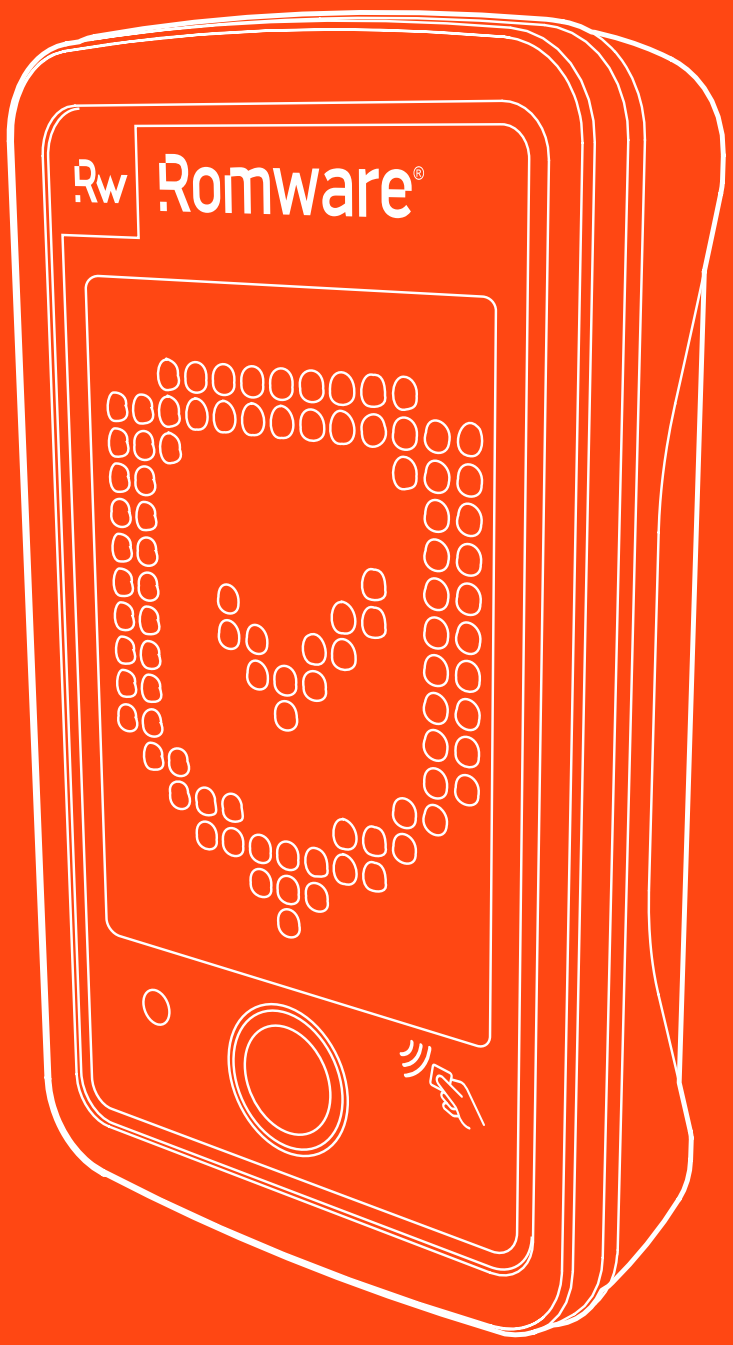
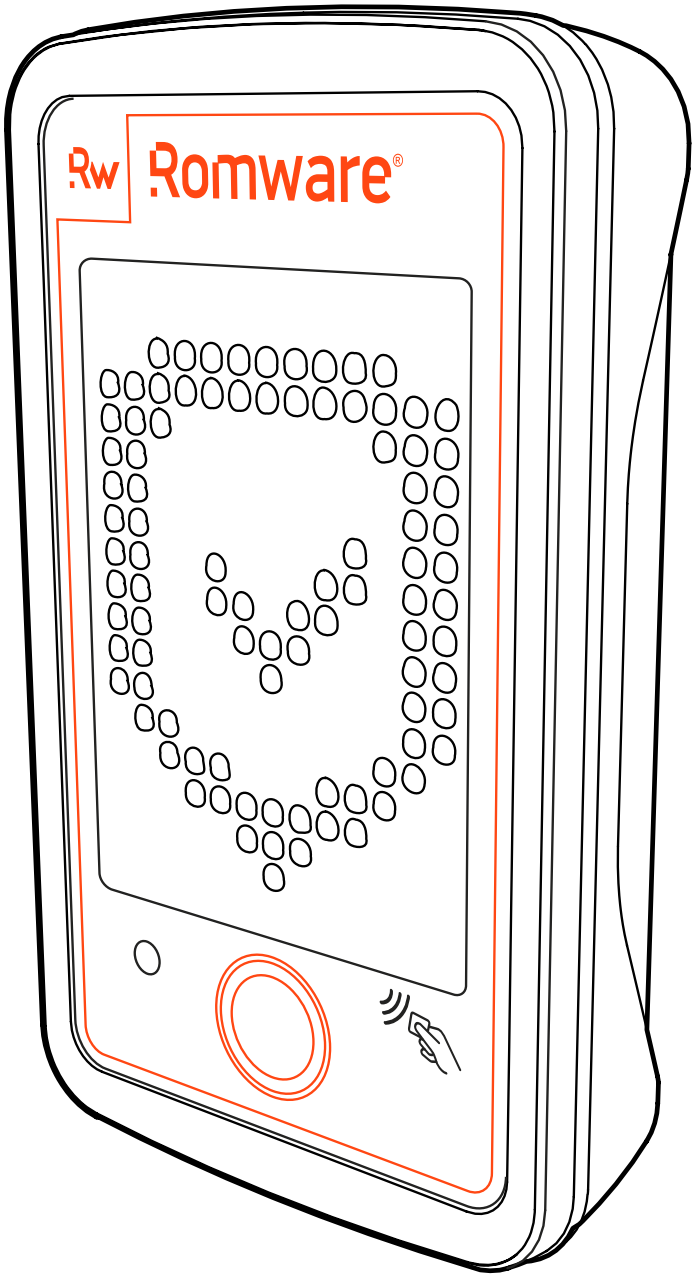
Romware



ROMWARE DRIVERBOX™

USER MANUAL

1.3-EN



ROMWARE DRIVERBOX™

USER MANUAL

1.3-EN

1. FOR YOUR SAFETY

Before using this product, carefully read this user manual. Failure to follow these safety instructions could result in fire, electric shock, injury, or damage to Romware DriverBox™ or other property. Do not dispose of this manual. Ensure that this information is retained and appropriately used by the product user.

DEFINITION OF ALERT SYMBOLS

The following alert symbols are used in this document to indicate and highlight areas of the associated text that require a greater awareness by the user.

WARNING

Indicates a hazard with a high risk level. If this hazardous situation is not avoided, it may result in death or serious injury.

CAUTION

Indicates a potentially hazardous situation. If this is not avoided, injuries or damage to the product or the environment may occur. It may also be used to alert against unsafe practices.

NOTICE

Indicates additional information on how to use the product.

INTENDED USE

Romware DriverBox™ is an accessory device for Romware™ worker safety and site security products. It can be used as a component of a site-installed system to help warn users for unsafe situations, such as vehicle driving behaviour, keeping a safe distance from people or man-machine collisions.

Romware DriverBox™ is designed for use in industrial environments.

QUALIFICATION OF USERS

- Users must fully understand and strictly observe the instructions. Use the product only for the purposes specified in the Intended Use section of this document. Comply with all local and national rules and regulations associated with this product.

- Users of Romware DriverBox™ must be familiar with the relevant safety concepts of the industrial environment they are operating in, as well as applicable standards and other regulations. Always obey site-specific signs and instructions.

REPAIR AND MODIFICATIONS

- Only trained and competent personnel are permitted to inspect, repair and service Romware DriverBox™.

- Use only original Romware™ parts and accessories for using and maintaining this product. Otherwise, the correct functioning of the product could be impaired. Rombit recommends a Romware™ service contract for all maintenance activities and that all repairs are carried out by Rombit.

CAUTION

Modifications to any component of Romware DriverBox™ are not permitted, as they can endanger your safety or damage the device. Disassembling Romware DriverBox™ may cause damage, result in loss of water resistance, and may cause injury to the user.

SAFETY PRECAUTIONS

WARNING

RF EXPOSURE AND INTERFERENCE

Romware DriverBox™ uses radio signals to communicate with other devices. It is designed, tested, and manufactured to comply with regulations governing radio frequency emissions. Even so, radio-signal emitting devices can negatively affect the operation of other electronic equipment, causing them to malfunction.

Always turn off Romware DriverBox™ when use of radio equipment is prohibited, such as while traveling in aircraft, or when asked to do so by authorities.

POSSIBLE MEDICAL DEVICE INTERFERENCE

Romware DriverBox™ contains components that emit electromagnetic fields. This may interfere with medical devices, such as pacemakers and defibrillators. Consult your physician and medical device manufacturer for information specific to your medical device and whether you need to maintain a safe distance of separation between your medical device and Romware DriverBox™.

If you suspect Romware DriverBox™ is interfering with your medical device, stop using the Romware™ system immediately and consult your physician.

ROMWARE DRIVERBOX™ IS NOT A MEDICAL DEVICE

Romware DriverBox™ is not a medical device and should not be used as a substitute for professional medical judgement. It is not designed or intended for use in the diagnosis of disease or other conditions, or in the cure, mitigation, treatment, or prevention of any condition or disease.

NOT FOR USE IN A POTENTIALLY EXPLOSIVE ENVIRONMENT

Using Romware DriverBox™ in any area with a potentially explosive atmosphere, such as areas where the air contains high levels of flammable chemicals, vapors, or particles (such as grain, dust, or metal powders), may be hazardous.

Exposing Romware DriverBox™ to environments having high concentrations of industrial chemicals may damage or impair Romware DriverBox™ functionality.

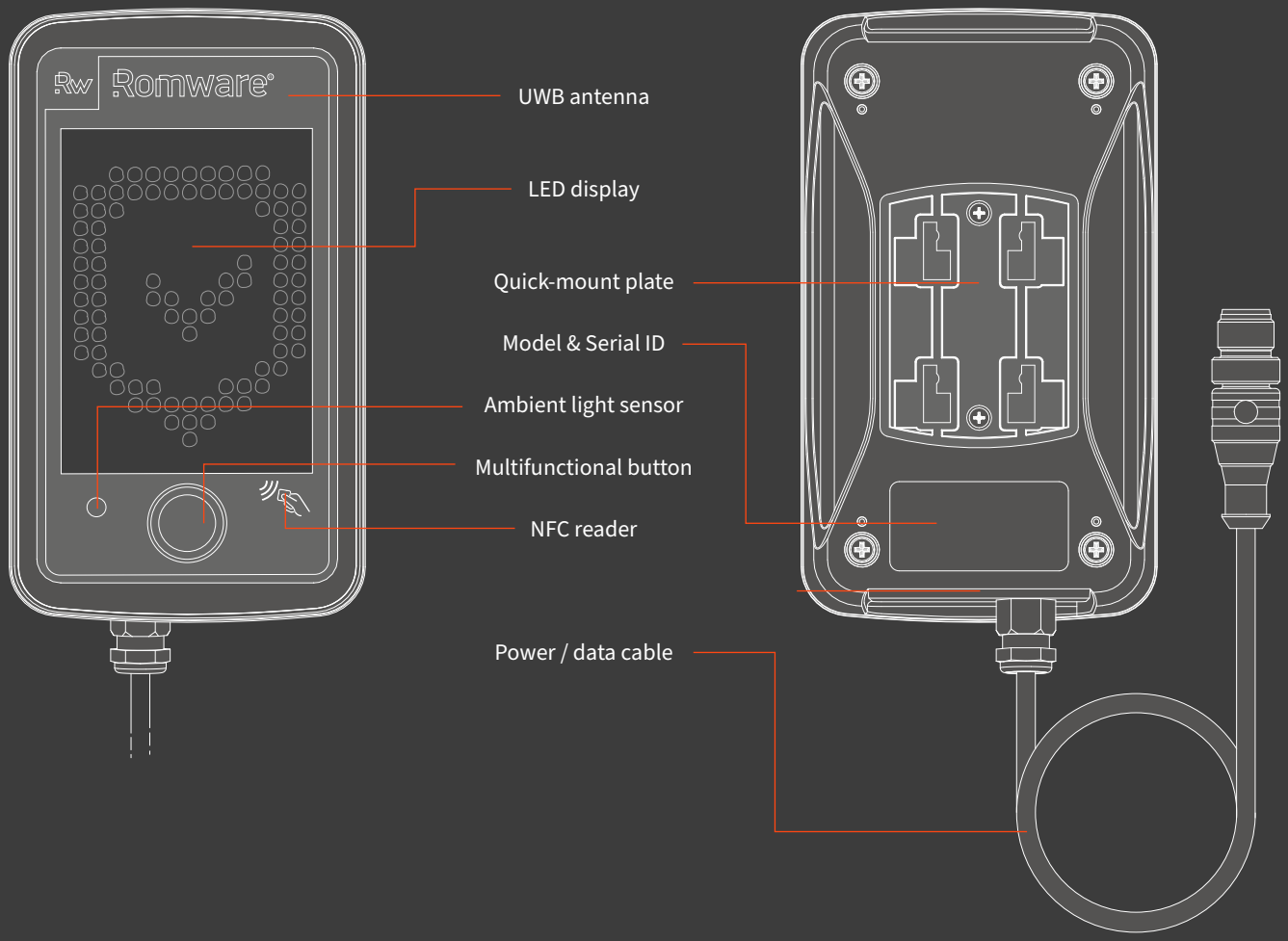
VIBRATION AND SHOCK RESISTANCE

Romware DriverBox™ was designed and tested to withstand the harsh environment of typical industrial sites. When implementing Romware DriverBox™ in extreme conditions, such as applications subject to high accelerations, extreme vibration or temperature, additional precautions and integration testing are required.

HIGH-CONSEQUENCE ACTIVITIES AND SAFETY INTERLOCK

Romware DriverBox™ is not intended for use where the failure of the device could directly lead to death, personal injury, or severe environmental damage. Romware DriverBox™ is intended and marketed as Assistive Technology: a system intended to help warn users of potentially unsafe situations and to raise awareness of the risks involved. As such, it is NOT intended to be used as a safety component of a machine setup as meant in article 2(c) of the European Machine Directive 2006/42/EC.

2. PRODUCT OVERVIEW



FUNCTIONAL DESCRIPTION

ROMWARE DRIVERBOX™

- Romware DriverBox™ is meant to be used as part of a mobile installation on industrial vehicles such as forklifts. It is to be connected to, and powered by a compatible Romware™ device such as the Romware M-Anchor 100™.

- When connected to a compatible Romware™ device, Romware DriverBox™ starts automatically when its host is powered on, and provides visual and auditory feedback to the driver or user. It connects via its integrated UWB receiver to either a dedicated site network infrastructure or other Romware™ devices nearby to provide assistive safety functionality.

COMPATIBLE DEVICES

- Romware DriverBox™ can be connected to auxilliary devices such as Romware M-Anchor 100™ through its CAN connection.

3. INSTALLING

CAUTION

Romware DriverBox™ is designed for installation by a Romware certified technician, as part of a total solution. Its correct functioning is highly dependent on a number of installation parameters, including the appropriate mounting position of the device itself, connected devices, and auxilliary antennas.

The following paragraph should be considered as a basic indication of installation parameters to consider, not a full installation guide.

CAUTION

OBSERVE LOCAL REGULATIONS FOR USING NON-MOBILE UWB DEVICES OUTDOORS

Depending on the region of use, regulations can apply that only allow UWB devices as a mobile or non-permanent installation when using them outdoors. Before using Romware DriverBox™ as part of a permanent non-removable installation outdoors, check if local regulations allow.

POSITION ON VEHICLE

Romware DriverBox™ is fitted with a quick-mount baseplate, allow it to be mounted inside a vehicle through several means:

- Fixed baseplate
- Swivel Mount
- Gooseneck

The optimal position on a vehicle is determined by considering comfortable viewing and device alerts being noticed, without blocking the driver's view around the vehicle.

- Romware DriverBox™ is to be mounted in a vertical upright position.

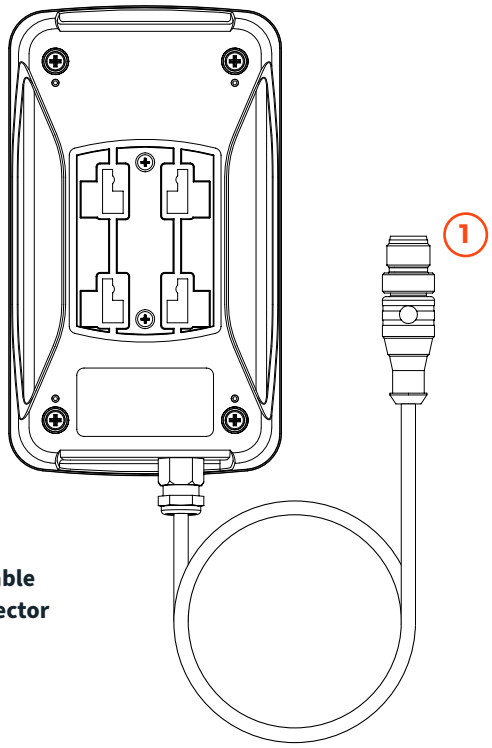
- Avoid mounting Romware DriverBox™ in a position where electromagnetic waves do not propagate properly (for example: behind or against a metal chassis, within a metal enclosure, ...).

CAUTION

CONSULT ROMBIT FOR BEST MOUNTING POSITION

Rombit can assist you in evaluating the best mounting position of Romware DriverBox™ on a particular vehicle or location for the intended application.

WIRING



1. **Power / data cable with CAN connector**

CAUTION

CABLE TO BE FITTED BY A CERTIFIED TECHNICIAN

Depending on delivery options, Romware DriverBox™ is delivered with or without the pre-assembled cable as shown above. If this cable is not fitted at delivery (e.g. for custom installations) , the CAN cable is to be connected to a terminal block inside the device. This assembly is only intended to be performed by a Romware certified technician. Failure to install the cable correctly can lead to malfunction, fire or injury.

Data

- Romware DriverBox™ communicates to the host Romware device through a custom CanBus connection. Connect the Power / data cable to e.g. the CANBus connector of a Romware M-Anchor 100™.

Power

- Romware DriverBox™ is powered by the host Romware device it is connected to. No further power connections are necessary.

4. STARTING USE

CAUTION

HANDLE WITH CARE

Although Romware DriverBox™ is designed to be used in an industrial environment, it contains sensitive electronic components and can be damaged if dropped, burned, punctured, or crushed. Do not use a faulty or incomplete product, or when it shows damage such as a cracked case, liquid intrusion, or damaged cabling.

SYSTEM STARTING

- **While the system is starting:**
  Romware DriverBox™ shows an Rombit 'R' logo.

SYSTEM ACTIVE

- When in use, various icons and messages can appear on the screen, depending on the installed standard or bespoke solutions.
- *For more information on messages shown, please consult the documentation for the installed solution.*

CARD READER

- When used for the installed solution, the integrated RFID reader of Romware DriverBox™ can be used for e.g. identification purposes.
- When prompted by the system, hold a RFID badge or token in front of the card reader icon on the front of Romware DriverBox™ to read it.

5. CARE INFORMATION

CLEANING THE DEVICE CASING

- Clean the casing of Romware DriverBox™ with a damp cloth or a mild soap solution. Don't use abrasive cleaners. Do not immerse the device. Do not clean the device using high-pressure or high-temperature liquids, such as pressure washers or steam cleaners.

6. TECHNICAL DATA

Wireless technology	
UWB	Channel 5 (default), Channel 2 (for licensed customers only)
	Channel 2 band: 3774 – 4243.2 Mhz, Center freq. 3993.6 Mhz
	Channel 5 band: 6240 – 6739.2 Mhz, Center freq. 6489.6 Mhz
NFC	NFC compliant reader
Sensors	Ambient light sensor
Indicators	
Display	234 pixel colour LED matrix display
Speaker	Multi-tone piezo speaker
Wired connections	
CANBus	Proprietary protocol for connecting to compatible host Romware devices
Power supply	24VDC, 500 mA max. (powered by host device)
Dimensions and weight	131 mm x 77 mm x 29 mm, 127g
Water and dust resistance	IP67 rated
Ambient conditions	
Operation	-20°C to 55°C, 0 % to 98 % relative humidity
Storage	-20°C to 60°C, 0 % to 98 % relative humidity
Altitude	0 to 2000m (operation and storage)

FCC Regulatory notices

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with part 15 of the FCC Rules.

Operation is subject to the following two conditions:
1.This device may not cause harmful interference.
2.This device must accept any interference received, including interference that may cause undesired operation.

This device complies with the FCC RF exposure limits and has been evaluated in compliance with mobile exposure conditions.
The equipment must be installed and operated with minimum distance of 20 cm of the human body.

Note:
This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules.
These limits are designed to provide reasonable protection against harmful interference in a residential installation.
This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.
However, there is no guarantee that interference will not occur in a particular installation.
If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
—Reorient or relocate the receiving antenna.
—Increase the separation between the equipment and receiver.
—Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
—Consult the dealer or an experienced radio/TV technician for help.

UWB devices may not be employed for the operation of toys.
Operation onboard an aircraft, a ship or a satellite is prohibited.

ISED Regulatory notices

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with ISED license-exempt RSS(s).

Operation is subject to the following two conditions:
1.This device may not cause harmful interference.
2.This device must accept any interference received, including interference that may cause undesired operation.

This device complies with ISED RF exposure limits and has been evaluated in compliance with mobile exposure conditions.
The equipment must be installed and operated with minimum distance of 20 cm of the human body.

This Class B digital apparatus complies with Canadian ICES-003.