EPEC 6505 Display Unit

Operating Manual and Hardware Description

MAN000731

Functional Versions: 6505-020

Document version history:

Date	***Notes***
21.10.2020	First released version (rev.1)

Table of Contents

Epec Oy reserves all rights for improvements without prior notice

Epec Oy
Tiedekatu 6
FIN-60320 Seinäjoki

Postal address
PL/P.O.Box 194
FIN-60101 Seinäjoki, Finland

Phone
+358-(0)20-7608 111

Internet
www.epec.fi

1 PRELIMINARY NOTES

This document is valid for the EPEC 6505 Display Unit functional version 6505-020.

This document is intended for qualified personnel and contains all the important information for the correct use of the 6505 Display Unit.

Please read this document before the first use and refer to it during operation.

In order to provide a better overview, this operating manual cannot present all details for handling the 6505 Display Unit in all conceivable application cases. Neither can all conceivable methods of setting up the device, operating the device, and servicing the device be discussed in this manual. In case more information or support is required please contact Epec Oy's technical support department.

1.1 Used Instructions Types

This operating manual contains instructions that must be complied with for your personal safety and in order to avoid damage to property.

The instructions are presented as follows listed by degree of hazard:

Hazard!
Very important information
Malfunction of Failure possible if non-compliance

Caution!
Severe bodily injury or property damage can occur if the respective precautionary measures are not taken

Note
Additional information about the product, the handling of the product or the respective part of the operating manual to which particular attention should be paid.

Epec Oy reserves all rights for improvements without prior notice

Epec Oy
Tiedekatu 6
FIN-60320 Seinäjoki

Postal address
PL/P.O.Box 194
FIN-60101 Seinäjoki, Finland

Phone
+358-(0)20-7608 111

Internet
www.epec.fi

2 SAFETY INSTRUCTIONS, GUARANTEE AND LIABILITY

2.1 Common

Read this operating manual before commissioning the 6505 Display Unit. Keep this operating manual where it is accessible to all users at any time. Every person who is assigned to commission or operate the 6505 Display Unit must have read and understood the operating manual and the safety instructions in particular!

This operating manual contains instructions that must be complied with for your personal safety and in order to avoid damage to property. Failure to follow these safety instructions could result in fire, electric shock, or other injury or damage to the 6505 Display Unit or other property.

2.2 Qualified Personnel

This operating manual is intended for technically qualified personnel, who have the appropriate skills in the area of measurement, control, and regulating technology.

Precise knowledge of all safety instructions and warnings contained in this operating manual, as well as problem-free technical implementation of these instructions and warnings are the prerequisites for hazard-free installation, commissioning, safe operation, and maintenance, of the operator panel. Consequently, it is strictly required that all measures be performed by qualified personnel.

Qualified personnel, in accordance with the safety and warning instructions contained in this operating manual are personnel, who

- are familiar with CAN bus systems, related protocols and network designs that fulfill all legal requirements of the intended application, so that they are able to program the operator panel accordingly
- are familiar with the safety concepts of automation technology, either as project design personnel
- or operating personnel who have been instructed in how to handle the automation technology, and who are familiar with the section of this manual which deals with operation.
- or who, as commissioning, and service personnel have been trained to repair this type of automation technology, or who are authorized to commission, ground, and label electrical circuits and devices, or systems, in accordance with technical safety standards.

All persons who are involved in project planning, installation and operating the 6505 Display Unit must be familiar with automation technology safety concepts, and they must be qualified in accordance with the guidelines listed above.

Serious bodily injury and property damage can occur in the event of unqualified interventions in the device, or the system, or failure to heed the warning instructions specified in this operating manual.

Consequently, only personnel who are appropriately qualified may undertake interventions on this device, or on the associated system.

Epec Oy reserves all rights for improvements without prior notice

2.3 Power Supply

The 6505 Display Unit is designed for 12 V and for 24 Volt battery systems. The operating voltage range is 9-36 VDC, overvoltage resistance 48V for 5 minutes, inverse-polarity protection up to -48 VDC for 5 minutes.

2.4 Interventions in the device

The 6505 Display Unit has been developed, manufactured, and tested in compliance with applicable standards. When the handling guidelines and safety-related instructions described here are complied with for project design, mounting, intended use, and maintenance, normally the product poses no hazards relative to property damage or to personal health. Nevertheless, the device can cause residual hazards if it is used or operated improperly by personnel who have not been trained.

In case of malfunctions or lacks please contact Epec Oy. Any interventions in the device can cause serious interferences of the security for people and machines. They are not allowed and lead to disclaimer of liability and guarantee exclusion.

Epec is not liable for damage that occurs due to improper misuse of the delivered components, or through failure to heed the instructions in the operating manual, including the safety instructions.

Epec is not liable for damage or malfunctions that can occur using pirated or illegal software on the 6505 operator panel.

Epec is not liable for injuries to third party licenses for the contents used on the 6505 operator panel by the end customer.

Epec is not liable for damage that occurs due to unintended or intended changes of the Epec board support package or any other parts of the operating system.

Epec is not liable for damage that occurs due to improper programming and/or testing of the created application that runs on the device

Moreover, we expressly declare that all obligations on the part of Epec Oy are exclusively derived from the respective purchase contract, in which the guarantee is conclusively stipulated.

Epec Oy reserves all rights for improvements without prior notice

Epec Oy
Tiedekatu 6
FIN-60320 Seinäjoki

Postal address
PL/P.O.Box 194
FIN-60101 Seinäjoki, Finland

Phone
+358-(0)20-7608 111

Internet
www.epec.fi

2.5 Safety Instructions for the 6505 Display Unit

Dangerous high-voltage
Never attempt to repair or modify the 6505 Display Unit yourself. Disassembling the 6505 Display Unit may cause damage that is not covered under the warranty and cause hazardous conditions by the high-voltage components inside of the unit.
The 6505 Display Unit does not contain any user-serviceable parts. Service should only be provided by Epec Oy.

Hazardous situations due to device failure
Do not use the 6505 Display Unit as the sole means of preventing hazardous conditions in vehicles, machines, and equipment. Vehicles, machines, and equipment must be constructed in such a manner that defective conditions associated with the 6505 Display Unit cannot cause a hazardous situation for operating personnel.
Ensure that incorrect inputs via the 6505 Display Unit, its malfunction, or its failure cannot lead to major property damage, or to a hazard for operating personnel.

Missing safety devices if used improperly
Precautions for the safety of a system should not be rendered inoperable through the use of the 6505 Display Unit.
Emergency-Stop devices must remain effective in all operating modes.

Unintentional operation
Operating states can be called due to unintentional operation of the 6505 Display Unit that are not appropriate for the situation.
The 6505 Display Unit devices should be installed in such a manner that the possibility of unintentional operation is adequately excluded.

Undefined operating states
Undefined operating states can cause personal injury or property damage.
To prevent supply line and signal line interruptions from causing undefined or hazardous operating conditions, appropriate hardware and software safety precautions must be maintained.

Supply lines and signal lines must be installed in such a manner that noise (such as inductive or capacitive interference) cannot impair the 6505 Display Unit function.

Epec Oy reserves all rights for improvements without prior notice

Epec Oy
Tiedekatu 6
FIN-60320 Seinäjoki

Postal address
PL/P.O.Box 194
FIN-60101 Seinäjoki, Finland

Phone
+358-(0)20-7608 111

Internet
www.epec.fi

If a further usage of the 6505 Display Unit will cause danger, the device and if necessary, the system needs to be switched off and be secured against unintended activation. This particularly applies:

- If the device shows visible signs of damage
- If the device is no longer functional
- If parts of the device are disconnected or loose
- if the connection lines show visible damage

Using Connectors and Ports:
Never force a connector into a port. Check for mechanical obstructions on the port. If the connector and port do not join with reasonable ease, they probably do not match. Make sure that the connector matches the port and that you have positioned the connector correctly in relation to the port.

Epec Oy reserves all rights for improvements without prior notice

Epec Oy
Tiedekatu 6
FIN-60320 Seinäjoki

Postal address
PL/P.O.Box 194
FIN-60101 Seinäjoki, Finland

Phone
+358-(0)20-7608 111

Internet
www.epec.fi

3 INTENDED USE

The 6505 Display Unit is a programmable graphical display used to operate and monitor vehicles and working machines.

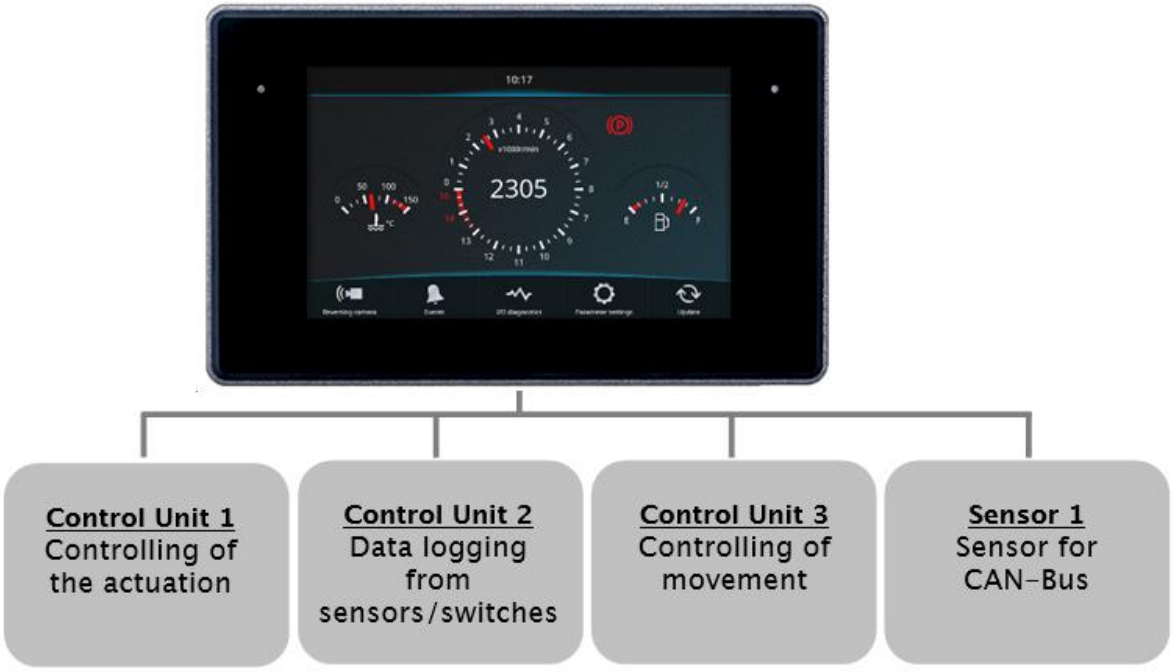
The communication with other system components, as for example decentralised I/O module, occurs over the CAN interfaces with the supported protocols: CANopen, J1939.

For service purposes, additional interfaces like RS232 and USB are available. Together with Embedded Linux operating system they form a universal platform for the communication with other CAN devices, networks, or PCs.

The operator panel of the 6505 Display Unit is not admitted for security-relevant duties for personal protection purposes.

Vehicles, machines, and equipment surrounding the 6505 Display Unit must be combined in such a manner that the 6505 Display Unit will be warmed up equally from all sides.
Increased warming of the unit from the back side may cause temporary fogging of the front glass or touch screen.

3.1 Example of Use



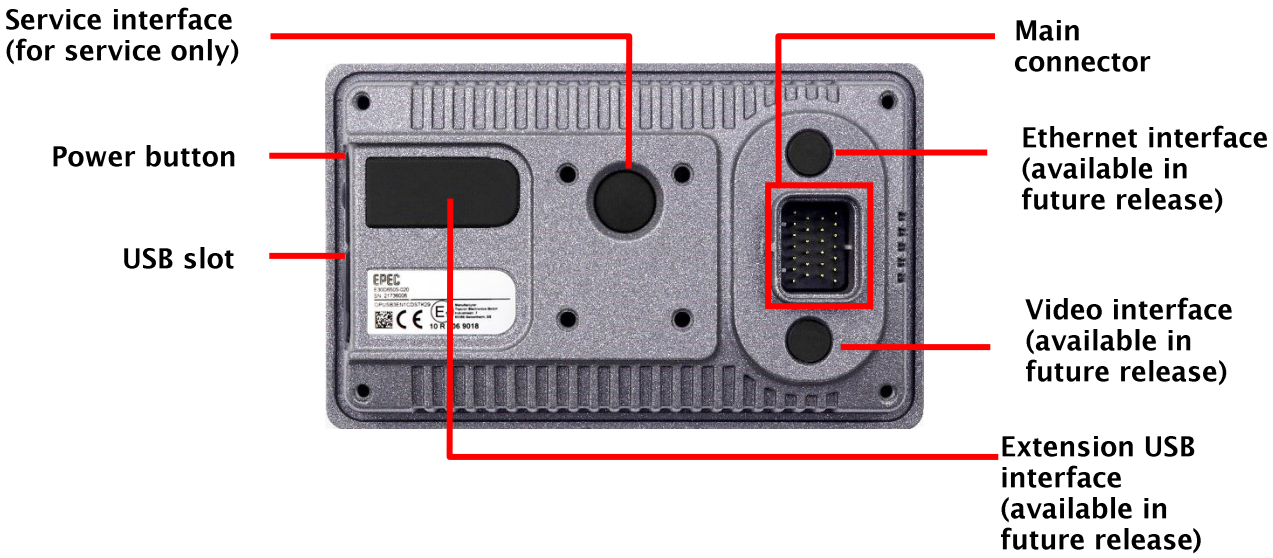
Epec Oy reserves all rights for improvements without prior notice

3.2 Device Description

Display:
5” (800 x 480 px) TFT color graphic LCD display (optional) with capacitive touch.

Light Sensor:
The light sensor can be used for an automatic adaption of display-backlight to the ambient light intensity.

Multicolor Status LED:
There is one multicolor status LED available.



Epec Oy reserves all rights for improvements without prior notice

Service interface:
On the 6505 Display Unit, a service interface is available. This interface serves Epec internal service use only.

Please do not remove the protection cap of service interface!

The 6505 Display Unit may only be used with factory closed protection cap otherwise Epec Oy is not liable for any damage or misfunction.

Power button:
The 6505 Display Unit has a separate power button. This button may be programmable within the application running in the 6505 Display Unit. By default, the display will be switched on by pressing the power button and switched off by a long press of the power button (> 4 seconds).

Power-on/off behavior:
The 6505 Display Unit can be switched on/off by the power supply directly.

As soon as the device is supplied with the necessary voltage via terminal 30 (battery plus), terminal 31 (battery GND) and terminal 15 (ignition), it will start to boot. In order to decrease boot time, the device supports power modes with which you can set the device to sleep mode before it powers down.

When ignition voltage is removed, the device will switch to low-power-mode (see *C/C++ Developer Guide* available from Epec's extranet). After a time frame that can be configured (default time is 60 sec), the device will move one more step down to sleep-mode. After another 60 seconds (default time), the unit will fully switch off. As soon as terminal 15 is switched on again, the unit will go back to the on-mode in full operation.

Power Mode	current at 13.5 V DC	current at 27 V
On	≤ 330 mA	≤ 200 mA
Low-power	Depending on configuration	Depending on configuration
Sleep	≤ 100 mA	≤ 80 mA
Off	≤ 5 mA	≤ 4 mA

Do not unplug clamp 30 from power supply on running unit. Power supply interruption on clamp 30 may cause data corruption and loss.

For more information please refer to the *C/C++ Developer Guide* available from Epec's extranet.

Epec Oy reserves all rights for improvements without prior notice

USB slot:
The 6505 Display Unit offers a USB slot on the side to be used for software updates and data transfer.

Main connector:
The following interfaces are available:

- Power supply and ignition input
- 2 x CAN-Interfaces according to ISO/DIS 11898
- RS232-Interface

3.3 Features Overview for the 6505 Display Unit

- Encapsulated aluminium housing to be mounted in landscape or portrait mode, standalone or in dash
- 5" TFT colour display for automotive with resolution 800 x 480 pixels
- Capacitive touch screen
- Powerful Freescale I.MX6® Solo 800Mhz CPU
- 32bit processor with embedded Linux operating system (Linux kernel 5.4.3)
- Two CAN interface (ISO 11898) using CANopen® and SAE J1939 protocols. Layer II is supported
- Speaker
- RS232 interface for serial console
- High speed USB on the side

The 6505 Display Unit is particularly characterized by its robust construction, and it has been developed especially for harsh use conditions in mobile work machines.

3.4 Application Development

There are two possible ways to program the 6505 Display Unit and make it an integrated part of its application.

1. CODESYS 3.x:
CODESYS is a programming tool and system developed by the German company 3S according to IEC 61131-3 standard. It supports different means of programming such as FBD or Structured Text. It can be used to program the 6505 Display Unit and CODESYS compatible ECUs. CODESYS includes the functionality to configure the CANopen® protocol for communication over CAN bus.

For further information, please refer to *Epec Programming and Libraries Manual* available from Epec's extranet.

2. C-Programming:
The 6505 Display Unit with its embedded Linux operating system can be fully programmed using C or C++ as programming language.

For further information and function-call list please refer to the *C/C++ Developer Guide* available from Epec's extranet.

Epec Oy reserves all rights for improvements without prior notice

Board Support Package (BSP):
Based on the operating system the BSP provides all the necessary interfaces to control the internal functionality of the unit (e.g. activation of the backlight display, processing key activation, etc.).
This software is ready installed on all 6505 Display Unit delivered together with the operation system. For further information please refer to the *C/C++ Developer Guide* available from Epec's extranet*.*

The operator panel 6505 Display Unit generation may only be handled due to the according operation manual.

Please take notice of the following recommendation and prerequisites for the computer used to the application design and /or programming:

- Using CODESYS for the development it is recommended to use the PC with Windows operational system, at least 2 GB free hard disk capacity and 2 GB RAM.
- Programming with C/C++ Linux operational system is prerequisite.

Epec Oy reserves all rights for improvements without prior notice

Epec Oy
Tiedekatu 6
FIN-60320 Seinäjoki

Postal address
PL/P.O.Box 194
FIN-60101 Seinäjoki, Finland

Phone
+358-(0)20-7608 111

Internet
www.epec.fi

4 MOUNTING

The back side of the display unit is ready prepared for both in dash and standalone mounting.

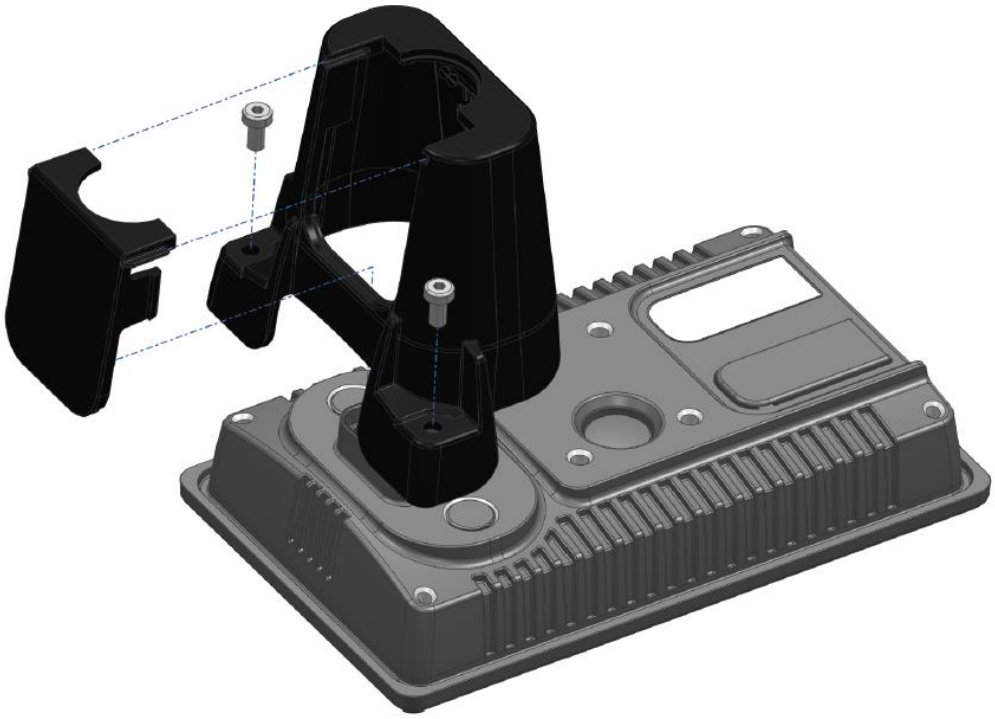
Both portrait and landscape positions are supported for mounting.

4.1 Standalone Mounting Instructions

The Connector Cover (ordering code MK0213) and Pedestal (ordering code MK0211) can be ordered separately.

4.1.1 Connector cover

1. Thread connector cables through the housing of the connector cover
2. Plug in the main connector cable to the display (see chapter, *Accessories* for ordering codes)
3. Clip on the side cover plate to the connector cover
4. Screw the connector cover to the device



Attention!
Using screws that are too long can damage the unit!
Accepted mounting torque with mounting cover is 1,8 Nm
Please secure the screws with the thread locker medium strength (e.g. Loctite 243).

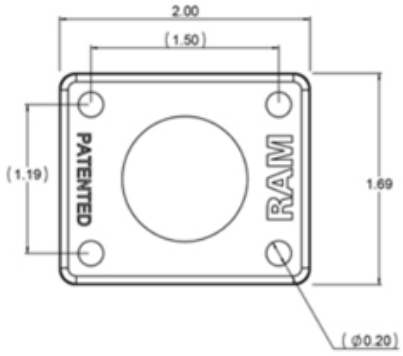
Epec Oy reserves all rights for improvements without prior notice

4.1.2 Pedestal

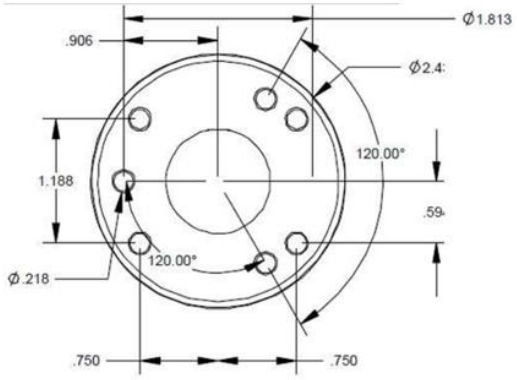
1. Attach the Display Adapter Plate to the back of the display unit using four M5 x 12 screws
2. Attach the display and adapter plate to the pedestal (ball and socket system)
3. Attach the Round Plate (pedestal base) to the dashboard

   Assignment of the screw length depends on dashboard thickness (thickness/length):
   - 1mm – 3mm / M5 x 20
   - 4mm – 6mm / M5 x 24
   - 7mm – 10mm / M5 x 28

Display Adapter Plate:



Round Plate (Pedestal Base)



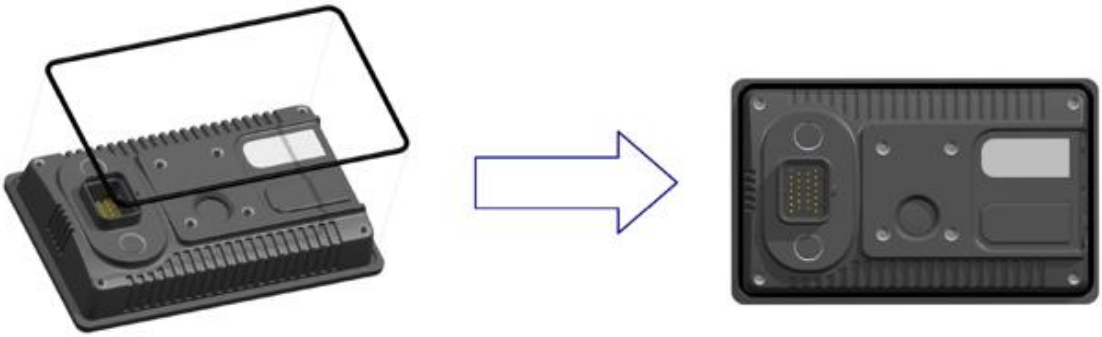
Ball and Socket technology allows for near infinite adjustability of the pedestal and adapter plates. With a twist of the arm knob, the display can be maneuvered to optimum viewing positions.

Epec Oy reserves all rights for improvements without prior notice

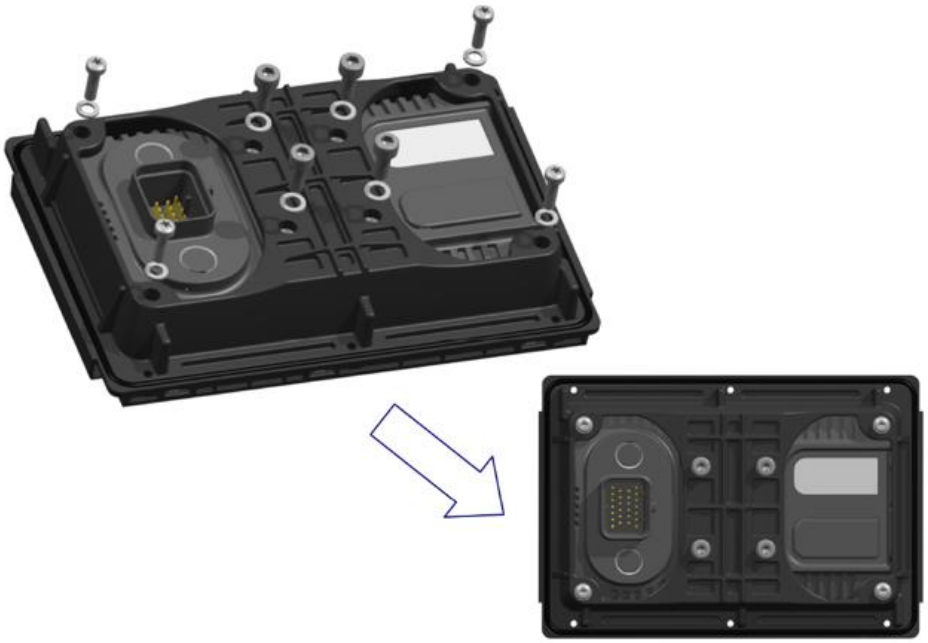
4.2 Dashboard Mounting Instructions

Use the Dashboard cut-out as a guideline and the In-dash Mounting Cover (Epec ordering code MK0212) for proper mounting of the 6505 Display Unit.

1. Place the rubber seal around the back of the display unit



2. Screw the display unit into the mounting frame using the screws provided
    - Four screws (M4 x 14)
    - Four screws (M5 x 12)



Epec Oy reserves all rights for improvements without prior notice

Epec Oy
Tiedekatu 6
FIN-60320 Seinäjoki

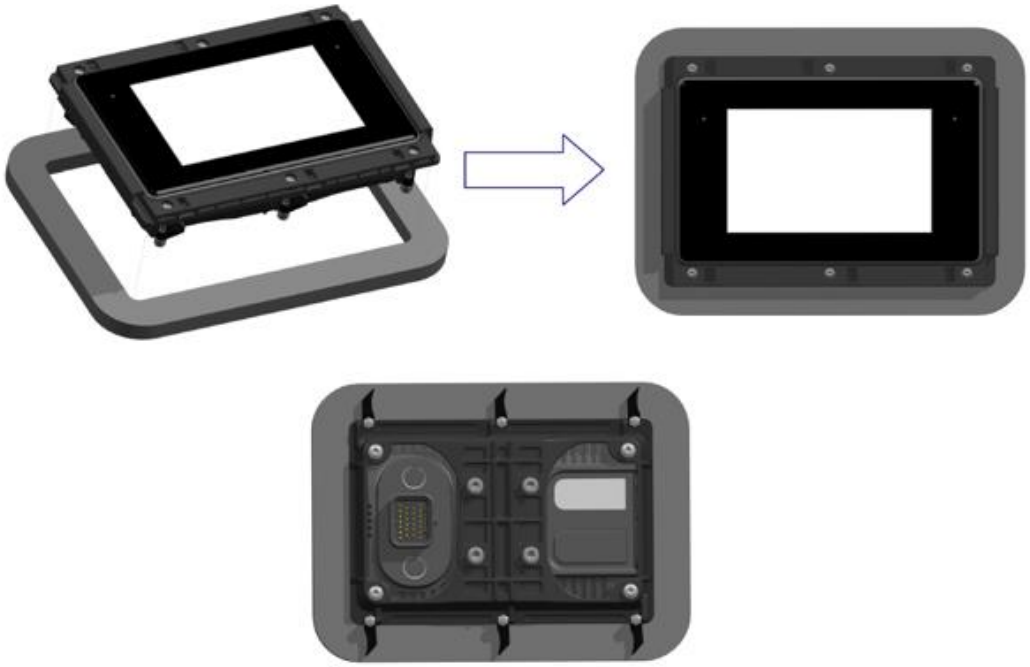
Postal address
PL/P.O.Box 194
FIN-60101 Seinäjoki, Finland

Phone
+358-(0)20-7608 111

Internet
www.epec.fi

3. Insert six screws (M3x25) from the front of the mounting frame and attach the hooks to the back.

4. Insert the frame into the dashboard and turn the hooks to secure the frame and display.



Epec Oy reserves all rights for improvements without prior notice

Epec Oy
Tiedekatu 6
FIN-60320 Seinäjoki

Postal address
PL/P.O.Box 194
FIN-60101 Seinäjoki, Finland

Phone
+358-(0)20-7608 111

Internet
www.epec.fi

5. Clip the side covers on the mounting frame.

Attention!
Using too long screws can damage the unit!
Accepted mounting torque with mounting cover is 1,8 Nm
Please secure the screws with the thread locker medium strength (e.g. Loctite 243).

Epec Oy reserves all rights for improvements without prior notice

Epec Oy
Tiedekatu 6
FIN-60320 Seinäjoki

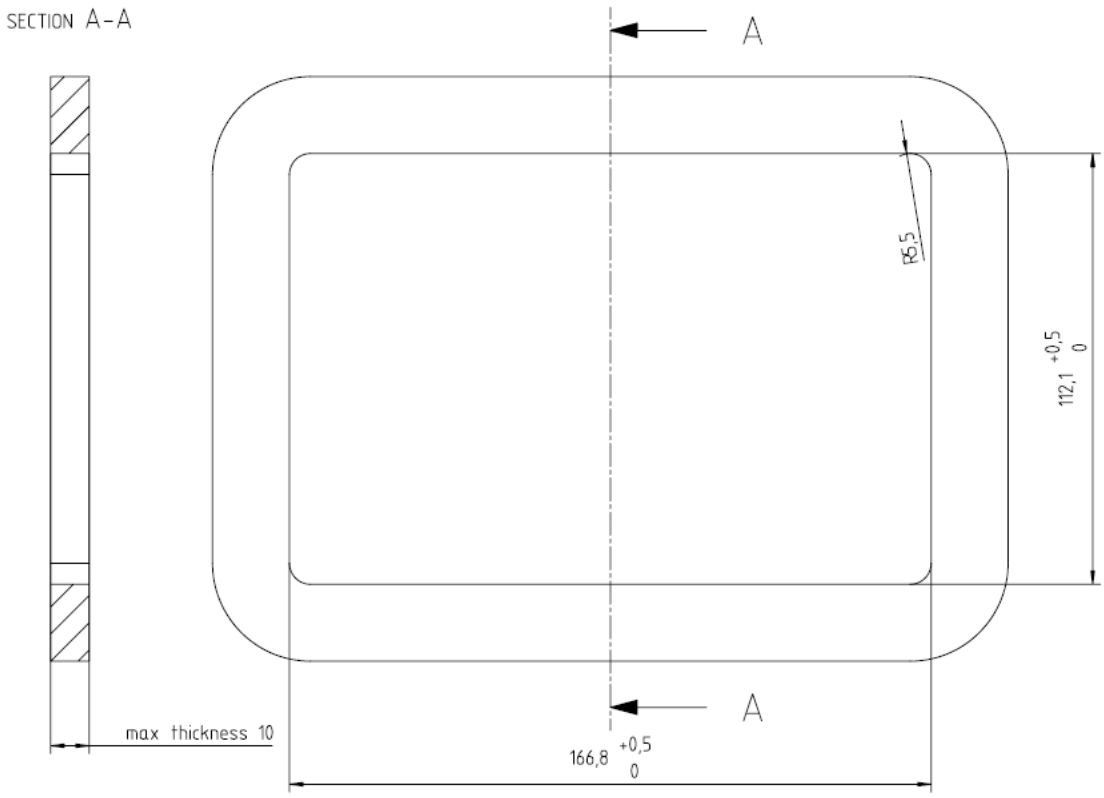
Postal address
PL/P.O.Box 194
FIN-60101 Seinäjoki, Finland

Phone
+358-(0)20-7608 111

Internet
www.epec.fi

4.2.1 Dashboard Cut-out

The maximum dashboard thickness for mounting the 6505 Display Unit is 10mm. Use the following cut-out as a guideline.



Epec Oy reserves all rights for improvements without prior notice

Epec Oy
Tiedekatu 6
FIN-60320 Seinäjoki

Postal address
PL/P.O.Box 194
FIN-60101 Seinäjoki, Finland

Phone
+358-(0)20-7608 111

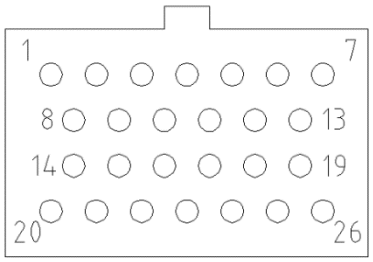
Internet
www.epec.fi

5 ELECTRICAL INSTALLATION 6505 DISPLAY UNIT

Below you can find the pin out diagram of the 6505 Display Unit. The connectors are drawn as seen from the back side of the unit.

Please note that the 6505 Display Unit only represents one part of the entire CAN network. Set-up and dimensioning of the network must be executed by specialized personnel, and the information in this regard cannot be a component of this operating manual.

Main Connector:



Epec Oy reserves all rights for improvements without prior notice

Epec Oy
Tiedekatu 6
FIN-60320 Seinäjoki

Postal address
PL/P.O.Box 194
FIN-60101 Seinäjoki, Finland

Phone
+358-(0)20-7608 111

Internet
www.epec.fi

Main connector pinout

pin no.	assignment	description
1	VCC	supply voltage +; terminal 30
2	Ignition Input	ignition input; terminal 15
3	GND	supply voltage - ;terminal 31
4	n.c.	
5	n.c.	
6	n.c.	
7	n.c.	
8	CAN1H	CAN bus 1 high signal
9	CAN1L	CAN bus 1 low signal
10	CAN2H	CAN bus 2 high signal
11	CAN2L	CAN bus 2 low signal
12	n.c.	
13	n.c.	
14	n.c.	
15	n.c.	
16	RS232: RxD	RS232: RxD
17	RS232: TxD	RS232: TxD
18	RS232: GND	RS232: GND
19	n.c.	
20	n.c.	
21	n.c.	
22	n.c.	
23	SERV_EN	service enable; to be connected while power-on for updating
24	n.c.	
25	n.c.	
26	n.c.	

Please observe the following guidelines for set-up:

- Power supply lines should only be passed in pairs as close together as possible.
- Sensitive signal lines should be shielded to achieve highest possible damping, and under this shielding they should be still be passed twisted.
- Metal plug connections should be used for shielded lines.
- Cable bundles should be distributed in accordance with their purpose (e.g. HF, LG, and power supply); the groups thus formed should not be routed in parallel to the extent possible, and they should be routed with clearance.

The 6505 Display Unit relies on a connection to an ECU that controls the functions and features of the target vehicle/machine.

Epec Oy reserves all rights for improvements without prior notice

The ECU must be the component in charge of all safety related functions.

Please keep all the connectors separated. All connection should be done on the shortest distance to the unit.

Wrong connection may cause damage of the unit.

5.1 Unused plugs

Penetrating humidity by unused and unprotected plugs may cause damage of the unit. Please protect unused plugs with special blind inserts.

5.2 Power Supply

The unit may be used with the 12 V and for 24 Volt battery systems, operating voltage range of 9-36 VDC. The overvoltage resistance is about 48V for 2 minutes. Inverse-polarity protection is up to -48 V DC.

5.3 First steps

Plug in the main connector into the 6505 Display Unit. Then connect the clamps 15 and 30 for the plus voltage, as well as clamps for GND and CarGND for the ground. Switch on the Power supply.

On start, the boot-logo image will be displayed on the screen. This may be exchanged with the customer specific image (please refer to *Epec Programming & Libraries manual* for more information).

The boot up takes about 15 seconds and will call the application according to the start scripts on the unit.

Epec Oy reserves all rights for improvements without prior notice

5.4 Cleaning/ service / maintenance

Cleaning agents which have an abrasive or dissolving effect on the coated glass pane, the foil of the touch screen or the plastic of the encoder or the housing should not be used to clean 6505 Display Unit operator panels. Only use soft clothes with a little soap and water or mild dish washing liquid.

The 6505 Display Unit does not have any parts that require service by the user. Repairs can only be performed by Epec Oy.

5.5 Disposal

Dispose of the device in accordance with the national environmental regulations.

Epec Oy reserves all rights for improvements without prior notice

Epec Oy
Tiedekatu 6
FIN-60320 Seinäjoki

Postal address
PL/P.O.Box 194
FIN-60101 Seinäjoki, Finland

Phone
+358-(0)20-7608 111

Internet
www.epec.fi

6 TECHNICAL DOCUMENTATION

The 6505 Display Unit is currently available in one housing version

EPEC 6505 Display Unit:

Epec Oy reserves all rights for improvements without prior notice

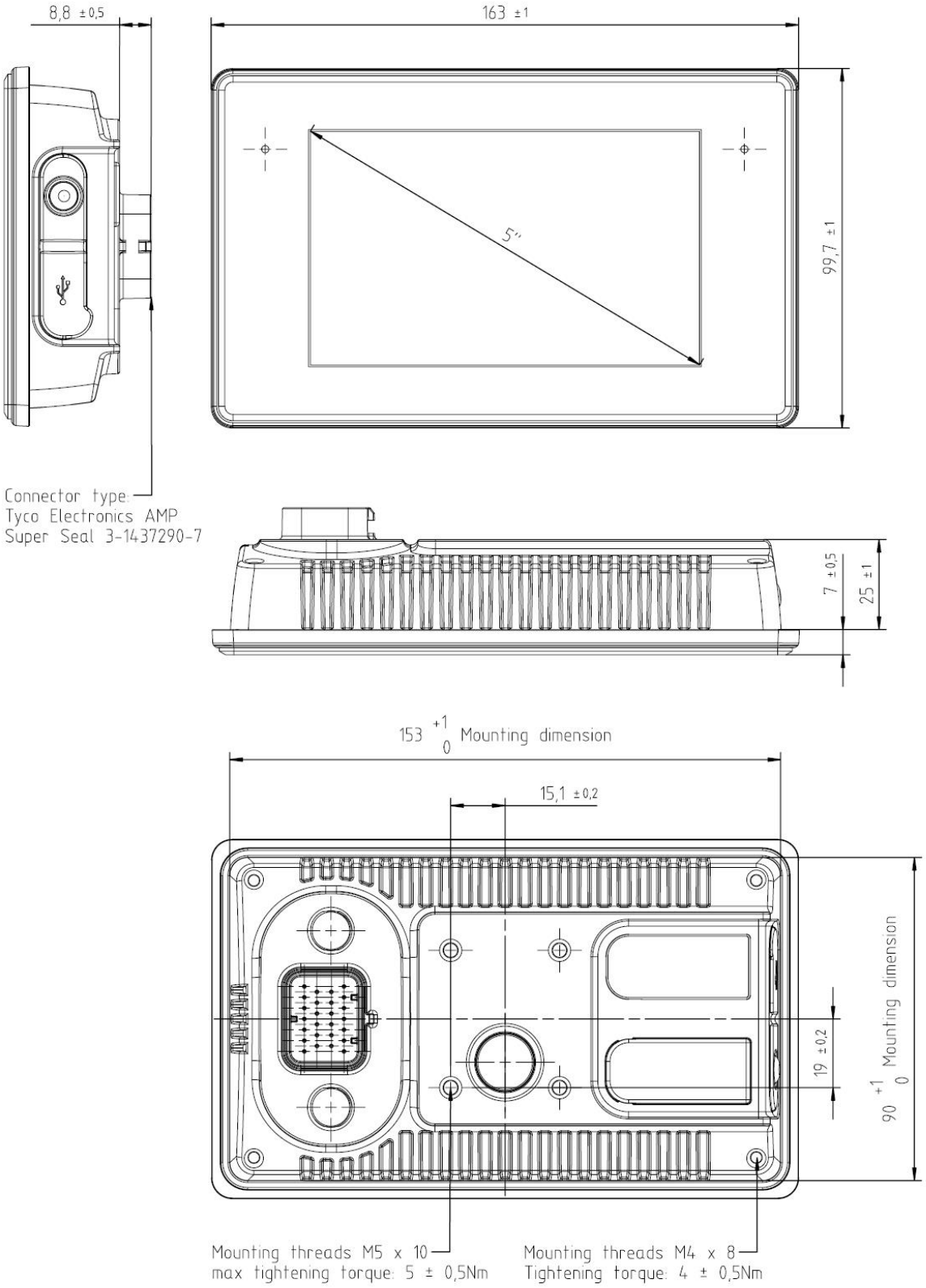
Epec Oy
Tiedekatu 6
FIN-60320 Seinäjoki

Postal address
PL/P.O.Box 194
FIN-60101 Seinäjoki, Finland

Phone
+358-(0)20-7608 111

Internet
www.epec.fi

6.1 Dimension Drawings - Epec 6505 Display Unit



Epec Oy reserves all rights for improvements without prior notice

6.2 Specification

	Epec 6505 Display Unit
Dashboard Mount	x
Dimensions (mm)	H99,7 x W163 x D32
Display size	800x480 pixels
Touchscreen	x
Optical Signal	1
Speaker	x
Processor Speed	800 MHz I.MX6
RAM	512 MByte
Mass Storage	2 GB
EEPROM	32 kB serial
CAN bus	2
RS232	1
USB 2.0 full speed	1
Real time clock	x
Light Sensor	x

Epec Oy reserves all rights for improvements without prior notice

6.3 Environmental compatibility

6.3.1 CE-Compliance

EU Directive 2014/30/EC (EMC) according to

- EN 12895: Industrial Trucks – Electromagnetic compatibility
- EN 13309: Construction machinery – Electromagnetic compatibility of machines with internal electrical power supply
- EN ISO 14982: Agricultural and forestry machinery – Electromagnetic compatibility – Test methods and acceptance criteria

6.3.2 Protection Level (IP Code)

IP 6k5 and IP 6k6 according to ISO 20653: Road Vehicles – Degrees of protection (IP-Code) – Protection of electrical equipment against foreign objects, water and access

6.3.3 Electrical Capability

12 and 24V-Systems according to:

- ISO 16750-2: Road Vehicles – Environmental conditions and testing for electrical and electronic equipment – Electrical loads
- ISO 15003: Agricultural Engineering – Electrical and electronic equipment – Testing resistance to environmental conditions

6.3.4 Mechanical Capability

According to ISO 16750-3: Road Vehicles – Environmental conditions and testing for electrical and electronic equipment – Mechanical loads, Code L

ISO 15003: Agricultural Engineering – Electrical and electronic equipment – Testing resistance to environmental conditions

- Mechanical Shock: Level 2
- Random Vibration: Level 2
- Sinusoidal Vibration: Level 2

6.3.5 Climate Capability

- According to ISO 16750-4: Road Vehicles – Environmental conditions and testing for electrical and electronic equipment – Climatic Loads
  - Operating Temperature Range: Code E: -30 … +75°C
  - Storage Temperature Range: -40 … +85°C
  - Climatic Loads: Code C
- ISO 15003: Agricultural Engineering – Electrical and electronic equipment – Testing resistance to environmental conditions

Epec Oy reserves all rights for improvements without prior notice

6.3.6 Chemical Capability

- According to ISO 16750-5: Road Vehicles – Environmental conditions and testing for electrical and electronic equipment – Chemical Loads Mounting Location: B
- ISO 15003: Agricultural Engineering – Electrical and electronic equipment – Testing resistance to environmental conditions

Epec Oy reserves all rights for improvements without prior notice

Epec Oy
Tiedekatu 6
FIN-60320 Seinäjoki

Postal address
PL/P.O.Box 194
FIN-60101 Seinäjoki, Finland

Phone
+358-(0)20-7608 111

Internet
www.epec.fi

6.4 Declaration of Conformity

Epec Oy hereby declares that this device is in compliance with Directive 2014/53/EU.

The full text of the EU declaration of conformity is available at the following internet address:
https://extranet.epec.fi/Public/Declarations/Epec6505_DeclarationOfConformity.pdf

Epec Oy reserves all rights for improvements without prior notice

Epec Oy
Tiedekatu 6
FIN-60320 Seinäjoki

Postal address
PL/P.O.Box 194
FIN-60101 Seinäjoki, Finland

Phone
+358-(0)20-7608 111

Internet
www.epec.fi

7 6505 DISPLAY UNIT ACCESSORIES

The unit is delivered without accessories. The following accessories for the 6505 Display unit can be ordered from Epec with the following ordering codes:

Picture	Product Name & Description	Ordering code
	**Pedestal for Standalone Mounting** Includes: • Display adapter plate • Round plate (Pedestal base) • 4 x screws (M5 x 12)	MK0211
	**In-Dash Mounting Cover** Includes: • 6 x screws (M3 x 25) • 4 x screws (M4 x 14), galvanized steel 8.8 • 4 x screws (M5 x 12) DIN 912 ISO 4762 without shank, A2, blank • 6 hooks • Rubber Seal • 2 x side covers	MK0212

Epec Oy reserves all rights for improvements without prior notice

Epec Oy
Tiedekatu 6
FIN-60320 Seinäjoki

Postal address
PL/P.O.Box 194
FIN-60101 Seinäjoki, Finland

Phone
+358-(0)20-7608 111

Internet
www.epec.fi

	**Standalone Mounting Connector Cover** Includes: • 2 piece connector cover • 2 x screws (M4 x 8)	MK0213
	**Power & Data Cable** Length: 185 cm (+/-5cm) Cable connectors: 26 pos AMP SuperSeal – 5 banana plugs, 5 x D9 connectors, Audio plug 3.5 mm (female)	KW0273
	Removable Screen Protection Foil	MN0497
	**Removable Silicone Cover** color: black	MK1145

Epec Oy reserves all rights for improvements without prior notice

Epec Oy
Tiedekatu 6
FIN-60320 Seinäjoki

Postal address
PL/P.O.Box 194
FIN-60101 Seinäjoki, Finland

Phone
+358-(0)20-7608 111

Internet
www.epec.fi