

WE CABIN DISPLAY i10

Intelligent HMI Solutions



WEcabin Display i10 is an intelligent HMI solution for mobile machines and commercial vehicles developed by Würth Elektronik ICS.

Description

- Robust housing for the use in tough environmental conditions
- High-end processing power through 64-bit multicore processors and memory size
- High optical performance ensures good readability in all lighting conditions
- Optical bonding enhance visibility and reliability
- Optional plug-in expansion module for input video functionalities and customisation possibility
- Easy to customise for individual design of graphical user interface (GUI) with WEcabin Designer

Technical data

General information	
Processor	Quad Core ARM Cortex-A53 i.MX8M
RAM	2 GB DDR3
Clock frequency	1.6 GHz
Flash memory	8 GB
FRAM	64 Kb
Real time clock	Rechargeable lithium battery
Operating temperature	-30 °C to +70 °C
Storage temperature	-40 °C to +85 °C
Ingress protection	IP66 IP69K (front part) for the version without buttons
Operating voltage	8 V to 32 V DC
Power consumption	500 mA at 24 V
Stand-by mode consumption	2 mA
Housing	POLIMID PA6 UV
Connectors	AMP SUPERSEAL 34 Way connector, 2 x 60 pins connector for Expansion Modules
Dimensions max.	i10 without buttons: 255 x 193 x 51 mm i10 with buttons: 300 x 220.5 x 52 mm
Signaling	Internal buzzer (90 dB)
Weight	1.5 kg / 1.9 kg

Interfaces		
CAN bus	2 x CAN 2.0B	11/29 Bits extended address identifier
	Baud rate	50 kBit/s to 1000 kBit/s (250 kBit/s default value)
Ethernet	1 x 10/100 Mbit/s	
USB	2 x 2.0 Host full speed 12 MB	
RS-485 / RS-232	1 x up to 150 kBd	
Wi-Fi	802.11n	
Bluetooth	BT4.0	

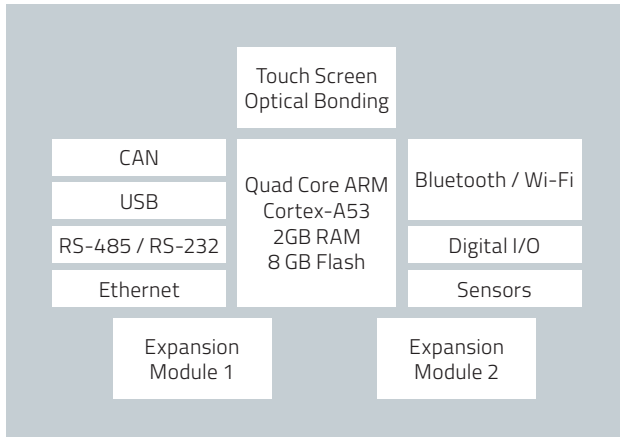
Inputs & outputs overview		
4	Digital inputs	High side 0 -24 V
4	Digital outputs	Low side 500 mA at 24 V

Display specifications	
Display	10.1" TFT LCD 16:10
Resolution	1280 x 800 WVGA 149 PPI
Backlight	LED
Brightness	500 cd/m ²
Light sensor	included
ON / OFF LED	included
Orientation	Landscape or portrait programmable mode
Colors	24 bit
Contrast ratio	600:1
Cover glass	3.2 mm thickness tempered glass
TFT installation	Liquid optical bonding

Physical input	
Touch interface	PCAP multi touch screen
Buttons	2 x 5 silicon soft keys backlighted (variant with buttons)

Sensors		
3-axis digital accelerometer		✓
Temperature sensor		✓
Light sensor		✓

Hardware map

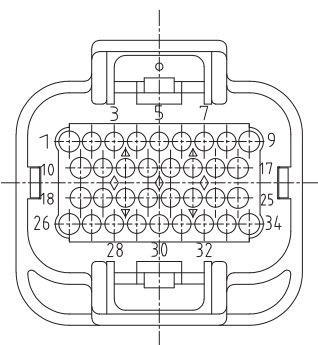


TE Connectivity AMP SUPERSEAL 34 Way Connector
Part No. 4-1437290-0



TE Connectivity AMP SUPERSEAL 1.0 mm Connector
Receptacle Contact Assembly, AWG 16
Part No. 3-1447221-3

TE Connectivity AMP SUPERSEAL 1.0 mm Connector
Receptacle Contact Assembly, AWG 20
Part No. 3-1447221-4

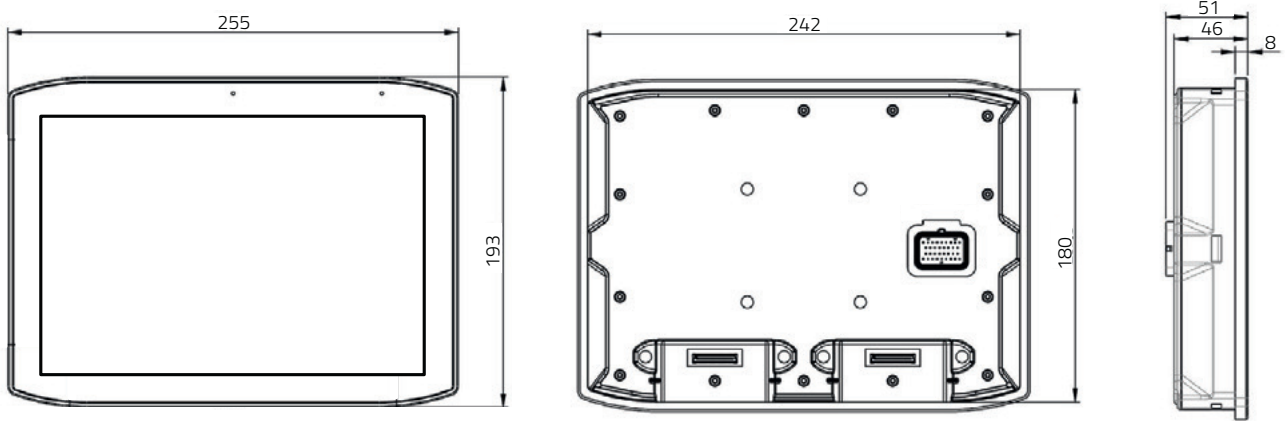


Pinout of the connector

Pin assignment

Pin	Signal	Description
1	GND	Ground
2	IN2	Digital input 2
3	IN1	Digital input 1
4	USB1_GND	USB 1 Ground
5	RX_N	Receive negative
6	RX_P	Receive positive
7	TX_N	Transmit negative
8	TX_P	Transmit positive
9	VBAT	Power supply battery
10	IN4	Digital input 4
11	IN3	Digital input 3
12	GND	Ground
13	USB2_GND	USB 2 ground
14	VBUS2	USB 2 +5 V DC
15	VBUS1	USB 1 +5 VDC
16	GND	Ground
17	V_SW	Ignition voltage
18	OUT1	Digital output 1
19	OUT2	Digital output 2
20	CAN2_H	CAN 2 High (WEcabin Designer CAN 1)
21	CAN1_H	CAN 1 High (WEcabin Designer CAN 0)
22	USB2H_DM	USB 2 Data minus
23	USB1_DM	USB 1 Data minus
24	RXD	Serial port received data
25	GND24	Power supply ground
26	NC	Reserved, not connected
27	OUT3	Digital output 3
28	OUT4	Digital output 4
29	CAN2_L	CAN 2 Low (WEcabin Designer CAN 1)
30	CAN1_L	CAN 1 Low (WEcabin Designer CAN 0)
31	USB2H_DP	USB 2 Data plus
32	USB1_DP	USB 1 Data plus
33	TXD	Serial port transmitted data
34	SHIELD	Shield protection

Dimensions & Mounting possibilities

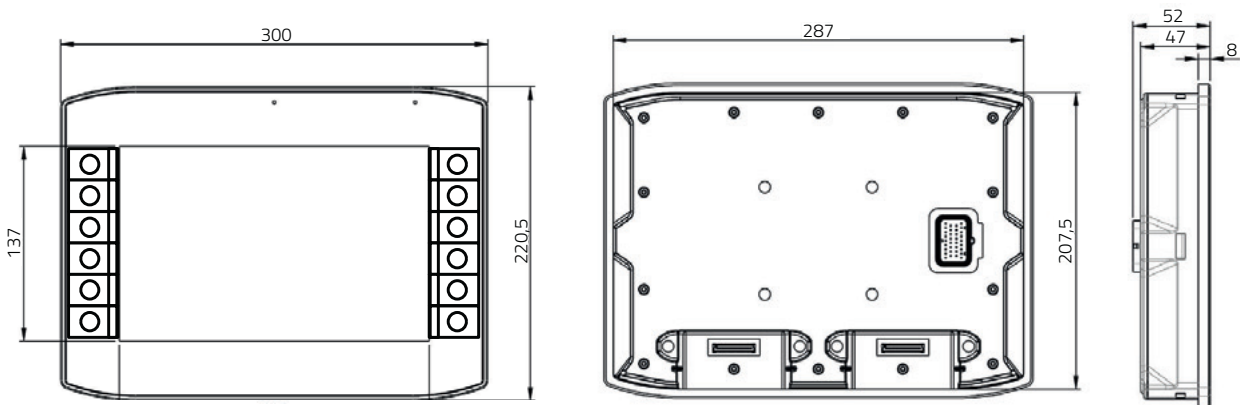


Dimensions – WEcabin Display i10 without buttons

Front length	255 mm
Front height	193 mm
Rear length	242 mm
Rear height	180 mm
Width	51 mm

Mounting possibilities WEcabin Display i10 without buttons

In-dash mounting	✓
RAM mounting	✗
VESA mounting	✓



Dimensions – WEcabin Display i10 with buttons

Front length	300 mm
Front height	220.5 mm
Rear length	287 mm
Rear height	207.5 mm
Width	52 mm

Mounting possibilities – WEcabin Display i10 with buttons

In-dash mounting	✓
RAM mounting	✗
VESA mounting	✓

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Programming environment

Software	
Operating system	Linux Embedded
Application programming	WEcabin Designer CoDeSys™ PLC (optional) Qt™ (optional)

Qualification

Test methods		
EMC	Automotive	ECE R10
EMC	Earth Moving and Construction Machinery	ISO 13766-1
EMC	Road Vehicles	ISO 13750-2
Electrical loads		EN ISO 14982
Ingress protection	IP66K IP69K (front part) for the version without buttons	ISO 20653
Vibration & Shock		ISO 16750-3
Temperature		ISO 16750-4

WEcabin Display i10 10 inch display with no buttons



WEcabin Display i10 10 inch display with 2 x 5 buttons



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