

WECABIN DISPLAY i7

Intelligent HMI Solutions



WEcabin Display i7 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
- Optional plug-in expansion modules for additional functionalities and customisation possibility
- 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	IP 66
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 connectors for Expansion Modules
Dimensions max.	221.5 x 143.5 x 47 mm
Signaling	Internal buzzer (90 dB)
Weight	900 g (without 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	1 x 10/100 Mbit/s	
USB	2 x 2.0 Host full speed	12 MB, 100 mA
RS-485	1 x up to 150 kBd	
Wi-Fi	802.11n (optional)	
Bluetooth	BT4.0 (optional)	

Inputs & outputs overview

4	Digital inputs	High side 0 – 24 V
4	Digital outputs	Low side 500 mA at 24 V

Display specifications

Display	7" TFT LCD 16:9
Resolution	1024 x 600 WGVA 128 PPI
Backlight	LED
Brightness	500 cd/m ²
ON / OFF LED	Included
Orientation	Landscape or portrait programmable mode
Colors	24 bit
Contrast ratio	600:1
Cover glass	3.0 mm thickness tempered glass
TFT installation	Liquid optical bonding

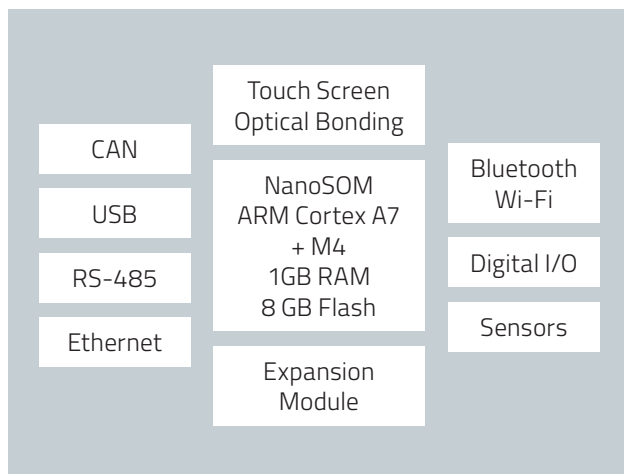
Physical inputs

Touch Interface	PCAP multi touch screen
Buttons	2 x 5 silicon soft keys backlighted (optional)

Sensors

3-axis digital accelerometer	Optional
Temperature sensor	
Light sensor	

Hardware map

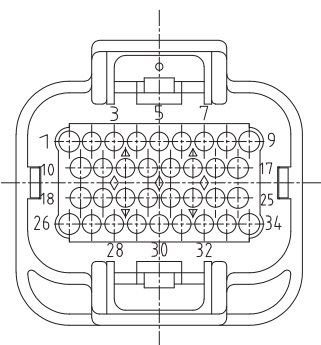


TE Connectivity AMP SUPERSEAL 34 Way Connector
Part No. 4-1437290-0v



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

Interface	Pin number	Signal	Description
Power supply	09	VBAT+	Power supply positive
	25	VBAT-	Power supply negative
	17	START KEY	Start key
	34	SHIELD	Shield protection
Ground	01, 12, 16	GND	Ground
CAN 1	21	CAN1_H	CAN 1 High
	30	CAN1_L	CAN 1 Low
CAN 2	20	CAN2_H	CAN 2 High
	29	CAN2_L	CAN 2 Low
Serial RS-485	24	RS485+	RS-485 positive
	33	RS485-	RS-485 negative
Ethernet	05	RX_N	Receive negative
	06	RX_P	Receive positive
	07	TX_N	Transmit negative
	08	TX_P	Transmit positive
USB1	04	USB1 GND	USB 1 Ground
	15	USB1 VBUS	USB 1 +5 VDC
	23	USB1 DM	USB 1 Data minus
	32	USB1 DP	USB 1 Data plus
USB2	13	USB2 GND	USB 2 Ground
	14	USB2 VBUS	USB +5 VDC
	22	USB2 DM	USB 2 Data minus
	31	USB2 DP	USB 2 Data plus
Digital input	02	IN1	Digital input 1
	03	IN2	Digital input 2
	10	IN3	Digital input 3
	11	IN4	Digital input 4
Digital output	18	OUT1	Digital output 1
	19	OUT2	Digital output 2
	27	OUT3	Digital output 3
	28	OUT4	Digital output 4
Not connected	26	NC	Reserved NC

Qualification

Test methods		
EMC	Automotive	ECE R10
EMC	Earth Moving and Construction Machinery	ISO 13766-1
EMC	Agricultural and Forestry Machinery	ISO 14982
Vibration & Shock	–	EN 60068-2
Ingress protection	IP66K	ISO 20653
Salt spray	–	ISO 9227
Temperature	–	EN 60068-2
RED	–	ETSI EN 301-489 ETSI EN 300 328 EN 61010 EN 62311

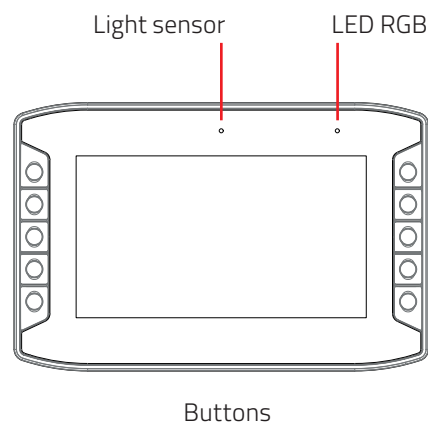
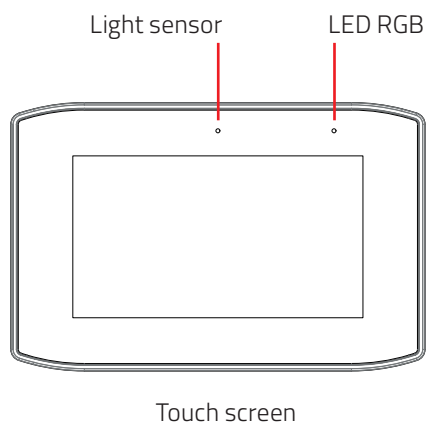
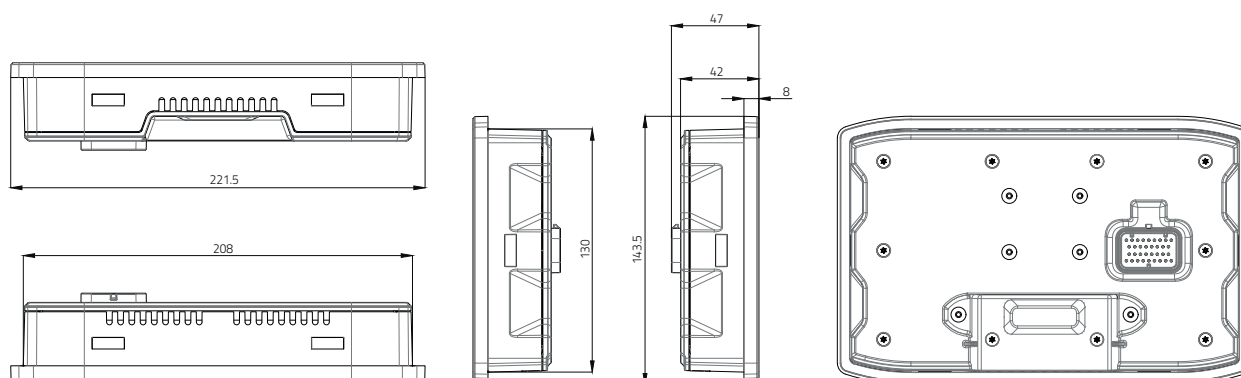
Programming environment

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

Dimensions & Mounting possibilities

Dimensions	
Front length	221.5 mm
Front height	143.5 mm
Rear length	208 mm
Rear height	130 mm
Width	47 mm

Mounting possibilities	
In-dash mounting	Fixing supports provided
Out-dash mounting	RAM Mount™ (type C)



Available versions

Versions	i7 Basic	i7 Standard	i7 Plus
Processor	Dual Core ARM Cortex A7	Dual Core ARM Cortex A7	Dual Core ARM Cortex A7
Memory	1 GB RAM, 8 GB Flash	1 GB RAM, 8 GB Flash	1 GB RAM, 8 GB Flash
FRAM	64 KB	64 KB	64 KB
Capacitive touch screen	X	✓	✓
Optical bonding	✓	✓	✓
7" Display, 1.024 x 600 (portrait/ landscape), 500 cd/m²	✓	✓	✓
Light sensor on/off LED	X	✓	✓
CAN bus	2	2	2
USB 2.0 port	2	2	2
Ethernet	✓	✓	✓
RS-485	X	X	✓
4 x digital inputs	X	✓	✓
4 x digital outputs	X	✓	✓
Wi-Fi / Bluetooth	X	X	✓
Accelerometer, temperature sensor	X	X	✓
Keyboard (2 x 5 buttons)	✓	Optional	Optional

Part number	Description
X03440	i7 Basic with buttons
X03441	i7 Standard
X03442	i7 Standard with buttons
X03443	i7 Plus
X03444	i7 Plus with buttons



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