

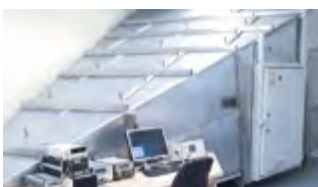
Modular Alarm, Monitoring and Control System



For Yachts and Commercial Vessels

Displays and Panel PCs

Böning Ship Automation



About us

Our company's founding stone was laid in 1977 when the the Engineering Firm Böning was formed. In 1996, it became the Engineering Firm Böning GmbH, and it was renamed to Böning Automations-technologie GmbH & Co. KG in 2003. From the onset, the development and manufacture of electronic devices and systems for ship automation was a major focus of all company activities.

While originally rooted in commercial shipping, our involvement in the area of super and mega yachts since 1996 has also been successful. Today, our devices and systems can be found on more than 13000 commercial ships and yachts. Incidentally, the bulk of these have been developed and manufactured in-house.

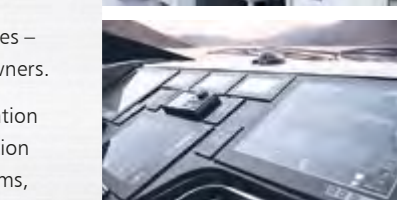
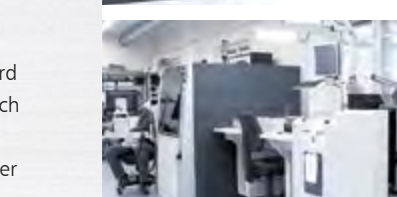
To date, a staff of approximately 100, including about 20 engineers in the area of development alone, are employed here in Ganderskeese in an area of nearly 4000 m² for office, production, and storage space.

One of our responses to the economic crisis beginning in 2008 is our continued drive toward globalization. In this context, we point to branch offices in Brazil, Italy, and Croatia, as well as representatives and distribution partners all over the world. This allows us to better meet the demands for competent service and short routes – especially by shipping companies and yacht owners.

Our recipes for success include a close cooperation with our customers. This results in the production of practice-oriented, reliable devices and systems, and this positive synergy leads to the continued growth of our expertise. Here, we point out the integrated alarm systems which affect practically all areas of ships.

As a rule, safety relevant devices and systems are type approved according to Germanischer Lloyd and other classification societies.

Our company is DIN EN ISO 9001:2008 certified.



Displays und Panel PCs



Böning's new generation of displays expands its product range in the display category with innovative devices.

Combining increased performance and functionality in a valuable modern design, they increase operational safety and ease of operation on ship bridges.

Their luminosity of up to 1300 cd/m² ensures good readability at all times, even during bright sunlight. Automatic dimming further ensures that the displays operate without glare especially when cruising at night.

Automotive components allow the displays to be used in greater temperature ranges than usual displays.

The visualization system with embedded operating system (Windows® Embedded) operates completely autonomously. These PCs were especially developed for ship building industry, and they are absolutely maintenance free.

Our Panel PCs also provide the option of showing the image data from different sources via external inputs.

Example product number: **AHD 1215 G** ► Embedded PC, with CAN module, 15", glass front



Foil front



Glass front



Matte glass

Description	Type	Black Box	10"	12" Wide	15"	19"	19" Wide	24"
Monitor	AHD 11xx		AHD 1110 x		AHD 1115 x	AHD 1119 x		AHD 1124 x
Monitor for operation panel mounting						AHD 1119 xP		
Slim Line monitor with only 30mm depth						AHD 1119 xS		
Embedded PC, with CAN module for 6 x lines	AHD 12xx	AHD 1200			AHD 1215 x	AHD 1219 x		AHD 1224 x
Embedded PC, no CAN module	AHD 13xx	AHD 1300 Slim	AHD 1310 x	AHD 1312 xW			AHD 1319 xW	



Displays and Panel PCs

Embedded Displays

4.3"	AHD 430	6
5.7"	AHD 570	7
8.8"	AHD 880 G	8

Panel PCs / Displays

10.4"	AHD 1310 G	10
	AHD 1110 G	11
15"	AHD 1215 G	12
	AHD 1115 G	13
19"	AHD 1219 G	14
	AHD 1119 G	15
24"	AHD 1224 G	16
	AHD 1124 G	17
19" Slim	AHD 1119 GS	18
19" Panel	AHD 1119 GP	19
12.3" Ultra Wide	AHD 1312 GW	20
19" Ultra Wide	AHD 1319 GW	21
Black Box	AHD 1200	22
Black Box	AHD 1300 Slim	23

Embedded Displays

From 4.3" to 8.8" Screen Size



AHD 430
4.3" LCD LED Touchscreen Display

Specifications

Panel	4.3" LCD LED Touchscreen		
Resolution	480 x 272 Pixel / 272 x 480 Pixel		
Luminosity	425 cd/m² LED		
Contrast	500:1		
Viewing angle	Horizontal: 80°/80°		Vertical: 80°/80°
Power supply	12/24 V DC (+30%/-25%)		
Power consumption	130 mA (24 V)		
Interfaces	2 x CAN		
Dimensions	Width: 90 mm	Height: 130 mm	Depth: 48 mm
Weight	approx. 0.35 kg		
Degree of protection	IP 22 (front) / IP 20 (back)		
Operating temperature	-20 °C ... +60 °C		
Storage temperature	-30 °C ... +80 °C		
Vibration	7 m/s² acc. to IEC 60068-2-6		
Approvals	in preparation		



AHD 570

5.7" LCD LED Color Display

Specifications

Panel	5.7" LCD LED		
Resolution	640 x 480 Pixel		
Luminosity	500 cd/m ² LED		
Contrast	250:1		
Viewing angle	Horizontal: 50°/50°		Vertical: 70°/70°
Power supply	12/24 V DC (+30%/-25%)		
Power consumption	700 mA (24 V)		
Interfaces	1 x CAN		
Dimensions	Width: 144 mm	Height: 144 mm	Depth: 43 mm
Weight	approx. 0.5 kg		
Degree of protection	IP 56 (front) / IP 20 (back) acc. to IEC 60529		
Operating temperature	-30 °C ... +70 °C acc. to RMRS Part IV, IEC 60068-2-1, IEC 60068-2-2		
Storage temperature	-50 °C ... +85 °C acc. to RMRS Part IV, IEC 60068-2-1, IEC 60068-2-2		
Vibration	7 m/s ² acc. to IEC 60068-2-6		
Approvals	BV (in preparation), DNV GL, LR, RMRS		



Also available as
AHD 880 F with
foil front



AHD 880 G
8.8" LCD Touchscreen Display

Specifications

Panel	8.8" LCD color display		
Resolution	640 x 240 Pixel		
Luminosity	250 cd/m² transfective		
Contrast	260:1		
Viewing angle	Horizontal: 50°/50°		Vertical: 45°/45°
Power supply	12/24 V DC (+30%/-25%)		
Power consumption	700 mA (24 V DC)		
Interfaces	3 x CAN, RS 232, Video-In (Composite PAL 50 Hz)		
Dimensions	Width: 270 mm	Height: 130 mm	Depth: 78,3 mm
Weight	approx. 2 kg		
Degree of protection	IP 56 (front) / IP 22 (back) acc. to IEC 60529		
Operating temperature	-25 °C ... +70 °C, Suitable for use on fly bridge (only AHD 880 F) acc. to RMRS Part IV, IEC 60068-2-1, IEC 60068-2-2		
Storage temperature	-30 °C ... +85 °C acc. to RMRS Part IV, IEC 60068-2-1, IEC 60068-2-2		
Vibration	7 m/s² acc. to IEC 60068-2-6		
Salt fog	acc. to IEC 60068-2-52		
Approvals	BV (in preparation), DNV GL, LR, RMRS		

Displays / Panel PCs

From 10" to 24" Screen Size



Also available as
AHD 1310 F with
foil front and as
AHD 1310 M with anti-glare
matte glass front



AHD 1310 G

10.4" LCD LED Touchscreen Panel PC

Specifications

Panel	10.4" LED, sunlight readable		
Resolution	1024 x 768 Pixel		
Luminosity	1300 cd/m² LED		
Contrast	700:1		
Viewing angle	Horizontal: 85°/85°		Vertical: 85°/85°
Power supply	24 V DC (+30%/-25%)		
Power consumption	2 A (24 V DC)		
Interfaces	1 x CAN, 2 x LAN, 2 x USB, 1 x Video-In		
Dimensions	Width: 280 mm	Height: 240 mm	Depth: 107 mm
Weight	approx. 7 kg		
Degree of protection	IP 56 (front) / IP 20 (back) acc. to IEC 60529		
Operating temperature	-30 °C ... +55 °C, Suitable for use on fly bridge (up to +70 °C at console temperature of max. +45 °C) acc. to RMRS Part IV, IEC 60068-2-1, IEC 60068-2-2		
Storage temperature	-50 °C ... +80 °C acc. to RMRS Part IV, IEC 60068-2-1, IEC 60068-2-2		
Vibration	7 m/s² acc. to IEC 60068-2-6		
Salt fog	acc. to IEC 60068-2-52		
Approvals	BV (in preparation), DNV GL, LR		



Also available as
AHD 1110 F with
foil front and as
AHD 1110 M with anti-glare
matte glass front



AHD 1110 G

10.4" LCD LED Touchscreen Display

Specifications

Panel	10.4" LED, sunlight readable		
Resolution	1024 x 768 Pixel		
Luminosity	1300 cd/m ² LED		
Contrast	700:1		
Viewing angle	Horizontal: 85°/85°		Vertical: 85°/85°
Power supply	24 V DC (+30%/-25%)		
Power consumption	1.5 A (24 V DC)		
Interfaces	1 x CAN, 1 x USB-Out, 2 x DVI-In, 1 x VGA-In, 1 x Video-In		
Dimensions	Width: 280 mm	Height: 240 mm	Depth: 107 mm
Weight	approx. 7 kg		
Degree of protection	IP 56 (front) / IP 20 (back) acc. to IEC 60529		
Operating temperature	-30 °C ... +55 °C, Suitable for use on fly bridge (up to +70 °C at console temperature of max. +45 °C) acc. to RMRS Part IV, IEC 60068-2-1, IEC 60068-2-2		
Storage temperature	-50 °C ... +80 °C acc. to RMRS Part IV, IEC 60068-2-1, IEC 60068-2-2		
Vibration	7 m/s ² acc. to IEC 60068-2-6		
Salt fog	acc. to IEC 60068-2-52		
Approvals	BV (in preparation), DNV GL, LR		



Also available as
AHD 1215 F with
foil front and as
AHD 1215 M with anti-glare
matte glass front



AHD 1215 G
15" LCD LED Touchscreen Panel PC

Specifications

Panel	15" LCD		
Resolution	1024 x 768 Pixel		
Luminosity	1000 cd/m² LED		
Contrast	1000:1		
Viewing angle	Horizontal: 85°/85°		Vertical: 85°/85°
Power supply	24 V DC (+30%/-25%)		
Power consumption	approx. 60 W (24 V DC)		
Interfaces	7 x CAN, 1 x RS 232, 1 x LAN, 2 x USB, 2 x DVI-In, 1 x VGA-In, Video-In, Digital-In/-Out		
Dimensions	Width: 384 mm	Height: 324 mm	Depth: 107 mm
Weight	approx. 10 kg		
Degree of protection	IP 56 (front) / IP 20 (back) acc. to IEC 60529		
Operating temperature	-30 °C ... +55 °C, Suitable for use on fly bridge (up to +70 °C at console temperature of max. +45 °C) acc. to RMRS Part IV, IEC 60068-2-1, IEC 60068-2-2, DIN EN 60945		
Storage temperature	-30 °C ... +85 °C acc. to RMRS Part IV, IEC 60068-2-1, IEC 60068-2-2, DIN EN 60945		
Vibration	7 m/s² acc. to IEC 60068-2-6, DIN EN 60945		
Approvals	BV (in preparation), DNV GL, LR, RMRS		



Also available as
AHD 1115 F with
foil front and as
AHD 1115 M with anti-glare
matte glass front



AHD 1115 G

15" LCD LED Touchscreen Display

Specifications

Panel	15" LCD		
Resolution	1024 x 768 Pixel		
Luminosity	1000 cd/m² LED		
Contrast	1000:1		
Viewing angle	Horizontal: 85°/85°		Vertical: 85°/85°
Power supply	24 V DC (+30%/-25%)		
Power consumption	approx. 40 W (24 V DC)		
Interfaces	1 x CAN, 1 x USB-Out, 2 x DVI-In, 1 x VGA-In, Video-In		
Dimensions	Width: 384 mm	Height: 324 mm	Depth: 107 mm
Weight	approx. 10 kg		
Degree of protection	IP 56 (front) / IP 20 (back) acc. to IEC 60529		
Operating temperature	-30 °C ... +55 °C, Suitable for use on fly bridge (up to +70 °C at console temperature of max. +45 °C) acc. to RMRS Part IV, IEC 60068-2-1, IEC 60068-2-2, DIN EN 60945		
Storage temperature	-30 °C ... +85 °C acc. to RMRS Part IV, IEC 60068-2-1, IEC 60068-2-2, DIN EN 60945		
Vibration	7 m/s² acc. to IEC 60068-2-6, DIN EN 60945		
Approvals	BV (in preparation), DNV GL, LR, RMRS		



Also available as
AHD 1219 F with foil front
(no touch screen) and as
AHD 1219 M with anti-glare
matte glass front



AHD 1219 G

19" LCD LED Touchscreen Panel PC

Specifications

Panel	19" LCD		
Resolution	1280 x 1024 Pixel		
Luminosity	1000 cd/m² LED		
Contrast	2000:1		
Viewing angle	Horizontal: 89°/89°		Vertical: 89°/89°
Power supply	24 V DC (+30%/-25%)		
Power consumption	approx. 60 W (24 V DC)		
Interfaces	7 x CAN, 1 x RS 232, 1 x LAN, 2 x USB, 2 x DVI-In, 1 x VGA-In, Video-In, Digital-In/-Out		
Dimensions	Width: 454 mm	Height: 384 mm	Depth: 107 mm
Weight	approx. 12 kg		
Degree of protection	IP 56 (front) / IP 20 (back) acc. to IEC 60529		
Operating temperature	-30 °C ... +55 °C acc. to RMRS Part IV, IEC 60068-2-1, IEC 60068-2-2, DIN EN 60945		
Storage temperature	-30 °C ... +85 °C acc. to RMRS Part IV, IEC 60068-2-1, IEC 60068-2-2, DIN EN 60945		
Vibration	7 m/s² acc. to IEC 60068-2-6, DIN EN 60945		
Approvals	BV (in preparation), DNV GL, LR, RMRS		



Also available as
AHD 1119 F with foil front
(no touch screen) and as
AHD 1119 M with anti-glare
matte glass front



AHD 1119 G

19" LCD LED Touchscreen Display

Specifications

Panel	19" LCD		
Resolution	1280 x 1024 Pixel		
Luminosity	1000 cd/m² LED		
Contrast	2000:1		
Viewing angle	Horizontal: 89°/89°		Vertical: 89°/89°
Power supply	24 V DC (+30%/-25%)		
Power consumption	approx. 60 W (24 V DC)		
Interfaces	1 x CAN, 1 x USB-Out, 2 x DVI-In, 1 x VGA-In, Video-In		
Dimensions	Width: 454 mm	Height: 384 mm	Depth: 107 mm
Weight	approx. 12 kg		
Degree of protection	IP 56 (front) / IP 20 (back) acc. to IEC 60529		
Operating temperature	-30 °C ... +55 °C acc. to RMRS Part IV, IEC 60068-2-1, IEC 60068-2-2, DIN EN 60945		
Storage temperature	-30 °C ... +85 °C acc. to RMRS Part IV, IEC 60068-2-1, IEC 60068-2-2, DIN EN 60945		
Vibration	7 m/s² acc. to IEC 60068-2-6, DIN EN 60945		
Approvals	BV (in preparation), DNV GL, LR, RMRS, MED compliant A.1/4.30, A.1/4.35, A.1/4.38		



Also available as
AHD 1224 M with anti-glare
matte glass front



AHD 1224 G
24" LCD LED Touchscreen Panel PC

Specifications

Panel	24" LCD		
Resolution	1920 x 1080 Pixel		
Luminosity	1000 cd/m² LED		
Contrast	5000:1		
Viewing angle	Horizontal: 89°/89°		Vertical: 89°/89°
Power supply	24 V DC (+30%/-25%)		
Power consumption	approx. 60 W (24 V DC)		
Interfaces	7 x CAN, 1 x RS 232, 1 x LAN, 2 x USB, 2 x DVI-In, 1 x VGA-In, Video-In, Digital-In/Out		
Dimensions	Width: 620 mm	Height: 384 mm	Depth: 107 mm
Weight	approx. 15 kg		
Degree of protection	IP 56 (front) / IP 20 (back) acc. to IEC 60529		
Operating temperature	-30 °C ... +55 °C acc. to RMRS Part IV, IEC 60068-2-1, IEC 60068-2-2		
Storage temperature	-30 °C ... +85 °C acc. to RMRS Part IV, IEC 60068-2-1, IEC 60068-2-2		
Vibration	7 m/s² acc. to IEC 60068-2-6		
Approvals	BV (in preparation), DNV GL, LR, RMRS		



Also available as
AHD 1124 M with anti-glare
matte glass front



AHD 1124 G

24" LCD LED Touchscreen Display

Specifications

Panel	24" LCD		
Resolution	1920 x 1080 Pixel		
Luminosity	1000 cd/m² LED		
Contrast	5000:1		
Viewing angle	Horizontal: 89°/89°		Vertical: 89°/89°
Power supply	24 V DC (+30%/-25%)		
Power consumption	approx. 60 W (24 V DC)		
Interfaces	1 x CAN, 1 x USB-Out, 2 x DVI-In, 1 x VGA-In, Video-In		
Dimensions	Width: 620 mm	Height: 384 mm	Depth: 107 mm
Weight	approx. 15 kg		
Degree of protection	IP 56 (front) / IP 20 (back) acc. to IEC 60529		
Operating temperature	-30 °C ... +55 °C acc. to RMRS Part IV, IEC 60068-2-1, IEC 60068-2-2		
Storage temperature	-30 °C ... +85 °C acc. to RMRS Part IV, IEC 60068-2-1, IEC 60068-2-2		
Vibration	7 m/s² acc. to IEC 60068-2-6		
Approvals	in preparation		



Also available as
AHD 1119 MS with anti-
glare matte glass front



AHD 1119 GS

19" LCD LED Touchscreen Display

Specifications

Panel	19" LCD		
Resolution	1280 x 1024 Pixel		
Luminosity	1000 cd/m² LED		
Contrast	2000:1		
Viewing angle	Horizontal: 89°/89°		Vertical: 89°/89°
Power supply	24 V DC (+30%/-25%)		
Power consumption	approx. 50 W (24 V DC)		
Interfaces	1 x CAN, 2 x DVI-In, 1 x VGA-In, 2 x Video-In		
Dimensions	Width: 420 mm	Height: 501 mm	Depth: 225 mm
Weight	approx. 12 kg		
Degree of protection	IP 56 (top) / IP 20 (socket) acc. to IEC 60529		
Operating temperature	-30 °C ... +55 °C		
Storage temperature	-30 °C ... +85 °C		
Vibration	7 m/s² acc. to IEC 60068-2-6		
Approvals	in preparation		



Installation Example

Also available as
AHD 1119 MP with anti-
glare matte glass front



AHD 1119 GP

19" LCD LED Touchscreen Display

Specifications

Panel	19" LCD		
Resolution	1280 x 1024 Pixel		
Luminosity	1000 cd/m ² LED		
Contrast	2000:1		
Viewing angle	Horizontal: 89°/89°		Vertical: 89°/89°
Power supply	24 V DC (+30%/-25%)		
Power consumption	approx. 50 W (24 V DC)		
Interfaces	1 x CAN, 2 x DVI-In, 1 x VGA-In, 2 x Video-In		
Dimensions	Width: 620 mm	Height: 390 mm	Depth: 107 mm
Weight	approx. 15 kg		
Degree of protection	IP 56 (front) / IP 20 (back) acc. to IEC 60529		
Operating temperature	-30 °C ... +55 °C		
Storage temperature	-30 °C ... +85 °C		
Vibration	7 m/s ² acc. to IEC 60068-2-6		
Approvals	in preparation		

Also available as
AHD 1312 MW with
anti-glare matte glass front



AHD 1312 GW

12.3" LCD LED Touchscreen Panel PC

Specifications

Panel	12.3" LCD LED		
Resolution	1280 x 480 Pixel		
Luminosity	1000 cd/m²		
Contrast	1000:1		
Viewing angle	Horizontal: 85°/85°		Vertical: 85°/85°
Power supply	12/24 V DC (+30%/-25%)		
Power consumption	2 A (24 V DC)		
Interfaces	1 x CAN, 2 x LAN, 2 x USB, 4 x Video-In (Composite PAL 50 Hz)		
Dimensions	Width: 340 mm	Height: 158 mm	Depth: 87 mm
Weight	approx. 2 kg		
Degree of protection	IP 56 (front) / IP 20 (back)		
Operating temperature	30 °C ... +55 °C		
Storage temperature	-30 °C ... +85 °C		
Vibration	7 m/s² acc. to IEC 60068-2-6		
Approvals	in preparation		

Also available as
AHD 1319 MW with
anti-glare matte glass front



AHD 1319 GW

19" LCD LED Touchscreen Panel PC

Specifications

Panel	19.2" LCD LED		
Resolution	1920 x 360 Pixel		
Luminosity	500 cd/m ²		
Contrast	600:1		
Viewing angle	Horizontal: 80°/80° Version for overhead mounting: Vertical: 60°/80° Vertical: 80°/60°		
Power supply	12/24 V DC (+30%/-25%)		
Power consumption	max. 2 A (24 V DC)		
Interfaces	1 x CAN, 2 x LAN, 2 x USB, 4 x Video-In (Composite PAL 50 Hz)		
Dimensions	Width: 530 mm	Height: 152 mm	Depth: 87 mm
Weight	approx. 2 kg		
Degree of protection	IP 56 (front) / IP 20 (back) acc. to IEC 60529		
Operating temperature	30 °C ... +55 °C		
Storage temperature	-30 °C ... +85 °C		
Vibration	7 m/s ² acc. to IEC 60068-2-6		
Approvals	in preparation		



AHD 1200

Black Box

Specifications

Processor	2.0 GHz Quad Core		
Resolution	max. 1920 x 1200 Pixel		
RAM	4 GB		
Flash Disk	8 GB		
Power supply	18/32 V DC		
Power consumption	approx. 45W (24 V DC)		
Interfaces	6 x CAN, 1 x RS 232, 2 x LAN, 2 x USB, DVI-I-Out, Video-In, Digital-In, Digital-Out		
Dimensions	Width: 400 mm	Height: 320 mm	Depth: 112 mm
Weight	approx. 10 kg		
Degree of protection	IP 20		
Operating temperature	-30 °C ... +55 °C		
Storage temperature	-30 °C ... +70 °C		
Installation depth	130 mm min.		
Approvals	GL, RS		



AHD 1300 Slim

Black Box

Specifications

Processor	2.0 GHz Quad Core		
Resolution	max. 1920 x 1200 Pixel		
RAM	4 GB		
Flash Disk	8 GB		
Power supply	24 V DC (+30% / -25%)		
Power consumption	approx. 45W (24 V DC)		
Interfaces	1 x CAN, 1 x RS 232, 2 x LAN, 2 x USB, 1 x DVI-I-Out, 4 x Video-In (Composite PAL 50 Hz)		
Dimensions	Width: 332 mm	Height: 110 mm	Depth: 70 mm
Weight	approx. 4 kg		
Degree of protection	IP 20		
Operating temperature	-30 °C ... +55 °C		
Storage temperature	-30 °C ... +70 °C		
Installation depth	130 mm min.		
Approvals	In preparation: DNV GL, LR		

www.boening.com



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**Böning Automationstechnologie
GmbH & Co. KG**

Am Steenöver 4
27777 Ganderkesee
Germany

Phone: +49 4221 9475-0
Fax: +49 4221 9475-22
Email: info@boening.com