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INDUSTRY STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GA/T 1093-2023

Replacing GA/T 1093-2013

Security protection - Face recognition applications - Technical requirements for face recognition for access control

安全防范 人脸识别应用 出入口控制人脸识别技术要求

(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 for standardization documents" Drafting.

This document replaces GA/T 1093-2013 "Technical Requirements for Face Recognition Systems for Access Control" and is consistent with GA/T 1093-2013.

In addition to structural adjustments and editorial changes, the main technical changes are as follows.

a) The scope has been changed (see Chapter 1, Chapter 1 of the 2013 edition).

b) Added normative references to GB/T 41786-2022 (see Chapter 3), GB/T 37078-2018 (see Chapter 3, 4.1.1, 5.4.2, 6.4.2, 6.9, 9.2.4.2, 9.3.4.2, B.1, B.2.5), GA/T 1739-2020 (see Chapter 3, 6.9, 9.3.9), GB/T 35678-2017 (see 5.6.1, 9.2.6.1, C.2, C.3), GB/T 41987-2022 (see 9.2.4.2, 9.3.4.1, 9.3.4.2), GB/T 15211-2013 (see B.1, B.2.4).

c) The term recognition accuracy rate was deleted (see 3.2 of the 2013 edition); the relevant terms in GB/T 37078-2018 were cited (see 3.1.1, 3.1.2); added the terms access control face recognition system, face detection, data subject, face-related data, and site Image, face image, response time (see 3.1.3 to 3.1.9); abbreviations added (see 3.2).

d) Added system composition and deleted system overview (see Chapter 4, Chapter 4 of the 2013 edition).

e) The functional requirements (see Chapter 5, 5.1 of the 2013 edition) and their test methods (see Chapter 9, 6.2 of the 2013 edition) have been changed.

The collaborative input function has been changed (see 5.8, 5.1.2 of the 2013 edition); the face recognition function has been changed (see 5.5, 5.1.3); deleted the functions of face collection, personnel management, log management, etc. (see 5.1.1, 5.1.4, 5.1.5 of the 2013 edition); added Explicit notification/consent, recognition status switching, face detection, prosthetic presentation attack detection, face registration, management functions, additional functions Energy and other contents (see 5.1~5.4, 5.6, 5.7, 5.9).

f) The performance requirements (see Chapter 6, 5.2 of the 2013 edition) and their test methods (see 9.3, 6.3 of the 2013 edition) have been changed. Added Image acquisition performance, distance and angle, environmental illumination adaptability, anti-prosthesis attack failure rate, storage capacity and other performance (see 6.1~6.5); changed the registration failure rate (see 6.6, 5.2.1 of the 2013 edition); increased the recognition performance (see 6.7); changed the level Average response time (see 6.8, 5.2.3 of the 2013 edition).

g) The safety, electromagnetic compatibility and environmental adaptability requirements

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have been changed (see 6.9, 5.3 of the 2013 edition).

h) Added safety requirements (see Chapter 7).

i) Added labeling requirements (see Chapter 8).

j) Added the normative appendix temporary personnel registration unit requirements (see Appendix A).

k) Added the normative appendix equipment identification (see Appendix B).

l) Added the normative appendix face test database requirements (see Appendix C).

m) Added the normative appendix false acceptance rate and false rejection rate test methods (see Appendix D).

1 Scope

This document specifies the system composition, functional requirements, performance requirements, installation requirements, and other aspects of the face recognition system for access control based on face recognition technology.

Full requirements and markings, describing the test methods.

This document is applicable to entrance and exit control systems, building intercom systems and other entrance and exit control products that use face recognition as reading control, as well as Design, production and inspection of face recognition modules.

2 Normative references

The contents of the following documents constitute the essential clauses of this document through normative references in this document.

For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies to this document.

GB/T 15211-2013 Environmental adaptability requirements and test methods for security alarm equipment GB/T 35678-2017 Technical requirements for images used in public security face recognition applications GB/T 37078-2018 Technical requirements for access control systems GB/T 41786-2022 Terminology of public security biometric identification GB/T 41987-2022 Test method for preventing fake body presentation attacks in public security face recognition applications GA/T 1739-2020 Access control system controller

3.1 Terms and Definitions

The terms and definitions defined in GB/T 37078-2018, GB/T 41786-2022 and GA/T 1739-2020 and the following terms and definitions apply this document.

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