.5.0 or later.

In ibaHD-Server v3.5.0 two new info fields have been introduced:

- Auto closed: This will be 0 when the time period was closed by a stop trigger. This will be 1 when ibaPDA automatically closed it. IbaPDA will automatically close a time period when the maximum time period duration is exceeded. IbaPDA will also automatically close all open time periods when the acquisition is stopped in standard mode.
- Data missing: This will be 0 when the data for the signals in the HD time store is available for the whole duration of the time period. It will be 1 when there is some data missing. IbaPDA will set DataMissing to 1 on all open time periods in tracking mode when the acquisition is stopped.

These new info fields can be shown in the event table.



Name	Start time	End time	ProductNo	Auto closed	Data missing
TP_TRACKY_365_Prod_10_2025-09-12_17.35.49	12/09/25 17:35:49	12/09/25 17:36:17	Prod_10	0	1
TP_TRACKY_364_Prod_30_2025-09-12_17.34.29	12/09/25 17:34:29	12/09/25 17:34:37	Prod_30	0	0
TP_TRACKY_363_2025-09-12_17.34.25	12/09/25 17:34:25	12/09/25 17:35:25	Prod_20	1	0
TP_TRACKY_362_2025-09-12_17.34.21	12/09/25 17:34:21	12/09/25 17:35:21	Prod_10	1	0
TP_TRACKY_361_Prod_50_2025-08-21_11.59.48	21/08/25 11:59:48	21/08/25 12:00:08	Prod_50	0	0
TP_TRACKY_360_Prod_40_2025-08-21_11.59.44	21/08/25 11:59:44	21/08/25 12:00:00	Prod_40	0	0
TP_TRACKY_359_2025-08-21_11.59.40	21/08/25 11:59:40	21/08/25 12:00:40	Prod_30	1	0
TP_TRACKY_358_Prod_20_2025-08-21_11.59.36	21/08/25 11:59:36	21/08/25 12:00:12	Prod_20	0	0
TP_TRACKY_357_Prod_10_2025-08-21_11.59.32	21/08/25 11:59:32	21/08/25 12:00:04	Prod_10	0	0

The screenshot shows 3 time periods that have been automatically closed after 1 minute. It also shows 1 time period that is missing data.

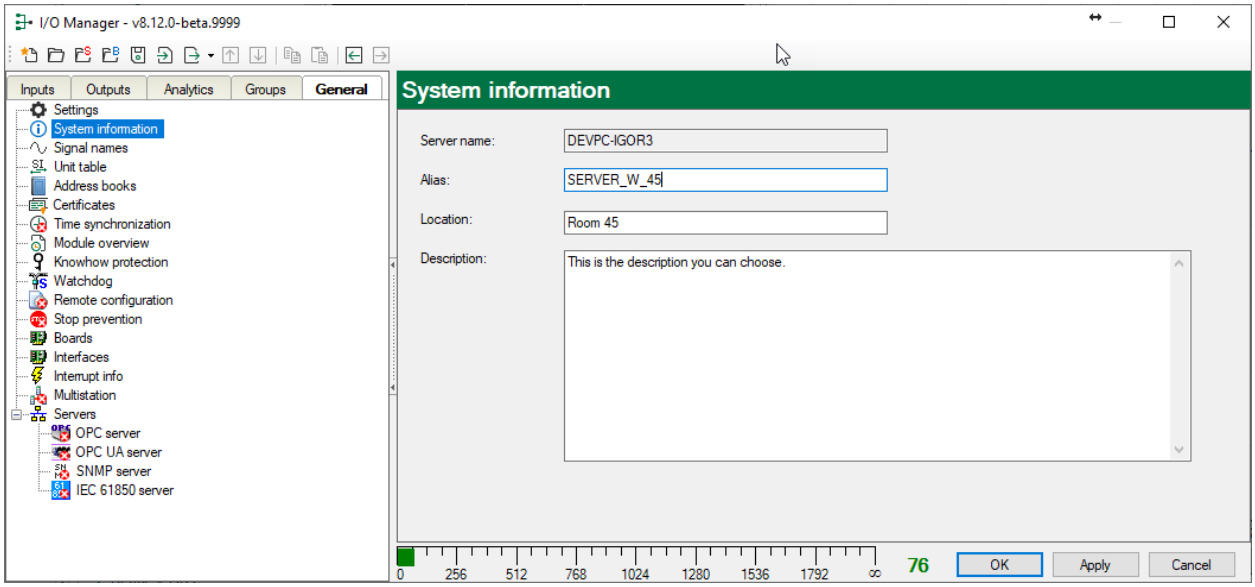
4 System information

It is possible to assign an alias and some other information to an ibaPDA server. This is especially interesting when the computer name - where the ibaPDA server is installed on - has no clear meaning.

The system information consists of:

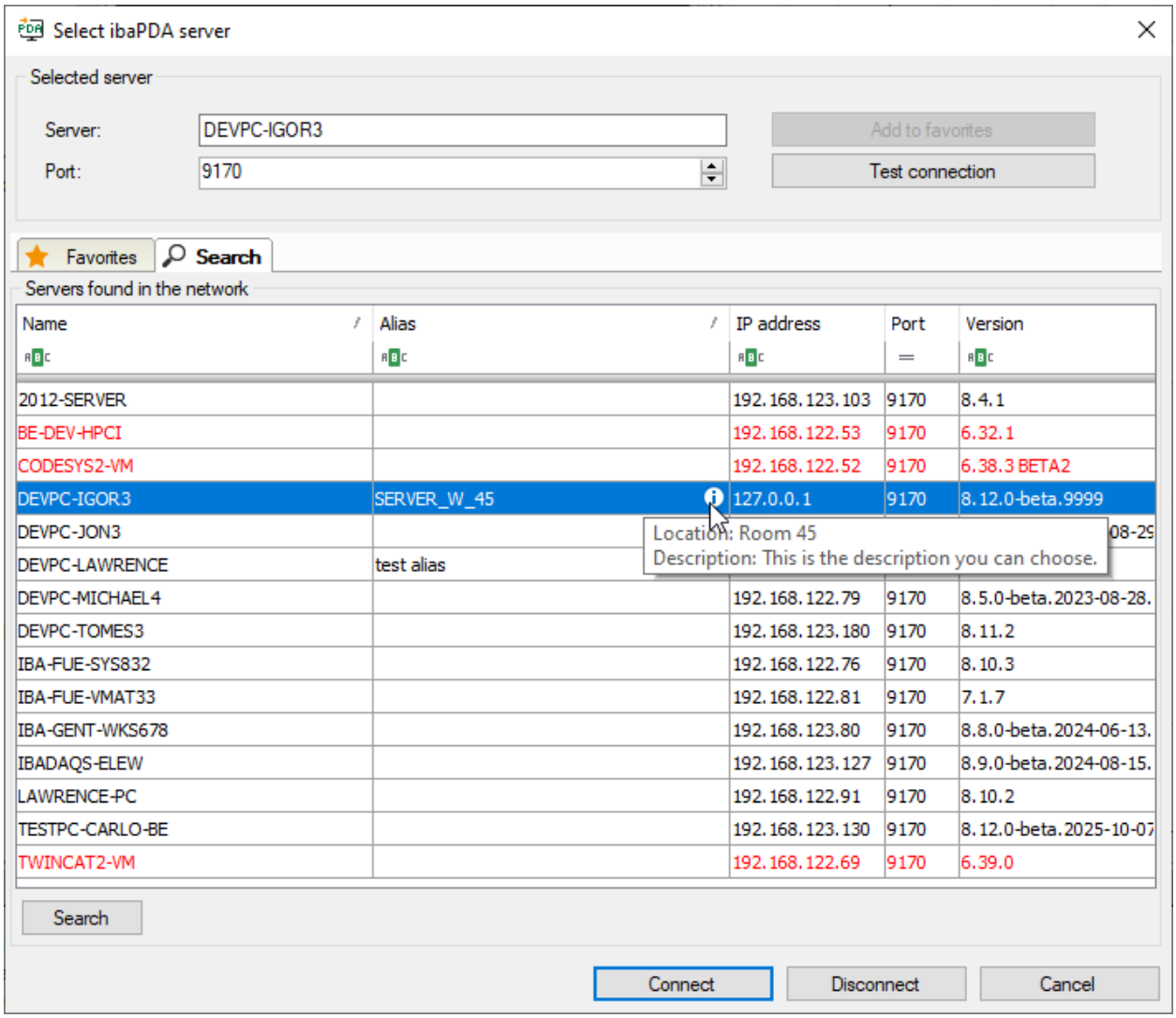
- Alias
- Location
- Description

You can configure the system information in the General tab of the I/O manager. The information is saved in the configuration file (*.io):



Note: If you transfer an I/O configuration file to another computer in another location, it is needed to update the system information in the configuration to avoid confusion!

On the client side of ibaPDA, the alias is shown in the ibaPDA server search in a new column. The location and description are available on a tooltip.



The alias, location and description are available in the favorites tab as well.

If the alias of the connect server is available, it is shown in the status bar of the ibaPDA client. In ibaQPanel, if you configure a label to display the connected server, the alias is displayed.