



DHU2.5_A Product Specification V1.1

Formulate	Bei Zhi	Audit		Approve	
Data	2024-11-04	Data		Data	

Revision History

Version	Release description	Valid from	Issued by
V1.0	First draft	2024-02-26	Bei Zhi
V1.1	Add FM/DAB Feature description	2024-11-04	Bei Zhi

1. Product Solutions

1.1 Product Specifications Introduce

DHU2.5_A is an intelligent cockpit domain controller, based on Qualcomm QAM8295P platform, supporting automotive gigabit/100 Gigabit Ethernet, video input/output interface, audio A2B interface and CAN/LIN/Flexray interface, and has built-in power amplifier, BT-WIFI and FM/DAB radio module, the main hardware specifications are shown in Table 1.1.。

Table 1.1 DHU2.5_A Major hardware specifications

Specification item	Specification description
SOC	QAM8295P * 1
LPDDR4x	16GB *2 (Bit width 128bit)
UFS3.1	256GB * 1
MCU	TC387 *1
1000/100BASE Ethernet	1000Base-T1 *2
Video input	GMSL2 *10 + GMSL3 * 1
Video output	GMSL2 *4 + FPDLINK *4
CAN-HS/CAN-FD	2 lane
LIN	3 lane
FlexRay	1 lane
A2B	1 lane
BT	BT5.2*2
WIFI	WIFI6(IEEE 802.11 a/b/g/n/ac/ax), AP+STA
USB	USB3.0+USB2.0 (BC1.2)
Built-in amplifier	MAX 4*30W/ch
Tuner	FM Dual antennas +DAB Dual antennas

1.2 Product solution introduction

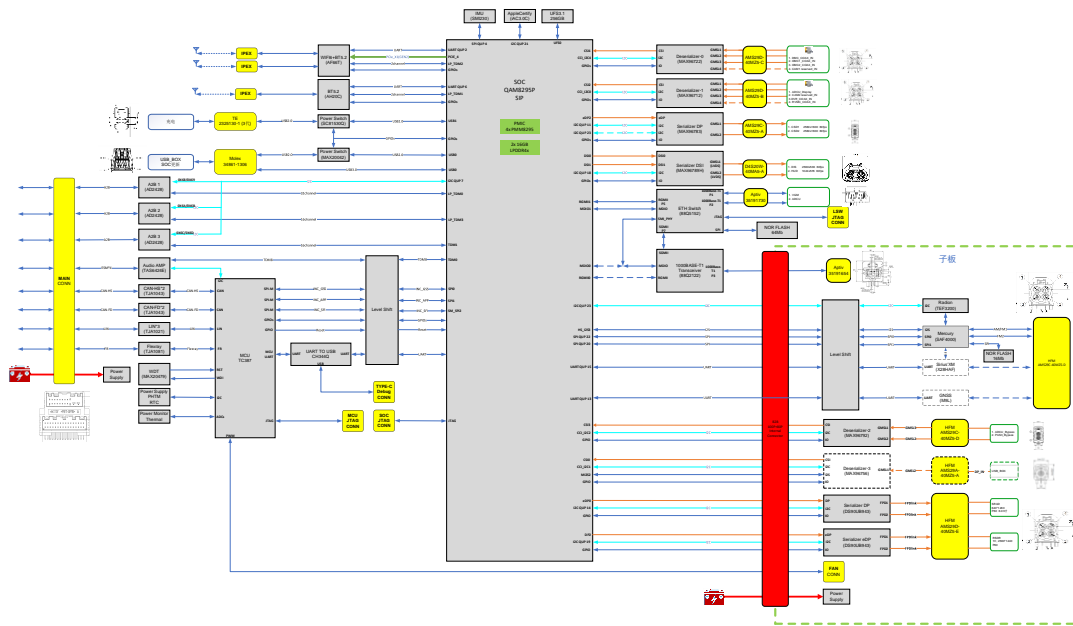


Fig1.1 DHU2.5_A Product solution introduction

As shown in Figure 1.1, the MCU acts as the main control unit and the safety monitoring unit to control the power-on and power-on logic of the whole board, monitor the status of each component in the board and the temperature of each area, and control the fan speed to meet the heat dissipation requirements of the whole machine. The MCU is connected to 2 CAN, 3 LIN and 1 Flexray transceiver to provide external communication interfaces. As a computing unit, the SOC provides rich peripheral interfaces, four CSI external deserializers, MAX96722 of which can provide 4 camera inputs, one MAX96792 provides 1 GMSL2 and 1 GMSL3 video input, Two DSI docking MAX96789 for instrument and HUD display; One eDP docking MAX76783 is used for the display output of the central control screen;. In addition, the SOC is connected to an external BT-WIFI module and a BT-only module, which supports WIFI6 and BT5.2 protocols, and also supports a four-channel built-in power amplifier and three A2B buses as external audio interfaces. The SOC is connected to the LSW chip 88Q5152 via an RGMII interface, which provides two 1000Base-T1 interfaces. There is one UART interface and three SPI interfaces for communication between the MCU and SOC, and multiple GPIOs for reset and status indication.

In addition, the SOC leads to a USB3.0 interface for docking the USB BOX on the car, and a USB2.0 interface for docking the U disk, which also supports the BC1.2 charging protocol.

2. Frequency and power

[illegible]

Manufacturer: Aptiv Electronics (Suzhou) Co., Ltd.

Address: No. 123, Changyang Street, Industrial Park, 215126 SUZHOU CITY, JIANGSU

PROVINCE, P.R. China

Importer name:*****

Importer address:*****

Restrictions in the 5 GHz Band

According to Article 10(10) of Directive 2014/53/EU, the packaging shows that this radio equipment will be subject to some restrictions when placed on the market in Belgium(BE), Bulgaria(BG), the Czech Republic(CZ), Denmark(DK), Germany(DE), Estonia(EE), Ireland(IE), Greece(EL),Spain(ES), France(FR), Croatia(HR), Italy(IT),Cyprus(CY), Latvia(LV), Lithuania(LT), Luxembourg(LU),Hungary(HU), Malta(MT), Netherlands(NL), Austria(AT), Poland(PL), Portugal(PT), Romania(RO), Slovenia(SI), Slovakia(SK), Finland(FI), Sweden(SE), Norway(NO), Iceland(IS),Liechtenstein(LI),Switzerland(CH), Turkey(TR),Northern Ireland (UK(NI)).

The WLAN function for this device is restricted to indoor use only when operating in the 5150 to 5250 MHz frequency range.

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.

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

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.

This equipment complies with radio frequency exposure limits set forth by the FCC for an uncontrolled environment.

This equipment should be installed and operated with a minimum distance of 20 cm between the device and the user or bystanders.

This device must not be co-located or operating in conjunction with any other antenna or transmitter.