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GA/T 528-2021

Technical specifications for satellite earth station of public security satellite communication network

公安卫星通信网卫星地球站技术规范

(English Translation)

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for Standardization Work Part 1: Structure and Drafting Rules of Standardization Documents" drafted.

This document replaces GA/T 528-2015 "Technical Specifications for Satellite Earth Stations of Public Security Satellite Communication Network", compared with GA/T 528-2015 the main technical changes are as follows.

--- Modified the description of the scope (see Chapter 1, Chapter 1 of the 2015 edition);

--- Modified some normative references (see Chapter 2, Chapter 2 of the 2015 edition);

--- Increase the corresponding reference documents (see Chapter 2);

--- Delete the terms and definitions of "V.35 technical system" and "IP technical system" (see 3.1.5 and 3.1.6 of the 2015 edition);

--- Added the terms and definitions of "satellite earth station" and "mobile satellite earth station" (see 3.1.2, 3.1.4);

---Added "KMC" "IP" "LTE" "IDS" "IPSec" "IPS" "PDT" "PGIS" "RTP" "SIP" "SNMP" "SSH" Abbreviations for "UART" "USART" "UDP" "VoIP" "VPN" (see 3.2);

--- Revised the technical system requirements of the public security satellite communication network (see 4.1, 4.1 of the 2015 edition);

--- Modified the description and structure diagram of the network structure (see 4.2.1, 4.2 of the 2015 edition);

--- Added the description of the control network (see 4.2.2);

--- Added the description of the business network (see 4.2.3);

--- Added the description of satellite channels (see 4.3);

--- Modified the earth station classification and system composition (see 4.4, 4.3 of the 2015 edition);

--- Added requirements for IP address planning (see 4.5);

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--- Modified the functional requirements (see 4.6, 4.4 of the 2015 edition);

--- Modified the performance requirements (see 4.7, 4.5 of the 2015 edition);

--- Deleted the V.35 technical system fixed earth station configuration requirements (see 5.1.1 of the 2015 edition);

--- Delete the configuration requirements of the V.35 technical system mobile earth station (see 5.2.1 of the 2015 edition);

--- Modified fixed earth station configuration and environmental requirements (see 5.1, 5.1 of the 2015 edition);

--- Modified the configuration requirements for on-board, ship-borne and transportable earth stations (see 5.2.1, 5.2.1 of the 2015 edition);

--- Added airborne earth station configuration requirements (see 5.2.2, 5.2.2 of the 2015 edition);

--- Revised the requirements for satellite antennas of mobile earth stations (see 6.1.2, 6.1.2 of the 2015 edition);

--- Modified the requirements for baseband equipment (see 6.3, 6.3 of the 2015 edition);

--- Modified the requirements of the encryption machine (see 6.4, 6.4.5.7 of the 2015 edition);

--- Increased the requirements for access equipment (see 6.5);

--- Modified the requirements for terminal equipment (see 6.6, 6.4 of the 2015 edition);

--- Increased safety protection requirements (see Chapter 7);

--- Revised the requirements for the vehicle platform (see 8.1, 7.1 of the 2015 edition);

--- Revised the requirements for shipborne platforms (see 8.2, 7.2 of the 2015 edition);

--- Increased the requirements for airborne platforms (see 8.3);

--- Added satellite network management system, simplified format IP protocol, communication encryption (see Appendix A, Appendix B, Appendix C);

--- Added references (see References).

1 Scope

This document specifies the overall requirements, system configuration and environmental requirements, main equipment performance requirements, Safety protection requirements, delivery platform requirements.

This document is applicable to the new construction, upgrade and reconstruction of

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Ku-band public security satellite communication network satellite earth stations.

2 Normative references

The contents of the following documents constitute essential provisions of this document through normative references in the text. Among them, dated citations documents, only the version corresponding to that date applies to this document; for undated references, the latest edition (including all amendments) applies to this document.

GB 1589 Motor Vehicles, Trailers and Motor Trains Outline Dimensions, Axle Loads and Quality Limits GB 4785 Installation Regulations for Exterior Lighting and Light Signaling Devices of Automobiles and Trailers GB 7258 Motor Vehicle Operation Safety Technical Conditions GB 12676 Technical Requirements and Test Methods for Braking Systems of Commercial Vehicles and Trailers GB/T 13594 Motor Vehicle and Trailer Anti-lock Braking Performance and Test Methods GB 13615 Earth Station Electromagnetic Environmental Protection Requirements GB 14050 System Grounding Type and Safety Technical Requirements GB/T 25070 Information Security Technology Network Security Level Protection Security Design Technical Requirements GB 50174 Data Center Design Specification GJB4.8 Environmental test of ship electronic equipment shock test GJB13A-1997 Ship Electrical Code GJB150.9A Laboratory Environmental Test Methods for Military Equipment Part 9: Damp heat test GJB150.10A Laboratory Environmental Test Methods for Military Equipment Part 10: Mold Test GJB150.11A Laboratory Environmental Test Methods for Military Equipment Part 11: Salt Spray Test GJB150.16A-2009 Laboratory Environmental Test Methods for Military Equipment Part 16: Vibration Test GJB150.23A-2009 Laboratory Environmental Test Methods for Military Equipment Part 23: Tilt and Swing Test GJB151A Military Equipment and Subsystem Electromagnetic Emission and Sensitivity Requirements GJB151B Military Equipment and Subsystem Electromagnetic Emission and Sensitivity Requirements and Measurements GJB203 Technical conditions for marine intermediate frequency generators GJB181B Aircraft Power Supply Characteristics GJB367A General Specification for Military Communication Equipment GJB1060.2 Ship Environmental Conditions Requirements Climatic Environment Implementation of GJB1210 Grounding, Bonding and Shielding Design GJB1777-1993 General Specification for Military Special Vehicles HJB34A Ship Electromagnetic Compatibility Requirements GA/T 1056 General Technical Specification for Police Digital Trunking (PDT) Communication System GA/T 1466.1 Smartphone-type mobile police terminals - Part 1: Technical requirements GY/T 165 TV center broadcast control system digital broadcast channel technical indicators and measurement methods

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