



Operator Terminal System Software

All operator terminals use system software comprising the operating system (Linux or Windows Embedded) and additional Bachmann software components.

The Bachmann software components simplify configuration, commissioning and diagnostics locally on the device and remotely via a web browser or the SolutionCenter. Furthermore, the system software provides the option of importing updates and accessing the device interfaces from a visualization.

Additional useful services and software packages are pre-installed on the operating system in order to reduce the development time for common application scenarios. Thus, web-based visualization solutions such as M1 webMI pro and atvise SCADA are very easy to set up. The integrated browser is tailored to industrial applications and offers, among other things, an on-screen keyboard (comparable with a smartphone) for user inputs.

The system software can be extended and adapted to suit your needs if required and is supplied from the factory customized with the terminals.

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Software	
Basic system	Debian GNU/Linux or Windows 10 IoT Enterprise
Software packages	<p>The following software packages are available preinstalled:</p> <ul style="list-style-type: none"> ● Industrial Browser ● Configuration interface (web-based) ● REST API for device interfaces ● DHCP server ● FTP server ● NTP client ● Java Runtime ● SSH client ● SSH server ● VPN server ● VNC server <p>Additional software packages can be installed later.</p>
Installation	<p>The current version comes preinstalled on all devices from the factory. A customized and preconfigured image can also be supplied from the factory on request. Furthermore, a prepared image can also be installed automatically later.</p>
Updates (only Linux)	<p>The system software is updated regularly in order to provide new functionality and security updates. The separation of the system partition and user partition ensures that the user data remains unaffected by the system update. Security relevant updates and bug fixes are provided in the form of partial updates.</p>
Configuration and diagnostic	
Remote maintenance	<p>Remote maintenance is possible via the SolutionCenter, configuration interface TSSW (web-based), VNC/RemoteDesktop and SSH.</p>
Terminal Setup Software (TSSW)	<p>Terminal Setup Software (TSSW) is a web-based, password protected configuration tool for changing configurations easily and for performing remote diagnostics or system updates.</p> <p>TSSW is available locally via an onscreen keyboard and remotely via a standard web browser.</p> <p>The following settings, among other things, can be made using the Terminal Setup Software (TSSW):</p> <ul style="list-style-type: none"> ● Network configuration ● Web browser ● Java webstart ● DHCP server ● VNC server ● NTP client ● Firewall ● Screen saver <p>Further configurations can be found in the user manual. Since the basic system is a widespread Linux derivative, it can also be extended and configured with the appropriate knowledge.</p>

Configuration and diagnostic	
Diagnostics	<p>The web-based configuration user interface also offers the option of receiving information about the device locally or remotely:</p> <ul style="list-style-type: none"> • Device type • Serial number • Hardware revision • Software version • Used/free memory • S.M.A.R.T state for flash storage media • Display of log files
Boot animation	The boot animation displayed when the system is started can be customized.
Visualization	
Web browser	<p>The preinstalled "industrial web browser" offers a number of advantages over a standard browser:</p> <ul style="list-style-type: none"> • Easy configuration via TSSW • No automatic updates that were not tested beforehand • Integrated onscreen keyboard comparable with smartphones • Remote debugging (allows debugging from web applications with standard tools from a developer PC) • Compatibility with atvise® products tested by Bachmann • Low use of resources
Other visualizations	If further software is required for the visualization in addition to the pre-installed software packages, the system software can be customized accordingly.
Additional possible applications	
Firewall	The web terminal system software with a preconfigured iptables configuration can be used as a firewall as well in order to save additional hardware.
Hardware	
Supported products	<p>OT1300 series</p> <p>OT1200 series</p>
Device interfaces	<p>Besides the support of all standard interfaces, such as Ethernet and USB, the system software provides an API for accessing the following device interfaces conveniently from a visualization:</p> <ul style="list-style-type: none"> • LED control • Inputs via function keys • Backlight dimming until 0 % • Call up of touch calibration (only necessary with resistive touch screens)