AKI2G Series

High performance HMI

Empower your solution with our high performing operator panels

Our new AKI2G series HMIs offers a stylish design with excellent performance. Get the most out of your operator interface with Kollmorgen Visualization Builder.

The basic AKI2G model is the obvious choice when requiring a cost-efficient, high value and reliable HMI panel. Available in 5 and 7 inches.

When only the best is good enough we recommend our advanced HMI with high-performance for all applications. Available in 7 and 12 inches.
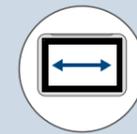
High performing, cost efficient and full functionality HMI panel

Our basic industrial HMI offers a high resolution touch-screen and modern design. The panel combine IP65 corrosion resistant plastic housing with the full version of Kollmorgen Visualization Builder, providing a cost-effective yet advanced HMI solution for small to medium applications.
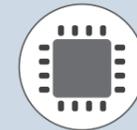
Available in 5 and 7 inches.

Wide screen format
AKI operator panels offer wide screen format, designed to succeed the traditional 4:3 square aspect ratio.

UL, CE, FCC and KCC certificates
The entire AKI operator panel range offers a strong standard certification with UL, CE, FCC and KCC certificates.

Power efficient ARM9 processors
Power efficient ARM9 processor provides strong performance for small and medium sized applications.

Corrosion resistant IP65 plastic housing
Corrosion resistant plastic housing with IP65 front. Resistant to direct rain, snow or wash-downs, dirt, grime and dust.

Operating temperature -10°C to +50°C
The -10°C to +50°C operating temperature range satisfies the demands of most industries.

All the communication ports you need
AKI basic operator panels offers 1 × Ethernet, 4 × serial, 1 × USB as standard, securing ample communication with other equipment.

See page 10 for technical data.

High technology HMIs for all your automation needs

Our advanced AKI2G series HMIs offers a range of high performance industrial panels designed for demanding applications. All with high performance ARM Cortex-A9 processors, the latest screen technology and a wide range of connectivity options to cover all your automation needs.
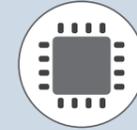
Available in 7 and 12 inches.
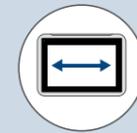
Wide screen format
X2 panels offer wide screen format, designed to succeed the traditional 4:3 square aspect ratio.

UL, CE, FCC and KCC certificates*
The entire X2 range offers a strong standard certification with UL, CE, FCC and KCC certificates.

Powerful ARM Cortex-A9 processor
Powerful single or dual core ARM Cortex-A9 processor delivers fast screen changes and program execution in demanding applications.

Robust aluminum housing
Robust aluminum housing with IP65, NEMA 4X/12 and UL Type 4X/12 front. Resistant to direct rain, snow or wash-downs, dirt, grime and dust.

Wide operating temperature -10°C to +60°C*
The wide -10°C to +60°C operating temperature range satisfies the demands of most industries.
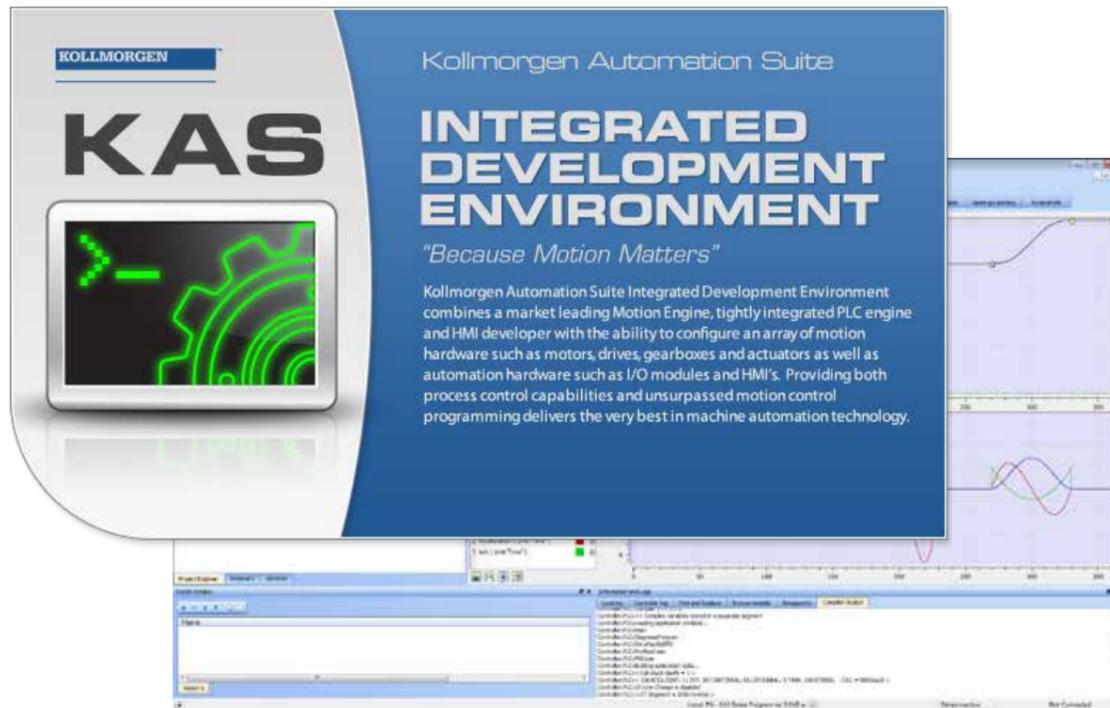
Marine certifications*
The X2 panels meet extended classes of marine certifications not normally carried by HMIs, making them suitable for all onboard locations.

SD memory card
Card holder and USB connection are located behind the lid on the back of the panel for smart memory expansion, project backup and application loading.

See page 11 for technical data.

Kollmorgen Automation Suite
INTEGRATED DEVELOPMENT ENVIRONMENT
"Because Motion Matters"

Kollmorgen Automation Suite Integrated Development Environment combines a market leading Motion Engine, tightly integrated PLC engine and HMI developer with the ability to configure an array of motion hardware such as motors, drives, gearboxes and actuators as well as automation hardware such as I/O modules and HMI's. Providing both process control capabilities and unsurpassed motion control programming delivers the very best in machine automation technology.

Kollmorgen Automation Suite
KOLLMORGEN VISUALIZATION BUILDER
"Because Motion Matters"

Kollmorgen Visualization Builder Software is part of the high-performance Motion Control and Automation Systems Development Suite of tools from Kollmorgen. Using this software suite, you can quickly and easily create Operator Interface panels that are easy to develop and intuitive to use.

» Open architecture provides consistent support for both IEC 61131-3 and user-defined programming constructs in a single environment

» Graphical, drag-and-drop programming environment ensures consistency and convenience

» Programmed modules can easily be modified and reused, increasing development speed

» Auto-recognize feature automatically brings Kollmorgen controllers, I/O devices, drives, motors and other hardware components into the development environment

» Programming language interchangeability allows seamless integration of different languages for different programming tasks, and even translates one IEC 61131-3 language to another

» Offline development and simulation capabilities allow you to create and test solutions without deploying the target hardware or putting physical components at risk

» Graphical cam editor makes it easy to import, create, modify and reuse complex cam profiles

» Multi-variable software oscilloscope and standard debugging features simplify troubleshooting and fine-tuning

Benefits

» Quickly create, optimize and validate motion components and templates

» Reuse and customize function blocks to suit many different applications

» Customize the development environment to suit your working style

» Simplify programming of complex automation systems that incorporate multiple types of components and configurations

» Integrate PLC programming within the same environment you use to define system topology, auto-discover and auto-configure components, create cam profiles, test and debug motion programs, and more

---

» Customizable workspace
Arrange your tool windows. Pin or dock them, or float them over and outside your editing space.

» Cross reference
Edit tag names at one place and it will reflect through the whole project. Get an overview, or trace specific tags.

» Panel wizard
Get a head start. Just select target panel and driver in the panel wizard, and you are ready to start a new project.

» Tag browser
Use the tag browser to connect tags to objects in a screen and to search for specific tags. Or create directly when connecting.

» Context-sensitive help
Simply press "F1" wherever you are in the developer environment and the manual opens with relevant information of the feature.

» Alias
Reuse screens without having to create a new duplicated screen. Tags are connected at one place only, and one screen can be reused for several machines, faceplates etc.

» Project backup
Backup your project and export to USB at any time. Use the Ethernet connection or USB to update your panel on site.

» Import/export
iX supports import/export of e.g. tags, alarms, texts, translations, symbols, etc.

» Easy to arrange
Use auto alignment with guidelines to position objects on the screen. Arrange, group, resize, align and distribute screen objects with a right click.

» Template screens
Increase brand consistency with uniform corporate screens and objects. Reuse your templates instead of maintaining individual background screens.

» Smart property grid
View all properties, only changed or your personal favorites. Easily edit, copy or compare the properties or actions of any object.

» Simulation
Off- and online simulation with or without live data from controllers provides safe and reliable tests of HMI applications.

» Multiple objects editing
Make multiple changes by selecting several objects and configuring them simultaneously with just one mouse click. This allows fast and efficient editing.

» Upload project
Projects can be down- and uploaded from the panel including password protected.

	5 inch AKI2G-CDA-MOD-05T-000	7 inch AKI2G-CDA-MOD-07T-000
General description		
Part number	630005105	630005205
Certifications		
General	CE, FCC, KCC	
Marine	–	
UL	UL 61010-2-201	
Mechanical		
Mechanical size	170 × 107 × 49 mm	196 × 146 × 52 mm
Touch type	Resistive	
Cut-out size	161 × 93 mm	186 × 136 mm
Weight	0.5 kg	0.7 kg
Housing material	Plastic (PC+ABS), Gray	
Power		
Input voltage	24 V DC (18 to 32 VDC) CE: The power supply must conform with the requirements according to IEC 60950 and IEC 61558-2-4. UL and cUL: The power supply must conform with the requirements for class II power supplies.	
Power consumption	6W	9.6W
Input fuse	Internal DC fuse	
System		
CPU	ARM9 400 MHz	
RAM	128 MB	
FLASH	256 MB, 200 MB free for application storage	
Display		
Size diagonal	5" diagonal	7" diagonal
Resolution	800 × 480 pixels	
Backlight	LED Backlight	
Backlight life time	20 000 hours	
Backlight brightness	300 cd/m²	400 cd/m²
Backlight dimming	Industrial Dimming	
Display type	TFT-LCD with LED backlight	
Display pixel error	Class I (ISO9241-307)	
Communication serial		
Number of serial ports	2 Port 9pin DSUB	
Serial port 1	RS 232 (RTS/CTS)	
Serial port 2	RS422/485	
Serial port 3	RS 232	
Serial port 4	RS 485	
Ethernet communication		
Number of ethernet ports	1	
Ethernet port 1	1 × 10/100 Base-T (shielded RJ45)	
Ethernet port 2	–	
Expansion interface		
Expansion port	No	
SD card	No	
USB	1 × USB 2.0 500mA	
Environmental		
Operating temperature	-10ºC to +50ºC	
Storage temperature	-20º to +60ºC	
Shock	15g, half-sine, 11ms according to IEC60068-2-27	
Vibration	1g, according to IEC 60068-2-6, Test Fc	
Sealing front	IP65	
Sealing back	IP20	
Humidity	5% – 85% non-condensed	

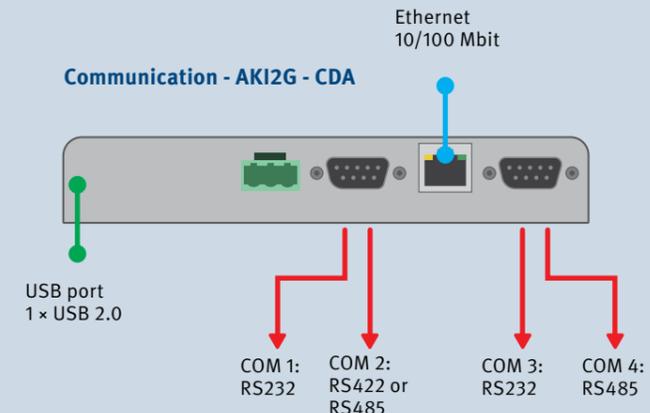|	7 inch AKI2G-CDB-MOD-07T-000	12 inch AKI2G-CDB-MOD-12T-000
General description		
Part number	630000205	640000205
Certifications*		
General	CE, FCC, KCC	
Marine	DNV, KR, GL, LR, ABS, CCS	
UL	UL 61010-2-201	
Mechanical		
Mechanical size	204 × 143 × 50 mm	340 × 242 × 57 mm
Touch type	Resistive	
Cut-out size	189 × 128 mm	324 × 226 mm
Weight	0.8 kg	2.6 kg
Housing material	Powder-coated aluminum, Gray	
Power		
Input voltage	24 V DC (18 to 32 VDC) CE: The power supply must conform with the requirements according to IEC 60950 and IEC 61558-2-4. UL and cUL: The power supply must conform with the requirements for class II power supplies.	
Power consumption	14.4W	28.8W
Input fuse	Internal DC fuse	
System		
CPU	i.MX6Solo Single Cortex-A9 1.0GHz 512kBL2cache	i.MX6DualLite, Dual Cortex-A9 1.0GHz 512kBL2cache
RAM	512 MB	1 GB
FLASH	2GB SSD(eMMC), 1.5GB free for application storage	
Display		
Size diagonal	7" diagonal	12.1" diagonal
Resolution	800 × 480 pixels	1280 × 800 pixels
Backlight	LED Backlight	
Backlight life time	20 000 hours	50 000 hours
Backlight brightness	350 cd/m²	400 cd/m²
Backlight dimming	Industrial Dimming	
Display type	TFT-LCD with LED backlight	
Display pixel error	Class I (ISO9241-307)	
Communication serial		
Number of serial ports	1 Port 9pin DSUB	
Serial port 1	RS 232 (RTS/CTS)	
Serial port 2	RS422/485	
Serial port 3	RS485 (only if COM 2 is RS485)	
Ethernet communication		
Number of ethernet ports	1	2
Ethernet port 1	1 × 10/100 Base-T (shielded RJ45)	
Ethernet port 2	NA	1 × 10/100 Base-T (shielded RJ45)
Expansion interface		
Expansion port	Yes, ciX expansion module	
SD card	SD and SDHC	
USB	1 × USB 2.0 500mA	2 × USB 2.0 500mA
Environmental		
Operating temperature	-10ºC to +60ºC	
Storage temperature	-20ºC to +70ºC	
Shock	15g, half-sine, 11ms according to IEC60068-2-27	
Vibration	1g, according to IEC 60068-2-6, Test Fc	
Sealing front	IP65, NEMA 4X/12 and UL Type 4X/12	
Sealing back	IP20	
Humidity	5% – 85% non-condensed	

Upgrade your solution, it is quick and easy!

Hardware upgrade to AKI series: Use the migration tables to find the right panel when you want to upgrade your existing Kollmorgen HMI solution to the new AKI operator panels.

From AKI to AKI2G

Model	AKI-CDA			AKI-CDB		
Size	4	7	10	7	12	15
Material	Aluminium			Aluminium		
Ethernet	1			2		
USB	1			3		
Serial ports	2 ports, 4 connections			2 ports, 4 connections		
Brightness (cd/m2)	350	350	400	500	400	450
SD card	Yes			Yes		
Sealing class front/back	IP65/20			IP65/20		
RAM	128 MB (DDR 2)			1 GB (DDR 2)		
CPU	ARM 9 (400 MHz)			Intel Atom (1.1 GHz)		
Application memory	80 MB			1,4 GB		
Certifications						
General	CE			CE		
Marine	DNV			No		
Safety	UL 508			UL 508		

Model	AKI2G-CDA		AKI2G-CDB	
Size	5	7	7	12
Material	Plastic		Aluminium	
Ethernet	1		1	2
USB	1		1	2
Serial ports	2 ports, 4 connections		1 port, 3 connections	
Brightness (cd/m2)	300	400	350	400
SD card	No		Yes	
Sealing class front/back	IP65/20		IP65/20 + NEMA 4X/12 & UL Type 4X/12	
RAM	128 MB (DDR 2)		512 MB	1 GB
CPU	ARM 9 (400 MHz)		Single Cortex-A9 1.0GHz	Dual Cortex-A9 1.0GHz
Application memory	200 MB		1,5 GB	
Certifications				
General	CE, FCC, KCC		CE, FCC, KCC	
Marine	No		DNV, KR, GL, LR, ABS, CCS	
Safety	UL 61010-2-201		UL 61010-2-201	

Serial port layout

Communication - AKI2G - CDA

Ethernet
10/100 Mbit

USB port
1 × USB 2.0

COM 1:
RS232

COM 2:
RS422 or
RS485

COM 3:
RS232

COM 4:
RS485

Communication - AKI2G - CDB

AKI2G - CDB - MOD - 07T - 000

SD Card

USB

LAN A:
100 Mbit

COM 1:
RS232

COM 2:
RS422 or
RS485

COM 3*:
RS485

COM3 can only be used if COM2 is RS485

AKI2G - CDB - MOD - 12T - 000

SD Card

USB

LAN A:
100 Mbit

LAN B:
100 Mbit

COM 1:
RS232

COM 2:
RS422 or
RS485

COM 3*:
RS485
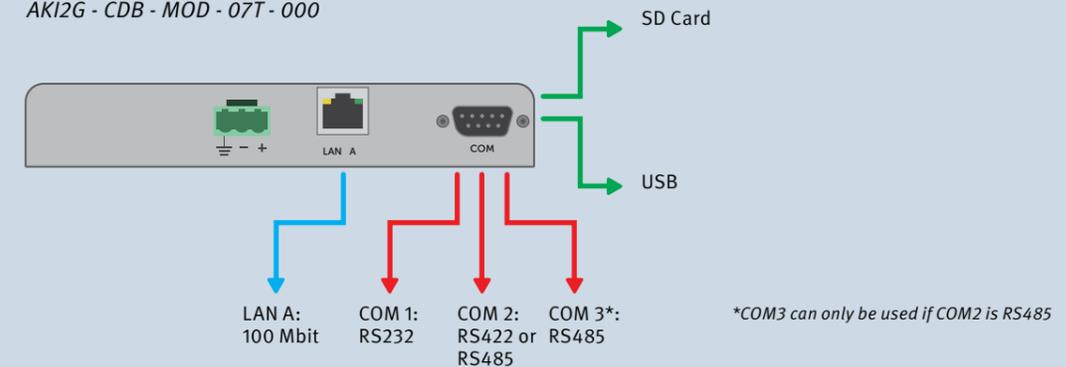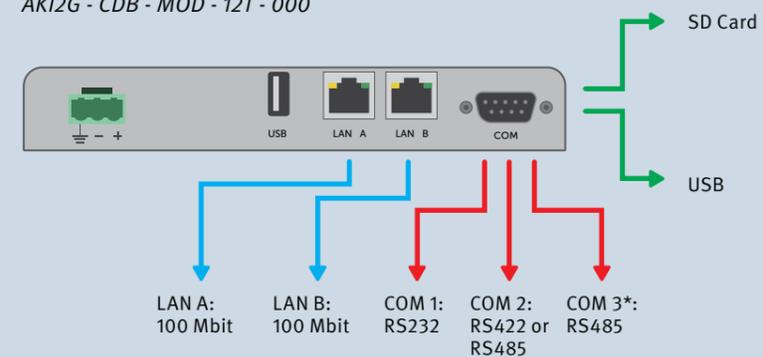
OPC DA communication

- OPC DA communication is not supported in X2 platform
- Change to OPC UA instead

Kollmorgen Sales & Support

North America
Kollmorgen
203A West Rock Road Radford,
VA 24141 USA
Phone: 1-540-633-3545
Fax: 1-540-639-4162
E-mail: support@kollmorgen.com

Germany / Rest of Europe / Middle East / Africa
KOLLMORGEN Europe GmBH
Pempelfurtstraße 1 40880 Ratingen
Germany
Phone: +49 (0) 2102 9394 0
Fax: +49 (0) 2102 9394 315
E-mail: think@kollmorgen.com
Support Technique: www.kollmorgen.com/technique

Asia
Mainland China
Address: Rm 202, Building 3, Lane 168,
Linhong Rd, Changning District,
Shanghai, China
Phone: +86 - 400 661 2802
E-Mail: sales.china@kollmorgen.com

South America
Kollmorgen
Avenida Tamboré -1077 Tamboré – Barueri
SP Brazil
CEP: 06460-000, Brazil

Kollmorgen is a leading supplier of motion systems and components for machine builders. Through the world-class knowledge in motion, industry-leading quality and deep expertise in linking and integrating standard and custom products, Kollmorgen delivers breakthrough solutions and are unmatched in performance, reliability and ease-of-use, giving machines builders an irrefutable marketplace advantage.

KOLLMORGEN ™

Because Motion Matters.™