



## **Device Manager**

As part of the SolutionCenter the Device Manager is the integrated tool for configuration and commissioning of all Bachmann automation devices. The entire M200 control system, the terminals of the OT series, but also standard-compliant fieldbus nodes from third-party manufacturers are supported by this tool. Due to its offline engineering ability, implementation can start before the hardware is available. Switching between offline and online configuration in both directions is not only possible for the complete control system but also for the exchange and archiving of individual hardware and software modules, as well as for complex fieldbus configurations.

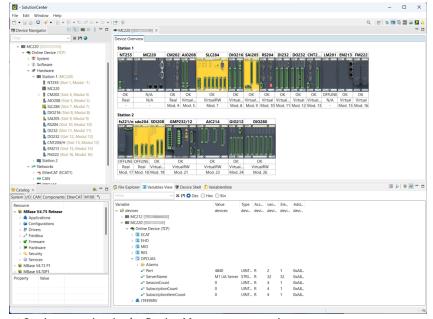
The working area is consistently divided into configurator and monitor areas for all topics. The configurator shows the saved target state which will be used at the next time the system is booted. The monitor shows the current state and allows for manual adjustment of values and settings.

The representation of the modules corresponds to the arrangement in reality. The tree view displays network connections via proprietary and standardized bus systems. I/O modules can be clearly identified and directly controlled via the graphic representation. Thus, the wiring test can start immediately after switching on the system.

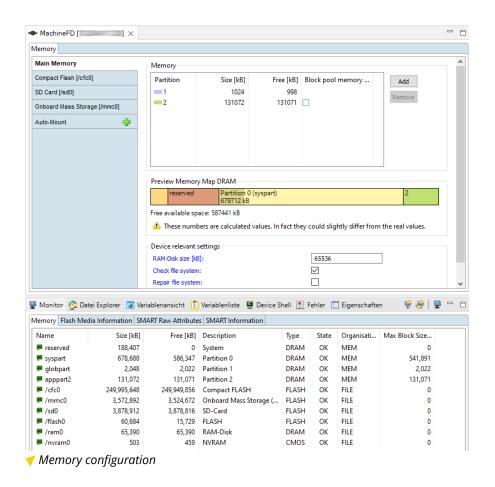
Additionally, the runtime software for real-time control is managed via the Device Manager. Bachmann system packages are summarized in a catalog. The update of the entire software is carried out comfortably by an assistant, that guides through the process. In addition to the supplied system packages, users can create their own, machine-specific packages to manage and transfer them to other PCs. This ensures consistent and unambiguous software versions on all systems and service PCs.

A separate view displays all relevant variables of all involved controllers. The search for values is facilitated by an automatic full-text search. A selection of task-related relevant values can be compiled, saved and reloaded in another window. A trend display can show the time course of values graphically.

- One interface for all Bachmann devices
- Managing devices
- Backup of existing devices
- Offline configuration of entire control systems or individual hardware modules / software modules
- Offline- and Online-configuration of fieldbuses (CAN, PROFINET RT und IRT, PROFIBUS DP, EtherCAT)
- Same way of working for online and offline devices
- Consistent concept: monitor (actual state) and configurator (target state)
- Graphic representation of the I/O modules
- Configuration and diagnostics in one tool
- Managing software in factory catalog and in custom catalogs
- Flexible combination of functional window areas (perspectives)



Station overview in the Device Manager perspective



## M100 I/O Device Manager

The M100 I/O system allows for decentralized signal acquisition via remote I/O-interface modules on fieldbus SubDevices. The configuration of these stations is part of the respective fieldbus management. A comfortable graphical user interface allows for the definition of module interactions within the station structure as well as settings for the I/O modules or individual channels. All tools and views are integrated directly into the SolutionCenter and do not require the installation of additional tools.

The user decides for himself whether he starts with the system configuration of fieldbus nodes, modules and channels or starts with an imported signal list and later distributes it to the physical interfaces. The sensordependent setting of the standard signal type is specified here as well as application-specific sampling rates, synchronization or cut-off frequencies of the digital filters. So that the M100 I/O not only has a single piece of process information (e.g. switching state) of the application available per channel, but also several derived process variables of the same channel (e.g. period duration  $\rightarrow$  velocity) are formed internally by the modules, this selection of the process image is also responsible to the M100 I/O device management.

Simplified graphic views of the module arrangement and the channels guide the user and always provide orientation and feedback. The signal statuses, measured values and error messages from online stations and modules are displayed directly on the user interface and make remote maintenance activities considerably easier. The integrated monitor function also enables the active setting of outputs for commissioning and testing.

	DIS108 MOD 4 CH	
+24V 1	$\odot$	2 +24V
DI+ 3	$\odot$	4 ONT+
GND 5	$\odot$	6 GND
+24V 7	$\odot$	8 +24V
9	$\bigcirc \odot$	10 DI+
GND 11	$\odot$	12 GND
+24V 13	$\odot$	14 +24V
15		16
GND 17	$\odot$	18 GND
+2.4V 19	$\odot$	20 +24V
21		22
GND 23	$\odot$	24 GND
+24V 25	$\odot$	26 +24V
GND 27	$\odot$	28 GND
	3	

1 M1	00 Ether	CAT Stat	ion_1					DOC	\$ Û	annel Processvalue Filter - Q Search	0
NEC102	UI0106	EAS102	dos124	D05124	D05124	D05124	DOS124	D05124		Channelname D. Channel function Address	Processvalue
CH	CH ,	CH y	CH 2	CH 7	CH 7	CH 7	CH 7	CH 7		MachineA.PartX.Switch1 01° DigitalIn 1002 1 5	GD din_value
	● 0 ○ 0	00	00			00	00	00		MachineA.PartX.Switch5 01 <sup>+</sup> DI 1002	(C)
	00	00	00	00	00	00	00	00		VachineA.PartX.Switch6 01 <sup>+</sup> DI 1002	©
	00 ●0	$\bigcirc \bigcirc $	00					00		MachineA.PartX.Switch7 01 <sup>+</sup> DI 1002	(C)
	00		00	00	00	00	00	00		MachineA.PartFeeder.Switch1 01 <sup>+</sup> DigitalIn 1002 1 1	GD din_value
	● 0 0 0	00	00	00		00	00	00		MachineA.PartX.Switch4 01 <sup>+</sup> DI 1002	©
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	00		00	00	00	00	00	00		MachineA.PartX.Switch3 01° DI 1002	©
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		$\odot$			$\bigcirc \bigcirc$		$\bigcirc \bigcirc$			MachineA.PartFeeder.Switch2	GD din_value
0/C	1/E	2	3	4	5	6	7	8	9-31	MachineA.PartFeeder.Light2 01 <sup>+</sup> Digita/Out 1002 1 4	GD dout_value
		-	-			Ŭ				MachineA.PartFeeder.Light1 01 <sup>+</sup> DigitalOut 1002 1 3	GD dout_value

Simplified graphic views of the module arrangement and the channels

In addition to the hardware-free, i.e. purely PC-based, preliminary engineering with components from the parts catalog, an existing fieldbus can also be read out and its station network used as a starting point for further engineering. Each process variable allows a symbolic name to be assigned for the application programming, which makes it easier to understand and the software can be completely separated from the actual I/O mapping. Alternatively, the IEC 61131-3 addressing (e.g. %IX7.3) can still be used. The process variables of the M100 I/O stations are made available to the processor modules of the controller (M200 family) via the proven UFB mechanism (Unified Fieldbus Model) or SVI. The well-known monitor and debug functions of the SolutionCenter are used to monitor the variables.

→ m 100 slot 1 → *MC206 [] ×			
eii102 - Slot 2			
1 M100 EtherCAT ∰ ⊕ ⊕ Station_1 - Slot			×
EII102 MOD > CH	에 My_Channel	1002 2 1	
A+         1         Image: Constraint of the second	2.Basic		
Z+ 5         Image: 5         E           DH_1 7         Image: 6         B         DH_2	Sensor wiring	Single ended	-
DI1_3 9 💿 💿 10 +5V	Voltage level	24 V	-
+24V 11      • • 12 Ground     13      14	Input Filter	200 ns	•
15 O 16 17 O 18	Edge evaluation	single	•
DI2_1 19 💿 💿 20 DI2_2	Counter reduction factor	0	
D12_3 21	Velocity evaluation time	10000	
+24V_IN 25	Velocity standstill detection	1000	
2	2.Reference		
	Homing source	Software	*
	Homing edge	Rising	*
	Homing mode	Single	•
	homing enable input	Software	-
	Homing acitvate	Q	
	homing preset value	0	
	Auto reset compare value	0	-

Module display with setting options in the SolutionCenter

- M100 I/O configuration integrated with M200 engineering in the SolutionCenter
- Clear and application-optimized graphical user interface
- Light/dark theme switching for optimal working conditions
- Signal list import/export and signal-centric engineering
- Automated assignment of channel list names to module channels and functions
- Complete offline configuration with no existing devices
- Reading out the existing topology and configuration of existing buses
- Live view of signals and error messages
- Setting outputs for commissioning and testing
- Station import/export for restoring and saving complex configurations
- Module catalog with online update and changelog
- Station/device report and order list

1100-IO MBase 4.75R V	er	~ X				
ype • Analog Modules	Module Variant	Module Compatibility	Version	Changelog	Profiles	
<ul> <li>Analog Input/Output Modules</li> </ul>						
AIM112	0x0	0x2	3.0.0-20240419.144607-36	Changelog	M100-IO MBase 4.75R	
AIO104I	0x0	0x2	3.0.0-20240419.144607-41	Changelog	M100-IO MBase 4.75R	
AI0112	0x0	0x3	3.0.0-20240419.145205-39	Changelog	M100-IO MBase 4.75R	
Backplanes						
Counter Modules						
Digital Modules						
Fieldbus Modules						
<ul> <li>General Data</li> </ul>						
PackageName: 0x8-var0x0-cor	np0x2					
ModuleType: 0x8						

Module catalog with online update and changelog