



Topcon OPUS Series



Topcon Electronics GmbH



The origins of our company go back to the family business Wachendorff Elektronik.

In 1998, the world's first operating concept for agriculture was developed by Wachendorff Elektronik. Since then, the product portfolio has continued to grow. Wachendorff Elektronik has been part of the Topcon Positioning Group since 2014 and can enrich their portfolio with their operating devices.

In April 2017, Wachendorff Elektronik changed its name to Topcon Electronics. The takeover of Topcon opened new opportunities for Topcon Electronics on the global market.

Topcon Electronics sees itself as a technology leader and is one of the top three display manufacturers in our market. Quality has a high priority. All products are developed, produced and distributed exclusively in Geisenheim.

OPUS operator panels are used primarily in mobile agricultural and construction machinery, among many other industries.

New plant

Topcon Electronics

150%

Production
capacity

March 2024

Start of
construction work



New plant - Topcon Electronics

OPUS A3 Eco



Specifications

Display	4.3" display size 15:9 TFT transmissive 480 x 272 px 400 cd/m ² Contrast ratio 400:1
Processor	32-bit, 532 MHz, Freescale I.MX35
Memory	256 MB RAM, 1 GB flash
Power Supply	9...36V
Interfaces	2x CAN ISO 11898 CAN specifications 2.0 B active Ethernet 10/100 Mbit/s Base-T 1 RS-232 (RxD, TxD, GND only) Analog/Digital I/O: 4 analog/digital inputs, 3 digital outputs 1 USB 2.0 full speed Light sensor
Signals	Multi-color LED Buzzer, approx. 60 dB(A)
User Interface	Analog-resistive touchscreen
Environmental Conditions	Temperatures Operating -30° to +65° Storage -40° to +85° Protection IP 66

OPUS A3 Standard



Specifications

Display	4.3" display size 15:9 TFT transmissive 480 x 272 px 400 cd/m ² Contrast ratio 400:1
Processor	32-bit, 532 MHz, Freescale I.MX35
Memory	256 MB RAM, 1 GB flash
Power Supply	9...36V
Interfaces	2x CAN ISO 11898 CAN specifications 2.0 B active Ethernet 10/100 Mbit/s Base-T 1 RS-232 (RxD, TxD, GND only) Analog/Digital I/O: 4 analog/digital inputs, 3 digital outputs 1 USB 2.0 full speed on main connector 1 USB 2.0 high speed on front Light sensor
Signals	Multi-color LED Buzzer, approx. 60 dB(A)
User Interface	8 Softkeys 3 Hardkeys Encoder Analog-resistive touchscreen
Environmental Conditions	Temperatures Operating -30° to +65° Storage -40° to +85° Protection IP 66

OPUS A6 Eco



Specifications

Display	7" display size 15:9 TFT transmissive 800 x 480 px 400 cd/m ² Contrast ratio 500:1
Processor	32-bit, 800 MHz, Freescale I.MX6
Memory	512 MB RAM, 4 GB flash
Power Supply	9...36V
Interfaces	2x CAN ISO 11898 CAN specifications 2.0 B active Ethernet 10/100 Mbit/s Base-T 1 RS-232 (Rx, Tx, GND only) Analog/Digital I/O: 4 analog/digital inputs, 3 digital outputs 1 USB 2.0 full speed Light sensor
Signals	Multi-color LED Speaker, approx. 80 dB(A)
User Interface	Analog-resistive touchscreen
Environmental Conditions	Temperatures Operating -30° to +65° Storage -40° to +85° Protection IP 66

OPUS A6 Standard



Specifications

Display	7" display size 15:9 TFT transmissive 800 x 480 px 400 cd/m ² Contrast ratio 500:1
Processor	32-bit, 800 MHz, Freescale I.MX6
Memory	512 MB RAM, 4 GB flash
Power Supply	9...36V
Interfaces	2x CAN ISO 11898 CAN specifications 2.0 B active Ethernet 10/100 Mbit/s Base-T 1 RS-232 (RxD, TxD, GND only) Analog/Digital I/O: 4 analog/digital inputs, 3 digital outputs 1 USB 2.0 full speed on main connector 1 USB 2.0 high speed on front Light sensor
Signals	Multi-color LED Speaker, approx. 80 dB(A)
User Interface	12 Softkeys 4 Hardkeys Encoder Analog-resistive touchscreen
Environmental Conditions	Temperatures Operating -30° to +65° Storage -40° to +85° Protection IP 66

OPUS A8 Eco



Specifications

Display	12,1" display size 16:10 TFT transmissive 1280 x 800 px 1000 cd/m ² Contrast ratio 750:1
Processor	64-bit, 1 GHz, Freescale I.MX6
Memory	1 GB RAM, 8 GB flash
Power Supply	9...36V
Interfaces	2x CAN ISO 11898 CAN specifications 2.0 B active Ethernet 10/100 Mbit/s Base-T 1 RS-232 (RxD, TxD, GND only) Analog/Digital I/O: 4 analog/digital inputs, 3 digital outputs 1 USB 2.0 full speed Light sensor
Signals	Multi-color LED Speaker, approx. 80 dB(A)
User Interface	PCT touchscreen
Environmental Conditions	Temperatures Operating -30° to +65° Storage -40° to +85° Protection IP 65 & IP 66

OPUS A8 Standard



Specifications

Display	12,1" display size 16:10 TFT transmissive 1280 x 800 px 1000 cd/m ² Contrast ratio 750:1
Processor	64-bit, 1 GHz, Freescale I.MX6
Memory	1 GB RAM, 8 GB flash
Power Supply	9...36V
Interfaces	2x CAN ISO 11898 CAN specifications 2.0 B active Ethernet 10/100 Mbit/s Base-T 1 RS-232 (RxD, TxD, GND only) Analog/Digital I/O: 4 analog/digital inputs, 1 USB 2.0 full speed on main connector 1 USB 2.0 high speed on front Light sensor
Signals	Multi-color LED Speaker, approx. 80 dB(A)
User Interface	8 Softkeys 4 Hardkeys Encoder PCT touchscreen
Environmental Conditions	Temperatures Operating -30° to +65° Storage -40° to +85° Protection IP 65 & IP 66

A-Series

Technical Specifications



	OPUS A3 Eco		OPUS A3 Standaard		OPUS A6 Eco	
	Basic	Full	Basic	Full	Basic	Full
Standalone	•	•	•	•	•	•
DashboardMount	•	•	•	•	•	•
Landscape	•	•	•	•	•	•
Portrait	•	•	•	•	•	•
Size	4,3"	4,3"	4,3"	4,3"	7"	7"
Resolution	480 X 272 px	480 X 272 px	480 X 272 px	480 X 272 px	800 X 480 px	800 X 480 px
Touchscreen		•		•		•
Brightness	typ.400 cd/m ²	typ.400 cd/m ²	typ.400 cd/m ²	typ.400cd/m ²	typ.500 cd/m ²	typ.500 cd/m ²
Keys Soft/Hard			8/3	8/3		
Keys with Backlight			•	•		
Encoder with Click			•	•		
Multicolor LED/LED	•	•	•	•	•	•
Audible Signal		Beeper 60 db		Beeper 60 db	Speaker 80 db	Speaker 80 db
Processor	Freescale I.MX35	Freescale I.MX35	Freescale I.MX35	Freescale I.MX35	Freescale I.MX6	Freescale I.MX6
Processor Speed	532 Mhz	532 Mhz	532 Mhz	532 Mhz	800 Mhz	800 Mhz
RAM	128 MB	256 MB	128 MB	256 MB	512 MB	512 MB
Mass Storage	512 MB	1 GB	512 MB	1 GB	2 GB	4 GB
CANbus Ports	2	2	2	2	2	2
I/Os		4/3		4/3		4/3
USB	1	1	1	2	1	1
Ethernet		1		1	1	1
Maxvideo Input		1		1	1	3
Audio out						•

A-Series

Technical Specifications



	OPUS A6 Standard		OPUS A8 Eco		OPUS A8 Standard	
	Basic	Full	Basic	Full	Basic	Full
Standalone	•	•	•	•	•	•
DashboardMount	•	•	•	•	•	•
Landscape	•	•	•	•	•	•
Portrait	•	•	•	•	•	•
Size	7"	7"	12,1"	12,1"	12,1"	12,1"
Resolution	800 X 480 px	800 X 480 px	1280 X 800 px	1280 X 800 px	1280 X 800 px	1280 X 800 px
Touchscreen		•	•	•	•	•
Brightness	typ.500cd/m ²	typ.500 cd/m ²	typ.1000 cd/m ²	typ.1000 cd/m ²	typ.1000 cd/m ²	typ.1000 cd/m ²
Keys Soft/Hard	12/4	12/4			8/4	8/4
Keys with Backlight	•	•			•	•
Encoder with Click	•	•			•	•
Multicolor LED/LED	•	•	•	•	•	•
Audible Signal	Speaker 80 db	Speaker 80 db	Speaker 80 db	Speaker 80 db	Speaker 80 db	Speaker 80 db
Processor	Freescale I.MX6	Freescale I.MX6	Freescale I.MX6	Freescale I.MX6	Freescale I.MX6	Freescale I.MX6
Processor Speed	800 Mhz	800 Mhz	800 Mhz, solo	1 Ghz, quad	800 Mhz, solo	1 Ghz, quad
RAM	512 MB	512 MB	512 MB	1 GB	512 MB	1 GB
Mass Storage	2 GB	4 GB	4 GB	8 GB	4 GB	8 GB
CANbus Ports	2	2	2	2	2	2
I/Os		4/3	2/1	4/3	2/1	4/3
USB	1	2	1	1	2	2
Ethernet	1	1	1	1	1	1
Maxvideo Input	1	3	1	3	1	3
Audio out		•		•		•

OPUS B3 Eco



Specifications

Display	5" display size 15:9 TFT transmissive 800 x 480 px 800 cd/m ² Contrast ratio 700:1
Processor	32-bit, 800 MHz, Freescale I.MX6
Memory	512 MB RAM, up to 4 GB flash
Power Supply	8...36V
Interfaces	2x CAN ISO 11898 CAN specifications 2.0 B active 1 RS-232 (RxD, TxD, GND only) 2 USB 2.0 high speed Light sensor Full-Version: Ethernet/Automotive 10/100 Mbit/s Base-T
Signals	Multi-color LED Speaker, approx. 90 dB(A)
User Interface	Capacitive touchscreen
Environmental Conditions	Temperatures Operating -30° to +75° Storage -40° to +85° Protection IP 66

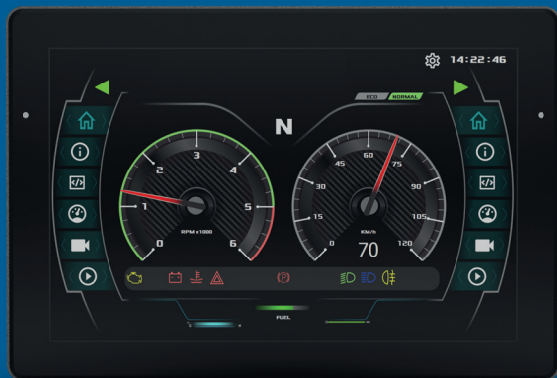
OPUS B4 Eco



Specifications

Display	7" display size 15:9 TFT transmissive 800 x 480 px 800 cd/m ² Contrast ratio 700:1
Processor	64-bit, 800 MHz, Freescale I.MX6
Memory	512 MB RAM, 4 GB flash
Power Supply	8...36V
Interfaces	2x CAN ISO 11898 CAN specifications 2.0 B active Ethernet 10/100 Mbit/s Base-T 1 RS-232 (RxD, TxD, GND only) 2 USB 2.0 high speed Light sensor
Signals	Multi-color LED Speaker, approx. 90 dB(A)
User Interface	Capative touchscreen
Environmental Conditions	Temperatures Operating -30° to +75° Storage -40° to +85° Protection IP 66

OPUS B6 Eco



Specifications

Display	10,1" display size 15:9 TFT transmissive 1280 x 800 px 1000 cd/m ² Contrast ratio 800:1
Processor	64-bit, 1 GHz, Freescale I.MX6
Memory	2 GB RAM, 8 GB flash
Power Supply	8...36V
Interfaces	2x CAN ISO 11898 CAN specifications 2.0 B active Ethernet 10/100 Mbit/s Base-T 1 RS-232 (RxD, TxD, GND only) 2 USB 2.0 high speed Light sensor
Signals	Multi-color LED Speaker, approx. 90 dB(A)
User Interface	Capacitive touchscreen
Environmental Conditions	Temperatures Operating -30° to +75° Storage -40° to +85° Protection IP 66

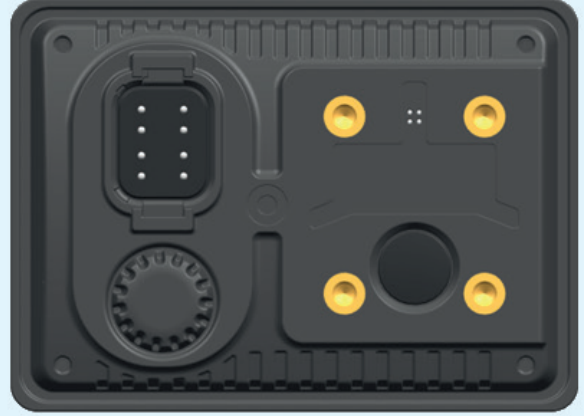
B3 / B4 / B6

Technical Specifications



	OPUS B3 Eco		OPUS B4 Eco		OPUS B6 Eco	
	Basic	Full	Basic	Full	Basic	Full
Standalone	•	•	•	•	•	•
DashboardMount	•	•	•	•	•	•
Landscape	•	•	•	•	•	•
Portrait	•	•	•	•	•	•
Size	5"	5"	7"	7"	10,1"	10,1"
Resolution	800x 480 px	800x 480 px	800x 480 px	800x 480 px	1280x 800 px	1280x 800 px
Touchscreen	•	•	•	•	•	•
Brightness	typ.800 cd/m ²	typ.800 cd/m ²	typ.800 cd/m ²	typ.800 cd/m ²	typ.1.000 cd/m ²	typ.1.000 cd/m ²
Keys Soft/Hard	0	0	0	0	0	0
Keys with Backlight						
Encoder with Click						
Multicolor LED/LED	•	•	•	•	•	•
Audible Signal	Speaker 90 db	Speaker 90 db	Speaker 90 db	Speaker 90 db	Speaker 90 db	Speaker 90 db
Processor	Freescale I.MX6	Freescale I.MX6	Freescale I.MX6	Freescale I.MX6	Freescale I.MX6	Freescale I.MX6
Processor Speed	800 MHz, Solo	800 MHz, Solo	800 MHz, Solo	800 MHz, Dual	800 MHz, Dual	1.000 MHz, Quad
RAM	512 MByte	512 MByte	512 MByte	1 GByte	1 GByte	2 GByte
Mass Storage	2 GByte	4 GByte	4 GByte	4 GByte	4 GByte	8 GByte
CANbus Ports	2	2	2	2	2	2
I/Os						
USB	1	2	1	2	1	2
Ethernet		1	1	1	1	1
Maxvideo Input		1	1	1	2	2
Audio out		1	1	1	1	1

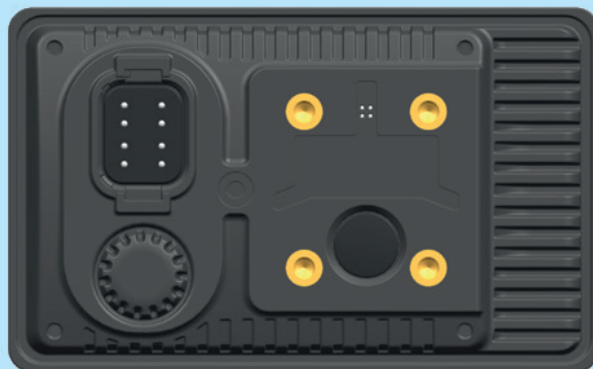
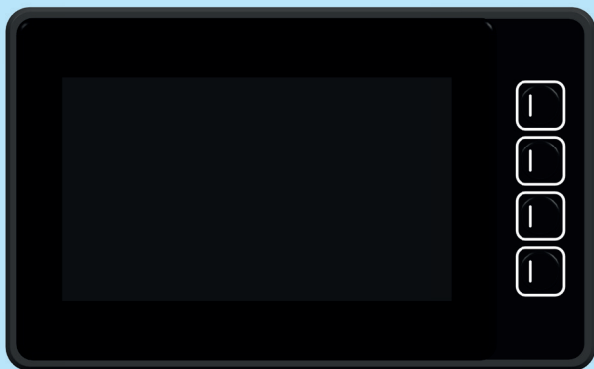
OPUS B2 Eco



Specifications

Display	4.3" display size 15:9 TFT transmissive 480 x 272 px up to 850 cd/m ² Contrast ratio 800:1
Processor	32-bit, 528 MHz, I.MX6 ULL
Memory	256 MB RAM, 2 GB flash
Power Supply	9...36V
Interfaces	2x CAN ISO 11898 CAN specifications 2.0 B active 1 USB 2.0 high speed
Signals	Full-Version: Buzzer, approx. 92 db
User Interface	Full-Version: Capative touchscreen
Environmental Conditions	Temperatures Operating -30° to +75° Storage -40° to +85° Protection IP 66 & IP 67

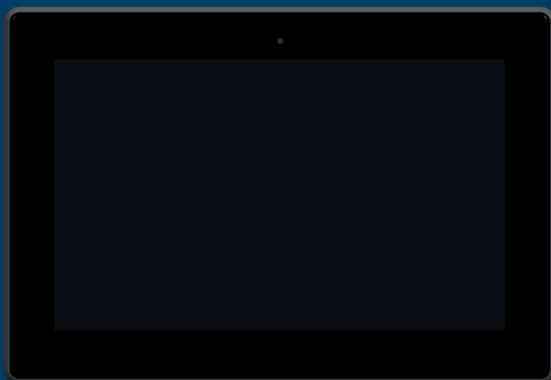
OPUS B2 Standard



Specifications

Display	4.3" display size 15:9 TFT transmissive 480 x 272 px up to 850 cd/m ² Contrast ratio 800:1
Processor	32-bit, 528 MHz, I.MX6 ULL
Memory	256 MB RAM, 2 GB flash
Power Supply	9...36V
Interfaces	2x CAN ISO 11898 CAN specifications 2.0 B active 1 USB 2.0 high speed
Signals	Full-Version: Buzzer, approx. 92 db
User Interface	4 Softkeys Full-Version: Capative touchscreen
Environmental Conditions	Temperatures Operating -30° to +75° Storage -40° to +85° Protection IP 66 & IP 67

OPUS B2 Plus Eco



Specifications

Display	7" display size 15:9 TFT transmissive 800 x 480 px up to 900 cd/m ² Contrast ratio 1000:1
Processor	32-bit, 528 MHz, I.MX6 ULL
Memory	256 MB RAM, 2 GB flash
Power Supply	9...36V
Interfaces	2x CAN ISO 11898 CAN specifications 2.0 B active 1 USB 2.0 high speed
Signals	Full-Version: Buzzer, approx. 92 db
User Interface	Full-Version: Capative touchscreen
Environmental Conditions	Temperatures Operating -30° to +75° Storage -40° to +85° Protection IP 66 & IP 67

OPUS B2 Plus Standard



Specifications

Display	7" display size
Processor	32-bit, 528 MHz, I.MX6 ULL
Memory	256 MB RAM, 2 GB flash
Power Supply	9...36V
Interfaces	2x CAN ISO 11898 CAN specifications 2.0 B active 1 USB 2.0 high speed
Signals	Full-Version: Buzzer, approx. 92 db
User Interface	6 Softkeys Full-Version: Capative touchscreen
Environmental Conditions	Temperatures Operating -30° to +75° Storage -40° to +85° Protection IP 66 & IP 67

B2 / B2+

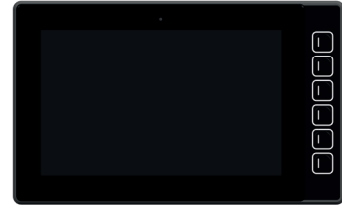
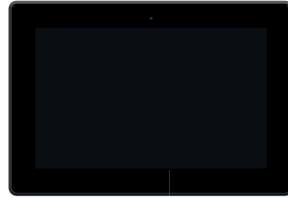
Technical Specifications



	OPUS B2 Eco		OPUS B2 Standard	
	Basic	Full	Basic	Full
Standalone	•	•	•	•
DashboardMount	•	•	•	•
Landscape	•	•	•	•
Portrait	•	•	•	•
Size	4,3"	4,3"	4,3"	4,3"
Resolution	480x 272 px	480x 272 px	480x 272 px	480x 272 px
Touchscreen		•		•
Brightness	typ.850 cd/m ²	typ.800cd/m ²	typ.850 cd/m ²	typ.800 cd/m ²
Keys Soft/Hard	0	0	4	4
Keys with Backlight				
Encoder with Click				
Multicolor LED/LED				
Audible Signal		Buzzer 92 dB		Buzzer 92 dB
Processor	I.MX6 ULL	I.MX6 ULL	I.MX6 ULL	I.MX6 ULL
Processor Speed	528 MHz	528 MHz	528 MHz	528 MHz
RAM	256 MByte	256 MByte	256 MByte	256 MByte
Mass Storage	2 GByte	2 GByte	2 GByte	2 GByte
CANbus Ports	2	2	2	2
I/Os				
USB	1	1	1	1
Ethernet				
Maxvideo Input				
Audio out				

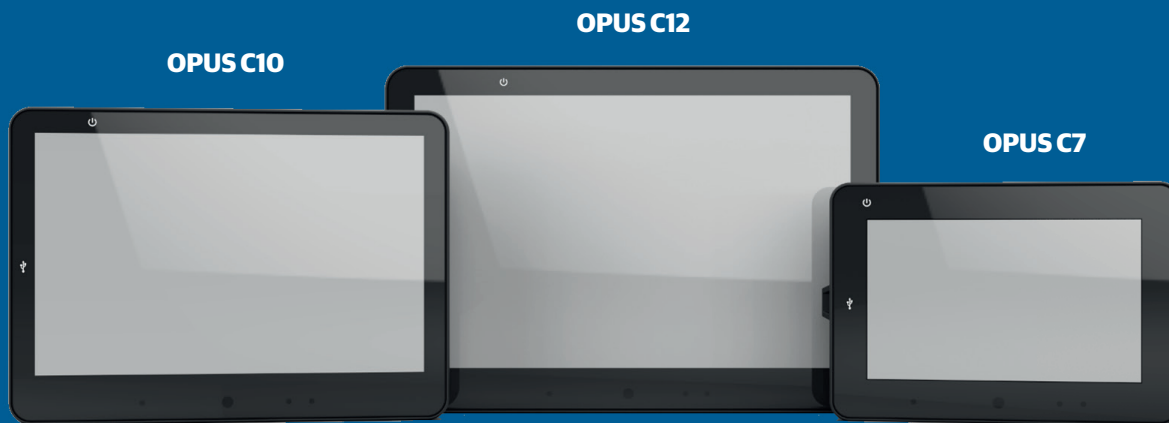
B2 / B2+

Technical Specifications



	OPUS B2 Eco +		OPUS B2 Standard +	
	Basic	Full	Basic	Full
Standalone	•	•	•	•
DashboardMount	•	•	•	•
Landscape	•	•	•	•
Portrait	•	•	•	•
Size	7"	7"	7"	7"
Resolution	800x 480 px	800x 480 px	800x 480 px	800x 480 px
Touchscreen		•		•
Brightness	typ.900 cd/m ²	typ.850 cd/m ²	typ.900 cd/m ²	typ.850 cd/m ²
Keys Soft/Hard	0	0	6	6
Keys with Backlight				
Encoder with Click				
Multicolor LED/LED				
Audible Signal		Buzzer 92 dB		Buzzer 92 dB
Processor	I.MX6 ULL	I.MX6 ULL	I.MX6 ULL	I.MX6 ULL
Processor Speed	528 MHz	528 MHz	528 MHz	528 MHz
RAM	256 MByte	256 MByte	256 MByte	256 MByte
Mass Storage	2 GByte	2 GByte	2 GByte	2 GByte
CANbus Ports	2	2	2	2
I/Os				
USB	1	1	1	1
Ethernet				
Maxvideo Input				
Audio out				

OPUS C-Series



Specifications

Display OPUS C7	7" display size 15:9 TFT transmissive 1280 x 800 px 800 cd/m ² Contrast ratio 1000:1
Display OPUS C10	10,1" display size 15:9 TFT transmissive 1280 x 800 px 900 cd/m ² Contrast ratio 800:1
Display OPUS C12	12,1" display size 15:9 TFT transmissive 480 x 272 px 1100 cd/m ² Contrast ratio 1000:1

Specifications

Processor	64-bit, 1,6 GHz, i.MX 8 QuadPlus
Memory	4 GB RAM, 10,6 GB flash
Power Supply	9...36V
Interfaces	3x CAN ISO 11898 CAN specifications 2.0 B active Ethernet 10/100 Mbit/s Base-T 1 RS-232 (Rx/D, Tx/D, GND only) Analog/Digital I/O: 5 analog/digital inputs, 5 digital outputs 1 USB Type C super speed on side connector 1 USB Type A high speed on back connector
Signals	Multi-color LED Speaker, approx. 90 dB(A)
User Interface	Capacitive Touch
Environmental Conditions	Temperatures Operating -30° to +75° Storage -30° to +80° Protection IP 66

C-Series

Technical Specifications

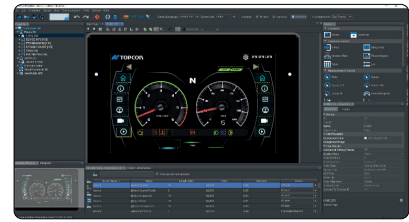


	OPUS C7 Eco	OPUS C10 Eco	OPUS C12 Eco
Standalone	•	•	•
DashboardMount			
Landscape	•	•	•
Portrait	•	•	•
Size	7"	10,1"	12,1"
Resolution	800x 480 px	1280x 800 px	1280x 800 px
Touchscreen			
Brightness	typ.800 cd/m ²	typ.900 cd/m ²	typ.1100 cd/m ²
Keys Soft/Hard			
Keys with Backlight			
Encoder with Click			
Multicolor LED/LED	•	•	•
Audible Signal	Speaker 90 db	Speaker 90 db	Speaker 90 db
Processor	I.MX8 QuadPlus	I.MX8 QuadPlus	I.MX8 QuadPlus
Processor Speed	1600 MHz	1600 MHz	1600 MHz
RAM	4 GByte	4 GByte	4 GByte
Mass Storage	10,6 GByte	10,6 GByte	10,6 GByte
CANbus Ports	3	3	3
I/Os	5/5	5/5	5/5
USB	1/1	1/1	1/1
Ethernet	2	2	2
Maxvideo Input			
Audio out			

Programming

OPUS-Projektor - Topcon easy-to-access solution

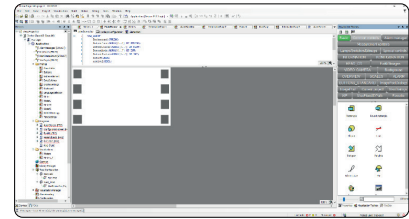
- Quick learning curve with drag and drop
- In-house development by Topcon Electronics with fast features and support
- Dynamic objects and flexible JavaScript programming
- No costs for licenses (devices)



OPUS-Projektor

CODESYS® 3.x - the well known ECU solution

- Most used for ECU and Controller programming
- Many libraries and possibilities with IEC-61131-3
- Free to use IDE



CODESYS® 3.x

C/C++/Qt - advanced expert solution

- High learning curve, only for experts
- High quality applications and performance
- Advanced functionality



C/C++/Qt

Laboratory Tests



IPx6 Waterproof

Protection against strong water jets and temporary flooding. The display is sprayed with water from all angles and then tested for all functionalities.

(Example: OPUS B3 Eco)



IPx7 Waterproof

Protection against temporary immersion in water. The display is immersed in water to a depth of 1 meter for 30 minutes and then tested for all functionalities.

(Example: OPUS B2 Eco)



IP6X Dust-protected

Protection against the smallest particles such as dust. The display is covered with the smallest particles and then tested for all functionalities.

(Example: OPUS B2 Eco)

... and many more!

- 1 Measurement
- 2 Electrostatic discharge (ESD) testing
- 3 Environmental tests - Snow
- 4 Vibration/Shaker testing



Topcon Corporate

A venture company established in 1932 with a challenging spirit who becomes a solution provider in "healthcare, agriculture and infrastructure" from a pioneer of domestic optical equipment.



In September 1932, Tokyo Kogaku Kikai Kabushikikaisha (Tokyo Optical Co., Ltd.) was established with the aim of domestically producing surveying instruments upon request from the Army Ministry, based on the surveying instruments division of K. Hattori & Co., Ltd.



In 1989, the company name was changed to Topcon Corporation. We have established a solid position as a comprehensive precision optical equipment manufacturer with a focus on optomechatronic surveying instruments and ophthalmic medical devices.

Since the 1990s, through overseas M&As and alliances, we have expanded our business into new fields such as automatic control technology for construction machinery, precision GNSS, and IT agriculture.

We are working to solve the societal challenges in healthcare, agriculture and infrastructure by DX solution, which makes full use of IoT and network technology based on the proprietary technology cultivated since our establishment.

Topcon Positioning



4900+

Employees

2150+

Patents

Global Network

With an extensive worldwide network of corporate offices, R&D centers and technical groups, we have an unmatched capability to assist any manufacturer, no matter where they are located, with fully integrated machine automation solutions. This also positions us to create programs to assist and support dealer networks, directly or through extensive training programs.

Experienced OEM Team

Our experienced OEM team knows what questions need to be answered first and the potential pitfalls to be avoided along the way. Their first objective is to make sure our technology is the right fit for your application and be your partner every step of the way.



Committed to Sustainability

The work we do as an organization complements and supports the sustainable development goals adopted at the UN Summit in 2015.

“The Sustainable Development Goals are the blueprint to achieve a better and more sustainable future for all. They address the global challenges we face, including poverty, inequality, climate change, environmental degradation, peace and justice.”

To learn more about our commitment to sustainability visit:
topconpositioning.com/sustainability



Zero Hunger

Our tools improve the management and measurement of cropping areas and sustainable agriculture. Through automation, we are helping create more productive crops and increase harvests, which leads to an improved food system and less food shortages.



Industry, Innovation and Infrastructure

We help farmers be more productive through proven, innovative agricultural precision measurement technology, resulting in increased productivity, larger yields and reduced labor.



SUSTAINABLE DEVELOPMENT GOALS



