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**INDUSTRY STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

MH/T 9010.2-2018

**Ground-air high-speed data link technical specifications based
on LET technology. Part 2: Airborne terminal specifications
(English Translation)**

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Foreword

MH/T 9010 "Ground-to-air high-speed data link technical specifications based on LTE technology" is divided into the following four parts.

- Part 1: General technical specifications;
- Part 2: Airborne terminal specifications;
- Part 3: Airborne antenna specifications;
- Part 4: Installation and acceptance requirements;

This part is part 2 of MH/T 9010.

This section was drafted in accordance with the rules given in GB/T 1.1-2009.

This part was proposed by the Aircraft Airworthiness Certification Department of the Civil Aviation Administration of China.

This part is under the jurisdiction of China Academy of Civil Aviation Science and Technology.

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1 Scope

This part of MH/T 9010 specifies the ground-to-air high-speed data link (hereinafter referred to as ATG system) airborne terminal of civil aviation based on LTE technology System architecture, basic requirements, functions, interfaces, safety and reliability, environmental and electromagnetic compatibility test requirements.

This part is applicable to the design, development, testing, installation and acceptance of the ATG system of civil transport aircraft (including business jets).

2 Normative references

The following documents are indispensable for the application of this document. For dated reference documents, only the dated version applies to this document.

For undated references, the latest version (including all amendments) applies to this

document.

3 Terms and definitions

The terms and definitions defined in MH/T 9010.1 apply to this document.

4 Abbreviations

The following abbreviations apply to this document.

5 Architecture

The ATG airborne terminal is the core component of the airborne ATG system. It is installed on the aircraft and is responsible for the processing, transmission and transfer of ATG ground-to-air network data.

Wait. The airborne data application system is connected to the ATG airborne terminal through a communication interface. The ATG airborne terminal is the interface between the airborne data application system and the ground.

Provide a transparent IP data transmission channel between the aircraft and the ground to complete high-speed data communication services such as data, images, and videos on the aircraft.

The airborne terminal is mainly composed of baseband subsystem, duplex filter subsystem, power amplifier subsystem, transceiver subsystem, and power supply subsystem.

6.1 Dimensions

It should meet the requirements of ARINC SPECIFICATION 600-16 Appendix 2 "Standard LRU Chassis Size", and should not exceed 6MCU.

6.2 Materials

Should meet RTCA/DO-160G requirements for flame retardancy.

6.3 Power supply

Should use 115 V, 400 Hz AC power supply or 28 V DC power supply.

6.4 Power consumption

The maximum power consumption should not exceed 160 W.

6.5 Heat dissipation

A thermal sensor should be placed in the thermally sensitive area to detect the temperature. When the temperature in the area exceeds the set threshold, the device should be actively alarmed or cut off power supply.

The installation of the airborne terminal should consider the influence of the surrounding airflow on its heat dissipation.

6.6 Quality

The quality of the whole machine should be in accordance with the requirements of ARINC SPECIFICATION 600-16. For 4MCU size equipment, the mass should not exceed 10 kg.

The mass of the 6MCU size device should not exceed 15 kg. (According to ATTACHMENT 4 MAXIMUM in ARINC SPECIFICATION 600-16 Requirements specified in LRU WEIGHT)

6.7 Grounding

Ground bonding resistance should meet the relevant requirements of RTCA/DO-313.

6.8 Nameplate

The nameplate information should include at least.

- The name, trademark or code of the manufacturer;
- The model, part number, serial number, and Mod number of the equipment.

7.1 Airborne data communication

It has the functions of data communication with other airborne communication equipment and maintenance management.

7.2 Accept management

The ATG airborne terminal should be able to accept management. The functions that accept the management include. turn off or open the ATG airborne terminal to query the ATG airborne terminal Work status, data flow, alarm information, etc.

7.3 Software upgrade

Should support software on-board and off-site upgrades.