

WÜRTH ELEKTRONIK MORE THAN YOU EXPECT

WECABIN DISPLAY i5

Intelligent HMI Solutions



WEcabin Display i5 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 processing power and memory size
- High optical performance ensures good readability in all lighting conditions
- Optical bonding enhance visibility and reliability
- Easy to customise for individual design of graphical user interface (GUI) with WEcabin Designer

Technical data

General information	
Processor	Dual Core ARM Cortex-A7
RAM	1 GB DDR3
Clock frequency	650 MHz
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	250 mA at 24 V
Stand-by mode consumption	2 mA
Housing	POLIMID PA6 UV
Connectors	AMP SUPERSEAL 34 Way connector, 60 pins connector for Expansion Module
Dimensions max.	142 x 108 x 49.7 mm
Signaling	Internal buzzer (90 dB)
Weight	470 g (with buttons)

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	10/100 Mbit/s (only for Standard & Plus versions)	
USB	2 x 2.0 Host full speed 12 MB	
RS-485 / RS-232	up to 150 kBd (only for Plus version)	

Inputs & outputs overview

4	Digital inputs	High side 0 – 32 V
4	Digital outputs	Low side 500 mA

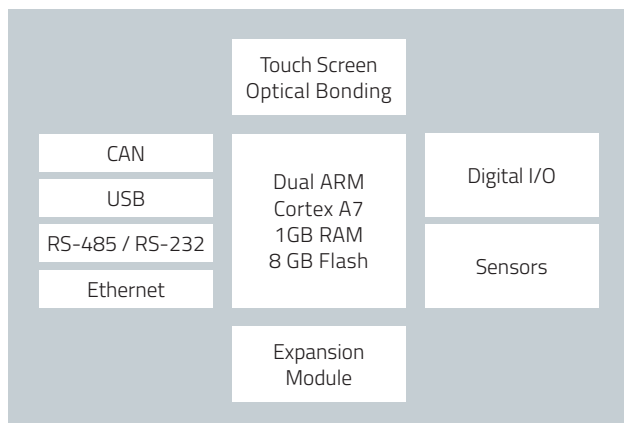
Display specifications

Display	5" TFT LCD 15:9
Resolution	800 x 480 WVGA 187 PPI
Backlight	LED
Brightness	500 cd/m ²
Light sensor	Option for Plus version
ON / OFF LED	Option for Plus version
Orientation	Landscape or portrait programmable mode
Colors	24 bit
Contrast ratio	600:1
Cover glass	3.2 mm thickness tempered glass
TFT installation	Optical bonding

Physical input

Touch interface	PCAP multi touch screen with liquid bonding
Buttons	6 silicon soft keys backlighted on lower side (optional)

Hardware map

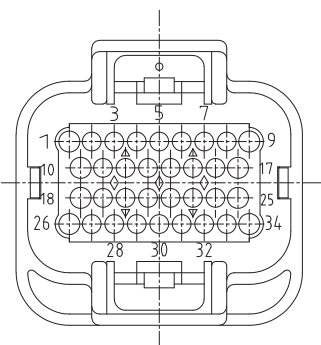


TE Connectivity AMP SUPERSEAL 34 Way Connector
Part No. 4-1437290-0



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

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

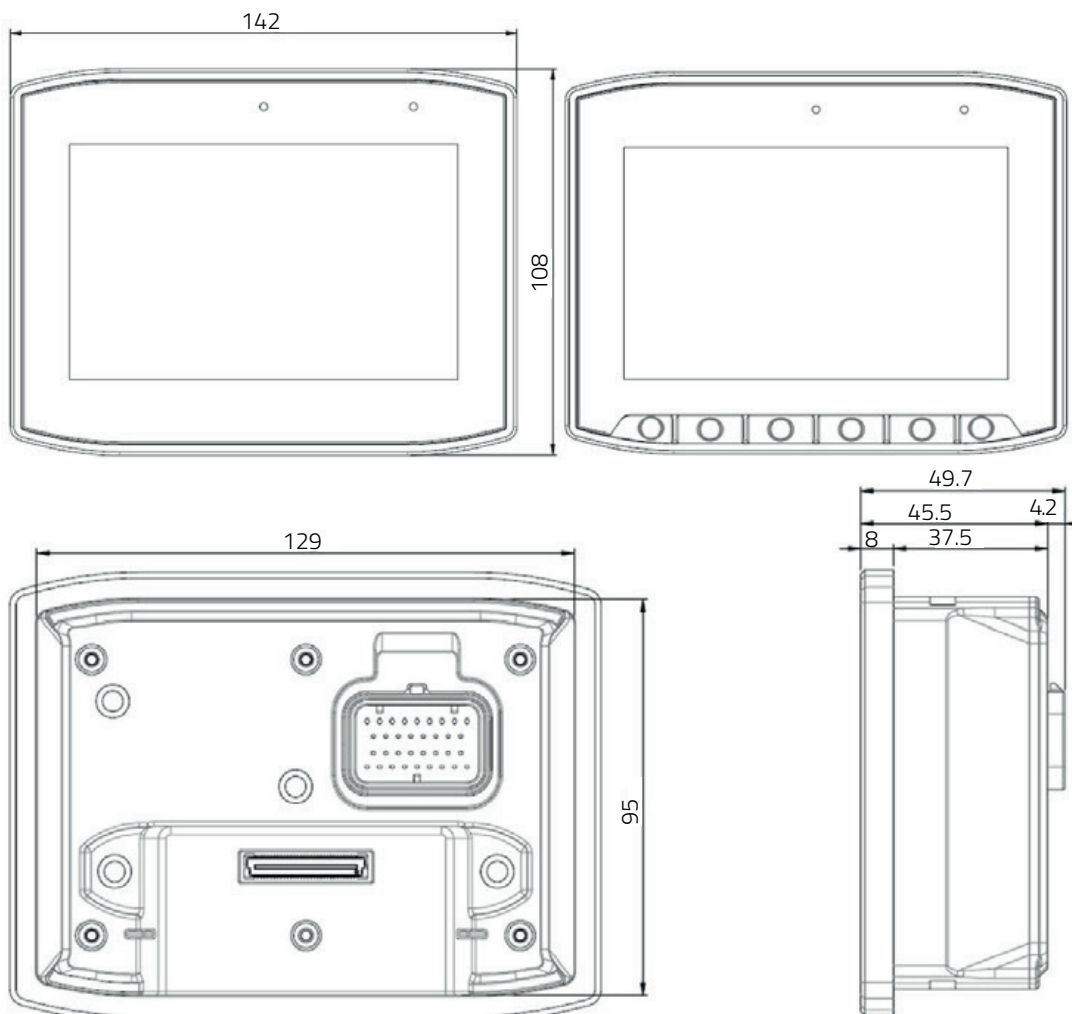
Programming environment

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

Dimensions & Mounting possibilities

Dimensions	
Front length	142 mm
Front height	108 mm
Rear length	129 mm
Rear height	95 mm
Width	49.7 mm

Mounting possibilities	
In-dash mounting	✓
RAM mounting	✓
VESA mounting	✗



Available versions

Versions	i5 Standard	i5 Plus
Processor	Dual Core ARM Cortex A7	Dual Core ARM Cortex A7
Memory	1 GB RAM, 8 GB Flash	1 GB RAM, 8 GB Flash
Capacitive touch screen	✓	✓
Optical bonding	✓	✓
5" Display, 800 x 480 (portrait/ landscape), 500 cd/m ²	✓	✓
Light sensor on/off LED	✗	✓
CAN bus	2	2
USB 2.0 port	2	2
Ethernet	✓	✓
RS-485 / RS-232	✗	✓
4 x digital inputs high side 0 – 24 V	✓	✓
4 x digital outputs low side 500 mA at 24 V	✓	✓
Accelerometer, temperature sensor	✗	✓

**CONTACT US**

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