bright box

Remoto Basic V3 Plus OBDII Dongle

General Specification, Mounting and Packaging Guidelines

Contents

Introduction

Quality is more than product quality. Once products are finished they will be shipped to the end customer in a qualitative way.

This means:

- Within the agreed lead time
- At the correct place
- With the proper documentation
- Without damage or degeneration of the production quality
- With a minimum of waste
- Ensuring efficient and safe handling of the goods in the warehouses

The purpose of this document is to outline the transportation, packaging, documentation and mounting guidelines.

The details described in these guidelines must be followed at all times, unless otherwise agreed to between Bright Box and the Customer.

General specification

OBDII Dongle

- Operational temperature from -40 to +85 °C
- High performance Cortex based microcontroller
- Designed and produced by Bright Box
- Embedded software is developed by Bright Box
- Equipped with SIM card
- CAN bus and K-Line interface
- GNSS module, 3D accelerometer and 3D gyroscope
- Memory: 256 Kbytes of Flash memory, 32 Kbytes of SRAM

- Dimensions: 70mm x 45mm x 25mm, Weight: 100g
- CE Marked and homologated for automotive
- Dongle is fitted to OBDII
- Dongle activation should be done by dealer or during PDI via web-based tool provided by Bright Box
- Support Firmware Over the Air Update technology

Communications

- FDD-LTE B2
- WCDMA/HSPA+ B2/B5

Specifications for Data transfer

- LTE CAT1
- Uplink up to 5Mbps,
- Downlink up to 10Mbps
- HSPA+
- Uplink up to 5.76 Mbps,
- Downlink up to 42 Mbps
- WCDMA
- Uplink/Downlink up to 384KbpsCSD
- CSD
- WCDMA data rate 57.6Kbps

Navigation

- Support GPS/GLONASS/Galileo/QZSS
- Support EASY self-generated orbit prediction
- GPS Cold starts: 29 s
- GPS Warm start: 22 s

- GPS Hot starts: <1s
- EPO Assist: 13s
- Automatic Position: <2.5m CEP
- Speed: 0.1m/s
- LED statuses: Device working mode, 3G network registration

CAN interface

- Bus pins fault protection exceeds ± 36nV
- Compatible with ISO 11898-2
- GIFT/ICT Compliant
- Data Rates up to 1 Mbps
- Extended –7 V to 12 V Common Mode Range
- High-Input Impedance Allows for 120 Nodes
- Unpowered Node Does Not Disturb the Bus

Additions

- Thermal Shutdown Protection
- iNEMO inertial module (3D accelerometer and 3D gyroscope).
- ±2/±4/±8/±16 g full scale
- ±125/±245/±500/±1000/±2000 dps full scale
- High-performance mode up to 1.6 kHz samples rate
- Embedded temperature sensor

Packing guidelines

Basic requirements

When designing prototype packaging, it must be ensured that a safe and ergonomic handling of the packaging is possible and that the risk of injuries at the OEM warehouse and supplier are eliminated.

The packages which cannot be handled by fork-lift truck may not exceed a maximum weight of 15 Kg, which in line with the European directive on manual handling of goods.

For boxes with a weight exceeding 15Kg, two bindings need to be applied to ease the carrying of the box.

Kit packing

Each accessory will be single packed in a box (unless otherwise agreed between the OEM and the supplier), including the attachment parts. Once the Dongles are publicly offered for sale, each accessory shall be accompanied with installation instructions and/or owner's manuals.

Small parts need to be fixed inside the box in such way that damage to other components is avoided.

Components have to be packed in such way, that they cannot break or get damaged during transport.

Each box must be sealed in such way that parts cannot be lost during the transportation.

The strength, color and type of carton must be defined case by case depending on the purpose and the kind of accessory.

Each kit must be labelled according the specifications.

Spare part packing

Spare parts have to be packed in a small box, unless otherwise agreed between the OEM and the supplier.

All components have to be packed separately per piece, unless otherwise defined by the OEM and identified with a label. This label has to be built up according all requirements from chapter "Label Requirements".

The bar code for the spare parts has to display only the part number stated on the OEM order and has to comply with the bar code requirements.

Over box packing

In the event that kits are packed in small boxes or in plastic bags, it might be necessary to pack them in a bigger carton box.

The over pack box must be labelled in the same way as the kit box, mentioning the correct part number, bar code and the number of kits inside.

It is not allowed to pack different part numbers in 1 over pack box!

Pallets

All single boxes or over pack boxes must be put on one-way (non- returnable) pallets. Preferably with the dimensions 800 mm by 1200 mm with a maximum of 1200 mm by 1800 mm.

All boxes must be fixed to the pallets with shrink foil or by a plastic band.

Stacking heights must comply with one of the following:

- Maximum 1200mm, including pallet.
- Minimum 2000mm – maximum 2350mm, including pallet.

When pallets with a maximum height of 1200mm are transported 2 high, the lower boxes must be reinforced to prevent collapsing of the boxes.

Pallets with a minimum height of 2000mm and maximum height of 2350mm have to be reinforced to prevent collapsing of the bottom boxes.

Reinforcements for theses pallets have to be carton corner type enforcements.

As a standard, all pallets used for shipments of parts comply to the ISPM-15 norm (Regulation of wood packaging material in international trade).

Mixed pallets

When shipping small volumes of different accessories, it is allowed to stack them on 1 pallet. However this can only be done if really necessary and providing that a big label is fixed to the concerned pallet, clearly mentioning the quantity of each part number included on the pallet.

Box requirement

Kits intended for export will comply with all basic requirements as stated above and OEM guidelines.

Extra requirements for these kits are:

- Carton boxes always have to be of the same size. Mixed box sizes for 1 part number are not allowed.
- The cardboard material of the boxes has to be moister resistant to withstand overseas container transport.
- Tape applied should be moister resistant with sufficient adhesion strength to seal the special carton box and to withstand overseas transport, without losing its performance.

Direct overseas shipments

In case direct shipments of goods from the supplier to overseas companies are required, the pallets used need to be accompanied by proof of fumigation. This can be by document or by special marking on wooden pallets.

Merchandising goods

All merchandising goods have to comply with the general requirements stated in all other sections of this guideline.

Merchandising goods must be packed in such way that from the outside the content cannot be seen. This is required for theft prevention.

Single goods should be packed by preference in a carton box. In case this is not feasible, a non-transparent over pack plastic bag is required in addition to the normal plastic packaging.

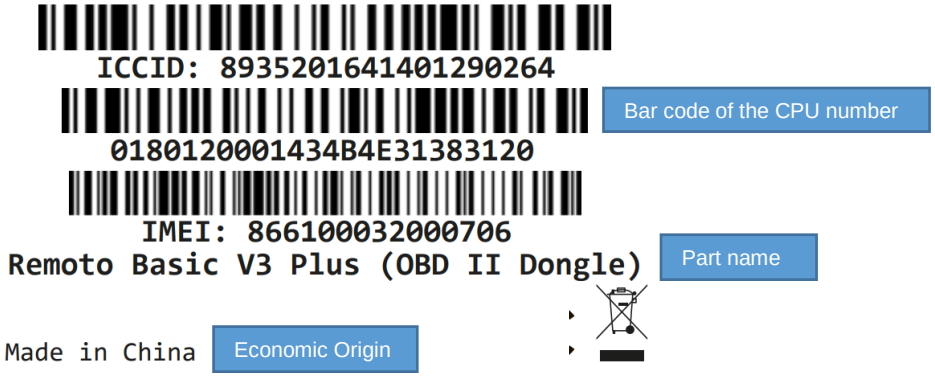
All goods must be packed in an over pack box, labelled with the same unit label, but mentioning the correct QTY in the over pack box.

When packing more than one type or size of a merchandising good, clear dividers have to be used in the over pack box to define the differences.

In case gift boxes are part of the merchandising goods, these have to be protected so that damage to the gift box is prevented.

Label requirements

Below an example of the label is given. Bright Box follows labeling requirements of the OEM. The size, font type, can be taken from the OEM standards.



The over pack box will be labelled in the same way as the kit box, mentioning the part number, bar code and the number of kits inside.

Label Size

The size of the label can be decided by the supplier (from the 2 indicated sizes), based upon the size of the packing boxes. In case of large boxes, two labels must be used on the box, one on the side and one on the front of the box. The label will always be put on the boxes in such way that they are visible when packed on a pallet.

Typeface

The primary typeface to be used is Helvetica or any cut of Helvetica. As an alternative, Arial can be applied. As a rule, all typing should be done ranged left, unjustified on the right.
If the Customer has specific requirements Bright Box will follow them.

Color

The label must be printed on a white base using the customer (car maker) color for the frame, with printing for the manufacturer logo and the other items. The color will be applied according to genuine parts labelling requirements of the OEM.

Mounting guidelines

Basic requirements

The dongle is mounting to OBDII connector in the car.

If necessary, can be designed the bracket according to dongle mounting position for each particular car and according to OEM requirements.

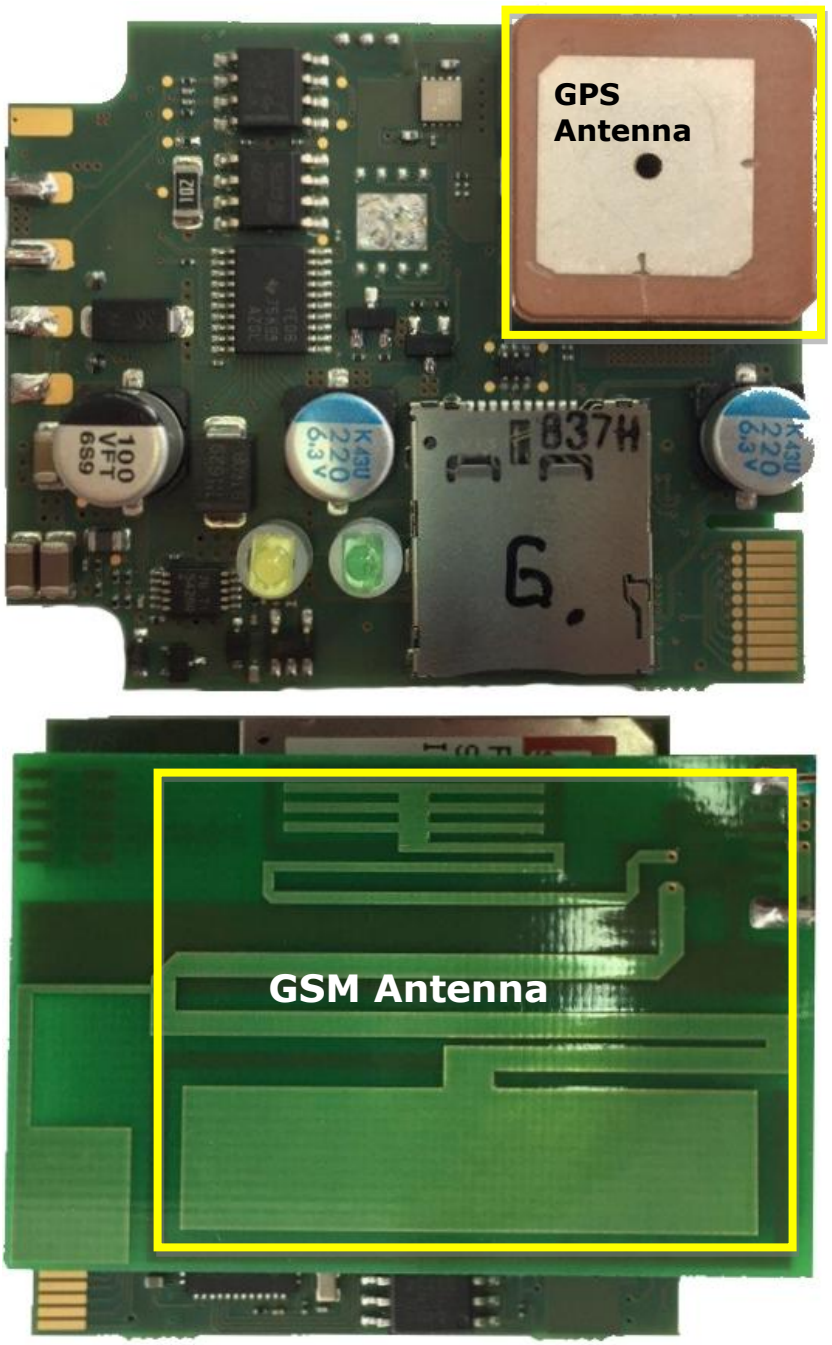
Installation kit

1. Remoto Dongle

Mounting position

Dongle mounting point requirements:

- Near OBD-II port, at the upper space of dashboard compartment or at the left-side space of dashboard compartment
- Dongle has enough distance from other electronic equipment, cables, metal plates, etc. to avoid any possible interference or signal degradation
- Direct heat or water ingress should be excluded. If operational temperature is about to exceed specified operational range automatic dongle shutdown is performed
- Recommended dongle orientation so that built-in GPS and GSM antennas are up and parallel to the ground and there are as minimal metal parts above antennas as possible



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

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, and (2) this device must accept any interference received, including interference that may cause undesired operation.

RF Exposure Warning Statements:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.

This equipment shall be installed and operated with minimum distance 20cm between the radiator & body.