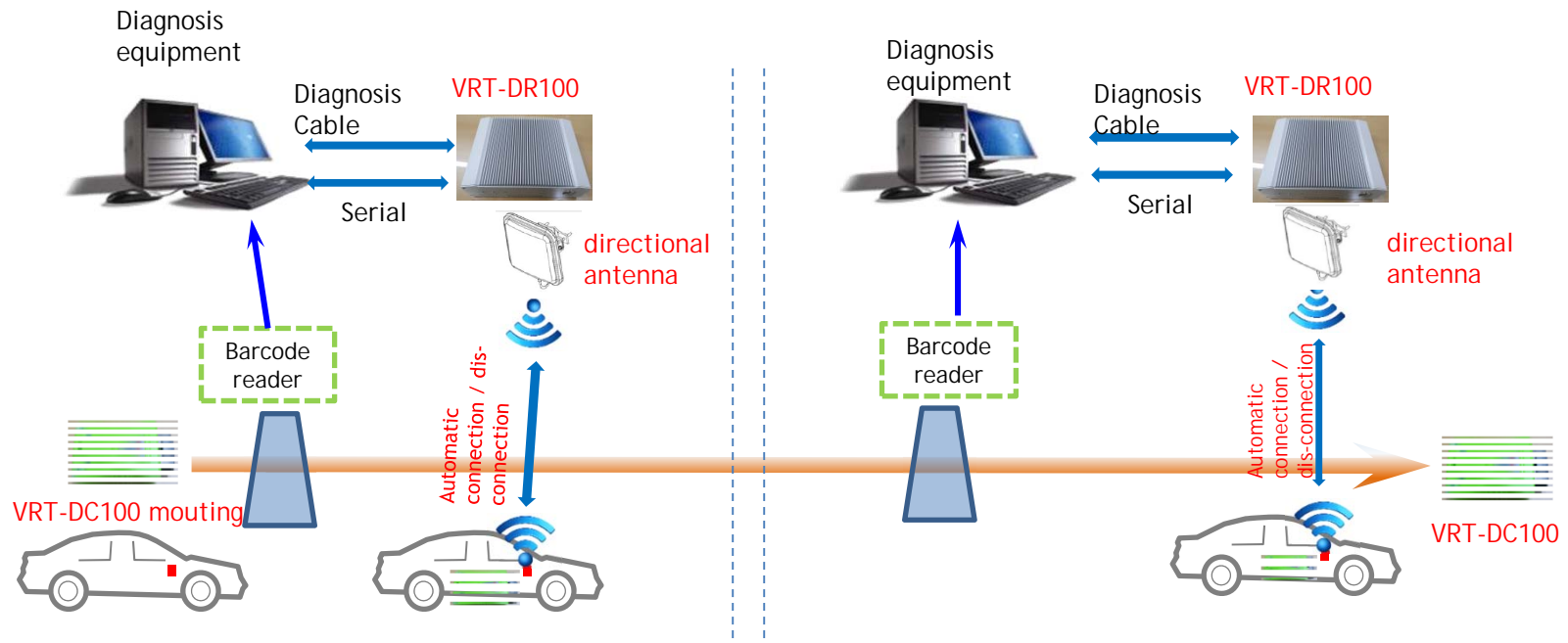


1. D-SCAN SUMMARY

- This is wireless communication device for the equipment uses diagnosis communication of HKMC plant. It is used with the inspection equipment in process of OK line, vehicle test line, driving test, watertight line, final inspection line etc
- It converts the diagnosis communication of inside OBD-II connector to wireless, transmits it to receiver in real time
- It converts the diagnosis communication received from diagnosis equipment to wireless, transmits it to vehicle module in real time
- It monitors/collects/saves the CAN, CCP data of vehicle, diagnoses/inspects the vehicle condition by transmit the data to receiver
- Receiver communicates the monitoring data and diagnosis data by interlocking with diagnosis equipment by RS-232 port
- Additional function
 - Vehicle remote control (IG ON)
 - Inline ECU re-programming
 - Acceleration sensor data logging
 - Vehicle leaning test, Bluetooth connection test, Wireless steering wheel leveler etc additional device support

2. D-SCAN SYSTEM

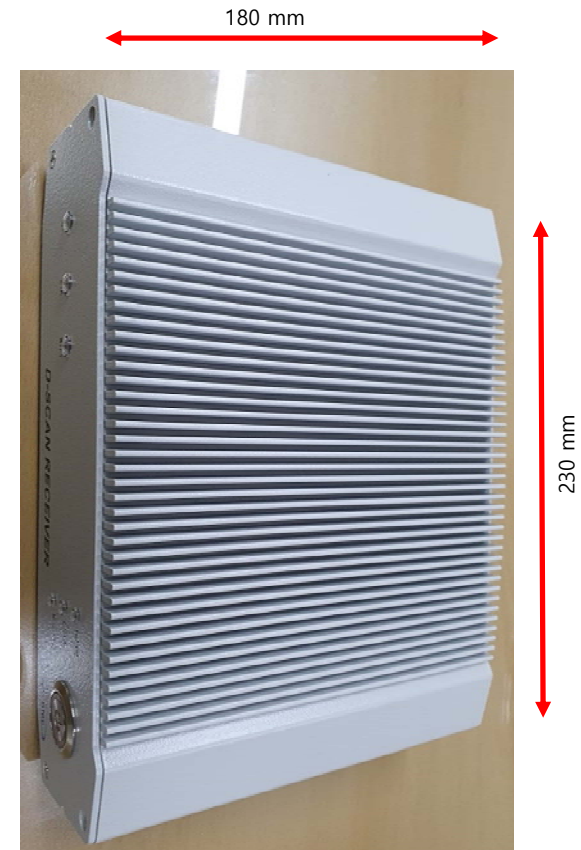
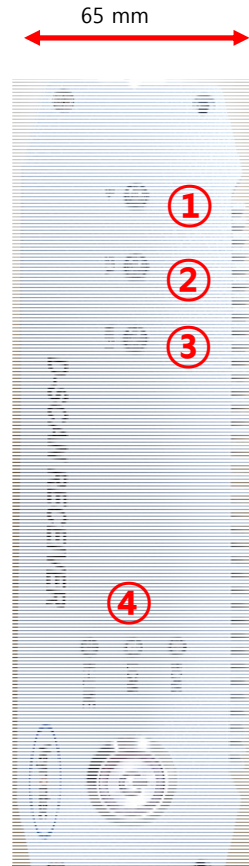
- ▶ The basic operation purpose of D-SCAN is for the wireless of the existing wire DLC cable of diagnosis equipment, it can reduce the system changes due to this.
- ▶ D-SCAN is the wireless device by 1:1 wireless connection, sets SSID by VIN (vehicle unique information) to prevent crossed connections. (Patent KR:1020130150689, 1020150139190)



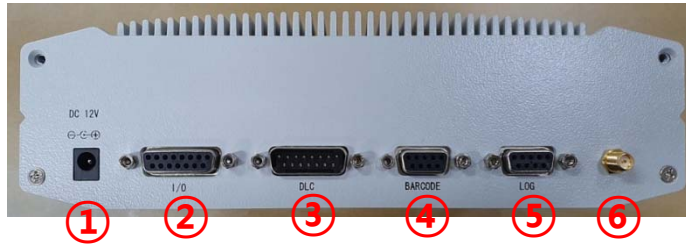
- ▶ Vehicle VIN and Barcode information matching : Barcode VIN = Vehicle VIN

3. D-SCAN Receiver composition (Front)

- ① **B+ LED (Green 5pi)**
 - DLC 16pin B+ Check LED
- ② **STA LED (Red 5pi)**
 - Barcode Input State LED
- ③ **WiFi LED (Blue 5pi)**
 - WiFi Connection State LED
- ④ **Communication Data State**
 - HCAN (Blue 3pi)
 - LCAN (Green 3pi)
 - K-Line (Red 3pi)



3. D-SCAN Receiver composition (Back)

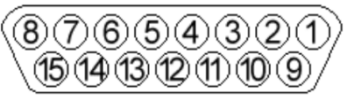


- ① DC Power JACK
- DC 12V INPUT
- ② D-sub 15 I/O Connector (Female)
- INPUT (DC12V~24V) 4ch & OUTPUT (DC12V) 4ch
- ③ D-sub 15 DLC Connector (male)
- DLC (Data Link Connector)
- ④ D-sub 9 Connector (Female)
- Barcode (Vehicle Body Number)
- RS-232C Serial / Baud 9600
- ⑤ D-sub 9 Connector (Female)
- Debug & Log / RS-232C / Baud 115200
- ⑥ RP-SMA Connector (Female) : UDP(RS9113) / Diagnostic Data

② D-sub 15 I/O Connector (Female)

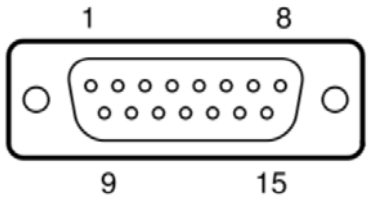
1~4. IN_01_P, IN_02_P, IN_03_P, IN_04_P
 9~12. IN_01_N, IN_02_N, IN_03_N, IN_04_N
 5~8. OUT_01_P, OUT_02_P, OUT_03_P, OUT_04_P
 14~15. OUT_Common_N

* ALL INPUT Isolation port



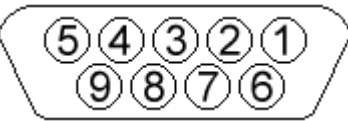
③ D-sub 15 DLC Connector (male)

1. M_CAN High
 4. GND
 5. H_CAN High
 8. M_CAN Low
 11. K-Line
 13. H_CAN Low
 15. B+



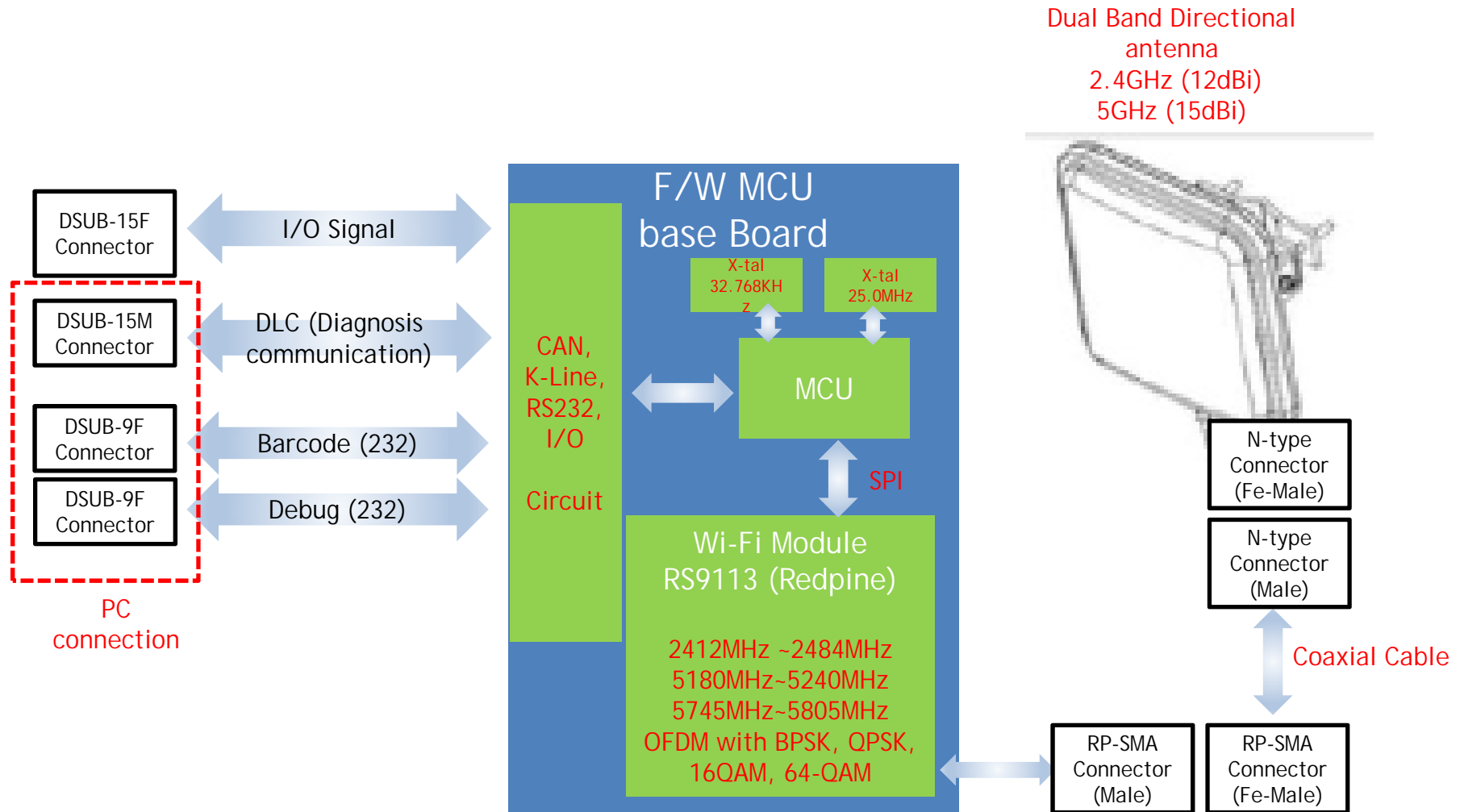
④ ⑤ D-sub 9 Connector (Female)

2. TXD OUT
 3. RXD IN
 5. GND



4. D-SCAN Receiver H/W Block Diagram

➤ Circuit Block Diagram (VRT-DR100)



4. Composition of D-SCAN for vehicle

① **Blue / Red LED**

- **Red** LED : Vin Number Read Error
- **Blue** LED : On by wireless connection

② **Green / Red LED check**

- **Green** LED : Power
- **Red** LED : B+ in the voltage is 10V or less

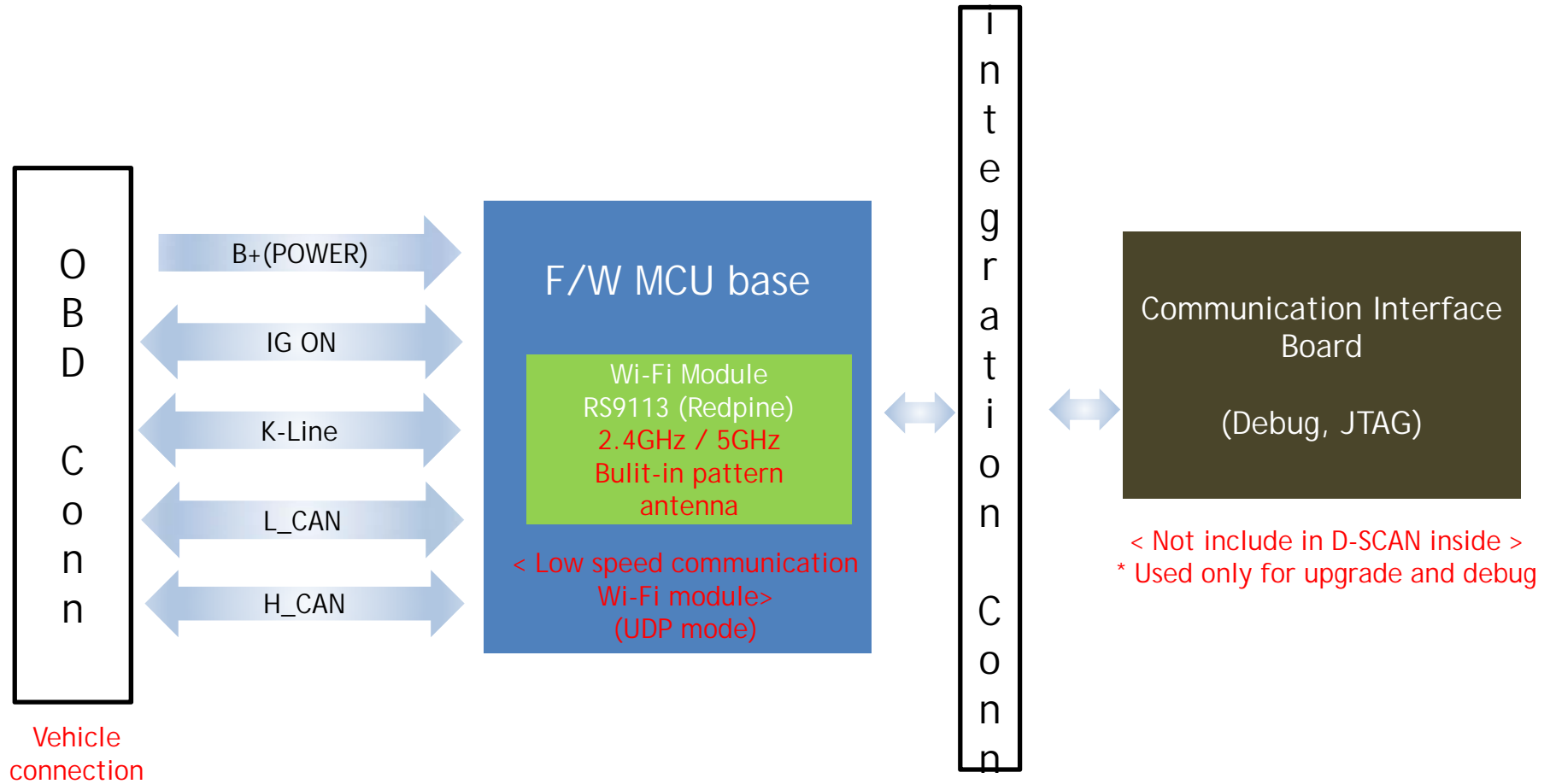
- **Buzzer check** After about 3seconds from mounting the Wirelss OBD

- "feep" (1time) : Vin Number Read OK
- "feep~ feep~ feep~" (10times) : Vin Number Read Error



4. D-SCAN CAR H/W Block Diagram

➤ Circuit Block Diagram (VRT-DC100)



4. Product specifications



HYUNDAI · KIA MOTORS

D-SCAN Receiver

- **POWER**
 - Adapter Power +12V Input
 - OBD II (16번 Pin) +12V Output (Control Enable)
 - 2.4Watts (12V @ 0.2A) : Terms (Output X)
- **External inputs / Outputs**
 - RS-232 (2 Port)
 - INPUT (DC 12~24V 4ch)
 - Output (DC 12V 4ch @ MAX 2A)
- **Communication**
 - KWP2000
 - LOW Speed CAN
 - High Speed CAN
- **Operating temperature**
 - "-20 °C ~ +50 °C"
- **Qurability**
 - Use Industrial hardware standard parts
 - Satisfies standard as hardware heating etc..
 - Satisfies connector connection/dis-connection durability
(Power Protection)

D-SCAN for vehicle

- **POWER**
 - CAR Power +12V Input (Max 30V)
 - Max 3Watts (12V @ 0.25A)
 - OBD II (3번 Pin) IGON Output (Control Enable)
- **CURRENT CONSUMPTION**
 - 12V @ 40mA : Sleep mode
 - 12V @ 120mA : Power saving mode
 - 12V @ 200mA : Diagnosis communication
- **CAR Battery Protection**
 - Buzzer alarm at 10V or less
- **Auto Vin Number read**
- **Communication**
 - KWP2000
 - LOW Speed CAN
 - High Speed CAN
- **Operating temperature**
 - "-20 °C ~ +50 °C"
- **Qurability**
 - Use Industrial hardware standard parts
 - Satisfies standard as hardware heating etc..
 - Satisfies connector connection/dis-connection durability
(Power Protection circuit)

FCC compliance information

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.

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.

Modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment under FCC rules.

This appliance and its antenna must not be co-located or operation in conjunction with any other antenna or transmitter. A minimum separation distance of 20 cm must be maintained between the antenna and the person for this appliance to satisfy the RF exposure requirements.