Operator Terminals

OT1200 Web Terminal

The specifications and interfaces of the OT1200 web terminal make it the ideal choice for small and medium web visualizations, such as atvise®.

Brilliant displays with high brightness, strong colors, very good viewing angles and a long service life make a lasting impression. The modern widescreen diagonals (7", 10.1", 12.1", 15.6") offer high resolutions, e.g. 15.6" with Full-HD. The display lifetime (half brightness) of over 50,000 hours lies within the premium segment.

User input via projected-capacitive (PCAP) touchscreens allows the use of multi-touch-gestures (e.g. pinch-to-zoom, swipe, two-hand operation). The visually appealing, hardened glass surface is easy to clean. The exclusive use of industrial components guarantees a long service lifespan and availability. Permanently soldered RAM and eMMC memories, as well as the absence of any moving parts, ensure maximum resistance to shock and vibration. High temperature ranges of up to 60 °C allow operation under harsh environments.

The pre-installed browser is designed for industrial applications. An integrated onscreen-keyboard enables convenient user input and reduces development efforts. Unwanted, automatic updates are prohibited, ensuring that only released software is used in the field, reducing downtime to a minimum.

The Linux system (based on Debian) provides an easy to use, web-based configuration tool. Configuration settings can be changed directly on the device or remote via browser. The system software includes further useful services, e.g. SSH, NTP, VNC, as well as a Web-API for secure hardware access. The API can be used to react to hardware keys, control LEDs and display brightness, and much more.

We will gladly supply your required software configuration direct from the factory: unpack, connect, done.

Features:
- Pre-installed and easy to configure web-browser
- Gesture control with PCAP Multi-Touch
- Ideal for all kinds of web-visualization
- Visualize data from OPC-UA sources in combination with atvise®
- Brilliant display with high resolutions in 7", 10.1", 12.1" and 15.6" widescreen
- Cortex®-A9 Dual-Core CPU, 2x ETH 10/100, 2x USB, CFast-Slot, 4 GB eMMC onboard
- Robust design and extended temperature range up to +60 °C

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OT1200 Series	OT1207	OT1210	OT1215
Display			
Diagonals	7"	10.1"	15.6"
Resolution	800x480	1280x800	1920x1080
Brightness	450 cd/m²	400 cd/m²	400 cd/m²
Contrast	800:1	800:1	1500:1
Viewing angle (L, R, U, D)	89/89/89/89 °	85/85/85/85 °	85/85/85/85 °
Life expectancy (half brightness)	50,000 h	100,000 h	70,000 h
Processor/RAM			
Processor	ARM® Cortex®-A9 i.MX6Dual		
RAM	1 or 2 GB DDR3 RAM	2 GB DDR RAM	
Mass Storage			
Mass storage integrated	4 GB eMMC [1]		
CFast-Card Slot	Optional CFast (min. 4 GB) [2]		
Control/Display Elements			
Touch screen type	Analog resistive touch or projective capacitive multi touch		
Design	Custom marking on request		
LEDs and control keys	Custom design on request		
Interfaces			
Ethernet 10/100 MBit	1x or 2x RJ45 (separate)	2x RJ45 (separate)	
USB	2x USB 2.0		
Power Supply			
Power supply	24 V DC (18 to 36 V)		
Mating plug	MC1, 5/3-STF-3,5 (2-pol.)		
Reverse polarity protection	Yes		
Galvanic isolation	No		
Electrical Safety			
Protection class (DIN EN 61140)	III		
Degree of protection (IEC 60529)	IP65 in front IP20 at rear		

1) At delivery, approx. 1.2 GB occupied by system software

2) Storage medium not included unless stated in the order description

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OT1200 Series	OT1207	OT1210	OT1215
Ambient Conditions			
Operating temperature	0 to +60 °C fanless		
Rel. humidity operation	5 to 95% without condensation		
Storage temperature	-20 to +70 °C		
Rel. humidity storage	5 to 95% without condensation		
Installation altitude	2,000 to 4,500 m above sea level: Temperature reduction of 0.5 Kelvin (K) per 100 m height		
Pollution degree (IEC 60664-1)	2		
Approvals / Certificates			
Product safety	CE, UL, cUL, cULus, CCC		
Marine	ABS, BV, DNV_GL, LR		
Software			
Operating system	Linux Embedded (Debian)		
Visualization software	Industrial Browser Visualization server with atvise® available		
Other Software	Bachmann Terminal Setup Software (TSSW) SSH Server VNC Server NTP Client Firewall Screen saver ... and many more useful software packages. Additional software packages can be installed subsequently.		

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OT1200+ Series	OT1207+	OT1210+	OT1212+	OT1215+
Display				
Diagonals	7"	10.1"	12.1"	15.6"
Resolution	800x480	1280x800	1280x800	1920x1080
Brightness	450 cd/m²	400 cd/m²	400 cd/m²	400 cd/m²
Contrast	800:1	800:1	1.000:1	1500:1
Viewing angle (L, R, U, D)	89/89/89/89 °	85/85/85/85 °	89/89/89/89 °	85/85/85/85 °
Life expectancy (half brightness)	50,000 h	100,000 h	50,000 h	70,000 h
Processor/RAM				
Processor	ARM® Cortex®-A9 i.MX6Dual+			
RAM	2 GB DDR RAM			
Mass Storage				
Mass storage integrated	4 GB eMMC [1]			
Mass storage selectable	Optional CFast (min. 4 GB) [2]			
Control/Display Elements				
Touch screen type	Resistive	Resistive / Projective capacitive multi touch	Projective capacitive multi touch	Projective capacitive multi touch
Design	Custom marking on request			
LEDs and control keys	Custom design on request			
Status indication	1x LED for supply voltage (green) 2x LED for status and speed per ETH socket			
Interfaces				
Ethernet	2x 10/100 (RJ45, separate)			
USB	2x USB 2.0			
Power Supply				
Power supply	24 V DC (18 to 36 V)			
Mating plug	MC1, 5/3-STF-3,5 (2-pol.)			
Reverse polarity protection	Yes			
Galvanic isolation	No			
Electrical Safety				
Protection class (DIN EN 61140)	III			
Degree of protection (IEC 60529)	IP65 in front IP20 at rear			

1) At delivery, approx. 1.2 GB occupied by system software

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OT1200+ Series	OT1207+	OT1210+	OT1212+	OT1215+
Ambient Conditions				
Operating temperature	0 to +60 °C fanless			
Rel. humidity operation	5 to 95% without condensation			
Storage temperature	-20 to +70 °C			
Rel. humidity storage	5 to 95% without condensation			
Installation altitude	2,000 to 4,500 m above sea level: Temperature reduction of 0.5 Kelvin (K) per 100 m height			
Pollution degree (IEC 60664-1)	2			
Approvals / Certificates				
Product safety	CE, UL, cUL, cULus, CCC			
Marine	–			
Software				
Operating system	Linux Embedded (Debian)			
Visualization software	Industrial Browser Visualization server with atvise® available			
Other Software	Bachmann Terminal Setup Software (TSSW) SSH Server VNC Server NTP Client Firewall Screen saver … and many more useful software packages. Additional software packages can be installed subsequently.			

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Order Codes OT1200 Series		
Item-No.	Item	Description
OT1207W/BE1/MX6/1G/EMC/04/LX	00025995-00	Operator Terminal: 7" (800x480); Resistive Touch; Freescale ARM® Cortex®-A9 i.MX6Dual; 1 GB DDR3 RAM; 1x Eth 10/100; 2x USB2.0; 4GB eMMC onboard; OS: Linux Embedded; Operating Temp. 0 .. +60 °C
OT1207W/BE1/MX6/2G/EMC/04/LX	00025996-00	Operator Terminal: 7" (800x480); Resistive Touch; Freescale ARM® Cortex®-A9 i.MX6Dual; 2 GB DDR3 RAM; 2x Eth 10/100; 2x USB2.0; 4GB eMMC onboard; CFast-Card-Slot; OS: Linux Embedded; Operating Temp. 0 .. +60 °C
OT1210WM/BE1/MX6/2G/EMC04/LX	00026488-00	Operator Terminal: 10.1" (1280x800); Projected-Capacitive Multi-Touch; Freescale ARM® Cortex®-A9 i.MX6Dual; 2 GB DDR3 RAM; 2x Eth 10/100; 2x USB2.0; 4GB eMMC onboard; CFast-Card-Slot; OS: Linux Embedded; Operating Temp. 0 .. +60 °C
OT1215WM/BE1/MX6/2G/EMC04/LX	00026491-00	Operator Terminal: 15.6" (1920x1080); Projected-Capacitive Multi-Touch; Freescale ARM® Cortex®-A9 i.MX6Dual; 2 GB DDR3 RAM; 2x Eth 10/100; 2x USB2.0; 4GB eMMC onboard; CFast-Card-Slot; OS: Linux Embedded; Operating Temp. 0 .. +60 °C
OT1207W/BE1/MX6/1G/EMC04/LX/atvise®	00033189-00	Operator Terminal: 7" (800x480); Resistive Touch; Freescale ARM® Cortex®-A9 i.MX6Dual; 1 GB DDR3 RAM; 1x Eth 10/100; 2x USB2.0; 4GB eMMC onboard; OS: Linux Embedded inkl. atvise-s-emb-OT1200/12 RT; Operating Temp. 0 .. +60 °C
OT1207W/BE1/MX6/2G/EMC04/LX/atvise®	00033190-00	Operator Terminal: 7" (800x480); Resistive Touch; Freescale ARM® Cortex®-A9 i.MX6Dual; 2 GB DDR3 RAM; 2x Eth 10/100; 2x USB2.0; 4GB eMMC onboard; CFast-Card-Slot; OS: Linux Embedded incl. atvise-s-emb-OT1200/12 RT license; Operating Temp. 0 .. +60 °C
OT1210WM/BE1/MX6/2G/EMC04/LX/atvise®	00033191-00	Operator Terminal: 10.1" (1280x800); Projected-Capacitive Multi-Touch; Freescale ARM® Cortex®-A9 i.MX6Dual; 2 GB DDR3 RAM; 2x Eth 10/100; 2x USB2.0; 4GB eMMC onboard; CFast-Card-Slot; OS: Linux Embedded incl. atvise-s-emb-OT1200/12 RT license; Operating Temp. 0 .. +60 °C
OT1215WM/BE1/MX6/2G/EMC04/LX/atvise®	00033192-00	Operator Terminal: 15.6" (1920x1080); Projected-Capacitive Multi-Touch; Freescale ARM® Cortex®-A9 i.MX6Dual; 2 GB DDR3 RAM; 2x Eth 10/100; 2x USB2.0; 4GB eMMC onboard; CFast-Card-Slot; OS: Linux Embedded incl. atvise-s-emb-OT1200 RT license; Operating Temp. 0 .. +60 °C

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Item-No.	Item	Description
OT1207WM/BE1/MX6+/2G/EMC04/LX	00033340-00	Operator Terminal: 7" (800x480); Resistive Touch; Freescale ARM® Cortex®-A9 i.MX6Dual+; 2 GB DDR3 RAM; 2x Eth 10/100; 2x USB2.0; 4GB eMMC onboard; CFast-Card-Slot; OS: Linux Embedded; Operating Temp. 0 .. +60 °C
OT1210WM/BE1/MX6+/2G/EMC04/LX	00033341-00	Operator Terminal: 10.1" (1280x800); Projected-Capacitive Multi-Touch; Freescale ARM® Cortex®-A9 i.MX6Dual+; 2 GB DDR3 RAM; 2x Eth 10/100; 2x USB2.0; 4GB eMMC onboard; CFast-Card-Slot; OS: Linux Embedded; Operating Temp. 0 .. +60 °C
OT1212WM/BE1/MX6+/2G/EMC04/LX	00033342-00	Operator Terminal: 12.1" (1280x800); Projected-Capacitive Multi-Touch; Freescale ARM® Cortex®-A9 i.MX6Dual+; 2 GB DDR3 RAM; 2x Eth 10/100; 2x USB2.0; 4GB eMMC onboard; CFast-Card-Slot; OS: Linux Embedded; Operating Temp. 0 .. +60 °C
OT1215WM/BE1/MX6+/2G/EMC04/LX	00033343-00	Operator Terminal: 15.6" (1920x1080); Projected-Capacitive Multi-Touch; Freescale ARM® Cortex®-A9 i.MX6Dual+; 2 GB DDR3 RAM; 2x Eth 10/100; 2x USB2.0; 4GB eMMC onboard; CFast-Card-Slot; OS: Linux Embedded; Operating Temp. 0 .. +60 °C
OT1207WM/BE1/MX6+/2G/EMC04/LX/atvise®	00033344-00	Operator Terminal: 7" (800x480); Resistive Touch; Freescale ARM® Cortex®-A9 i.MX6Dual+; 2 GB DDR3 RAM; 2x Eth 10/100; 2x USB2.0; 4GB eMMC onboard; CFast-Card-Slot; OS: Linux Embedded incl. atvise-s-emb-OT1200/12 RT license; Operating Temp. 0 .. +60 °C
OT1210WM/BE1/MX6+/2G/EMC04/LX/atvise®	00033345-00	Operator Terminal: 10.1" (1280x800); Projected-Capacitive Multi-Touch; Freescale ARM® Cortex®-A9 i.MX6Dual+; 2 GB DDR3 RAM; 2x Eth 10/100; 2x USB2.0; 4GB eMMC onboard; CFast-Card-Slot; OS: Linux Embedded incl. atvise-s-emb-OT1200/12 RT license; Operating Temp. 0 .. +60 °C
OT1212WM/BE1/MX6+/2G/EMC04/LX/atvise®	00033346-00	Operator Terminal: 12.1" (1280x800); Projected-Capacitive Multi-Touch; Freescale ARM® Cortex®-A9 i.MX6Dual+; 2 GB DDR3 RAM; 2x Eth 10/100; 2x USB2.0; 4GB eMMC onboard; CFast-Card-Slot; OS: Linux Embedded incl. atvise-s-emb-OT1200/12 RT license; Operating Temp. 0 .. +60 °C
OT1215WM/BE1/MX6+/2G/EMC04/LX/atvise®	00033347-00	Operator Terminal: 15.6" (1920x1080); Projected-Capacitive Multi-Touch; Freescale ARM® Cortex®-A9 i.MX6Dual+; 2 GB DDR3 RAM; 2x Eth 10/100; 2x USB2.0; 4GB eMMC onboard; CFast-Card-Slot; OS: Linux Embedded incl. atvise-s-emb-OT1200 RT license; Operating Temp. 0 .. +60 °C

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