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# INDUSTRY STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

# GA/T 833-2016

Replacing GA/T 833-2009

## Technical specifications for automatic recognition technology of motor vehicle license plate images

机动车号牌图像自动识别技术规范

**(English Translation)**

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## Foreword

This standard is drafted in accordance with the rules given in GB/T 1.1-2009.

This standard replaces GA/T 833-2009 "Technical specification for automatic identification of motor vehicle license plate images".

Compared with GA/T 833-2009, the main technical changes are as follows.

- modified the "scope" (see Chapter 1, Chapter 1 of the 2009 edition);

- the term "sign structure" was deleted (see 3.1 of the 2009 edition);

- the term "recognition result" was deleted (see 3.2 of the edition for 2009);

- the terms "recognition time" have been modified (see 3.1, 3.3 of 2009);

- the term "recognition accuracy" has been added (see 3.2);

- the term "recognition of the credibility of the results" (see 3.3);

- the removal of the "sign structure" requirement (see 4.1 of 2009);

--- Added "image requirements" (see 4.1);

--- modified the "image format" requirements (see 4.1.1, 2009 version of 4.5);

--- modified the "plate image size" requirements (see 4.1.1.4, 2009 version 4.4);

--- Added "software requirements" (see 4.2);

--- modified the "identification time" requirement (see 4.2.2.1, 2009 version 4.8);

- modified the "sign" character (see 4.2.2.3, 4.2 of 2009);



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--- modified the "plate color" requirements (see 4.2.2.4, 2009 version 4.3);

--- modified the "plate recognition accuracy rate" requirements (see 4.2.2.5, 2009 version of the 4.7);

--- Added "extended identification" requirements (see 4.2.3);

- the removal of the "identification result" requirement (see 4.6 of 2009);

- the deletion of the "result optimization" requirement (see 4.9 of 2009);

- increased the requirements of the "test method" (see Chapter 5);

- Removed the "interface function" requirement (see Chapter 5 of the 2009 edition);

--- Added the requirements of Appendix A (see Appendix A);

--- modified the "information input and output interface format" requirements (see Appendix B, 2009 edition of Chapter 6).

This standard is proposed by the Traffic Management Science Research Institute of the Ministry of Public Security.

This standard by the Ministry of Public Security Road Traffic Management Standardization Technical Committee.

The drafting unit. the Ministry of Public Security Traffic Management Science Institute, the State Road Traffic Safety Product Quality Supervision and Inspection Center.

## 1 Scope

This standard specifies the technical requirements and test methods for the automatic identification software of motor vehicle license plate image.

This standard is applicable to the design, development and testing of automatic identification software for motor vehicle license plate image.

## 2 Normative reference documents

The following documents are indispensable for the application of this document. For dated references, only the dated edition applies to this article Pieces. For undated references, the latest edition (including all modifications) applies to this document.

License plate of the People 's Republic of China GA 802 Terms and definitions of motor vehicles



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## 3 Terms and definitions

The following terms and definitions apply to this document.

Recognition time

The automatic identification software reads the motor vehicle image to the time required to give the recognition result.

Recognition accuracy the feature information identifies the correct number of pictures and the percentage of the total number of active pictures.

Recognition of the results of reliability reliabilityofrecognitionresult the degree of similarity of the recognition result to the standard is expressed as a percentage.

### 4.1.1 Image format

The vehicle image format for file recognition includes.

a) JPG;

b) BMP;

c) TIF;

d) PNG.

### 4.1.2 Image resolution

The image resolution used for recognition should be not less than 1600 x 1200 or 1920 x 1080 pixels.



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