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

GA/T 1049.2-2024

Replacing GA/T 1049.2-2013

**Communication protocol for integrated traffic command
platform for public security - Part 2: Traffic signal control
system**

(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 is part 2 of GA/T 1049 "Communication Protocol for Public Security Traffic Integrated Command Platform".

Lower part.

- Part 1: General;
- Part 2: Traffic signal control systems;
- Part 3: Traffic video surveillance system;
- Part 4: Traffic flow information collection system;
- Part 5: Traffic violation monitoring and recording system;

- Part 6: Traffic information release system;
- Part 7: Police vehicles and single police positioning systems;
- Part 8: Traffic facility management system;
- Part 9: Traffic incident collection system;
- Part 10: Motor vehicle detection and control system;
- Part 11: Ministry, province and city three-level command platform.

This document replaces GA/T 1049.2-2013 "Communication Protocol for Public Security Traffic Integrated Command Platform Part 2: Traffic Signal Control System Compared with GA/T 1049.2-2013, in addition to structural adjustments and editorial changes, the main technical changes are as follows.

- a) Deleted the terms and definitions of "traffic signal control system", "sub-area", "area", "phase", "stage", "cycle" and "equivalent car" (See 3.1, 3.3~3.8 of the 2013 edition);
- b) Changed the protocol version number in the general requirements (see 4.1.2, 4.2.1 of the 2013 edition);
- c) The logical relationship structure has been changed (see Figure 1, Figure 1 of the 2013 edition);
- d) Added line parameters (see 5.1.5);
- e) The sub-area parameters have been changed (see 5.1.6, 5.1.4 of the 2013 edition);
- f) The intersection parameters have been changed (see 5.1.7, 5.1.5 of the 2013 edition);
- g) The signal parameters have been changed (see 5.1.8, 5.1.6 of the 2013 edition);
- h) The control import direction of the signal light group parameters has been changed (see 5.1.9, 5.1.7 of the 2013 edition);
- i) The detector parameters have been changed (see 5.1.10, 5.1.8 of the 2013 edition);
- j) Lane parameters have been changed (see 5.1.11, 5.1.9 of the 2013 edition);
- k) Added pedestrian crossing parameters and signal group parameters (see 5.1.12 and 5.1.13);
- l) The phase parameters have been changed (see 5.1.14, 5.1.11 of the 2013 edition);
- m) The timing scheme parameters have been changed (see 5.1.15, 5.1.12 of the 2013 edition);
- n) Added daily planning parameters and scheduling parameters (see 5.1.16 and 5.1.17);
- o) The system status has been changed (see 5.2.1, 5.2.1 of the 2013 edition);

- p) Deleted the regional status (see 5.2.2 of the 2013 edition);
- q) The intersection control scheme has been changed (see 5.2.4, 5.2.5 of the 2013 edition);
- r) The intersection phase has been changed (see 5.2.6, 5.2.7 of the 2013 edition);
- s) Changed the light color status of the intersection signal group (see 5.2.7, 5.2.8 of the 2013 edition);
- t) The intersection control scheme has been deleted (see 5.2.9 of the 2013 edition);
- u) Added stage traffic flow data, variable guide lane status, trunk line control mode, trunk line section recommended speed, signal cabinet door status State (see 5.2.9~5.2.13);
- v) The specified control method scheme has been changed (see 5.3.2, 5.3.2 of the 2013 edition);
- w) Deleted the designated control plan (see 5.3.3 of the 2013 edition);
- x) Changed the locking of traffic flow direction and added locking types (see 5.3.3, 5.3.4 of the 2013 edition);
- y) Added the functions of issuing center plans, setting timing plan parameters, setting daily plan parameters, setting scheduling parameters, stage intervention, setting Function of changing the guide lane and retransmitting operation information (see 5.3.6~5.3.12);
- z) The description of signal group parameter elements has been changed (see B.1.11, B.1.9 of the 2013 edition);
- aa) The description of the stage number in the stage parameters has been changed (see Table B.13, Table B.16 of the 2013 edition);
- bb) The description of the elements of the intersection phase has been changed (see B.2.6, B.2.7 of the 2013 edition).

Introduction

The public security traffic integrated command platform is positioned at the upper layer of the business application system of the public security traffic command system. It needs to be connected with various business applications.

System communication, integration and calling of its functions to realize its own specific business functions. GA/T 1049 "Communication Protocol of Public Security Traffic Integrated Command Platform" the purpose of the proposal is to standardize the data communication between the public security traffic integrated command platform and various business application systems, and to support the platform to effectively Integration and coordination. Considering that the functions and data of each business application system are relatively independent, it is necessary to target each type of system characteristics under the overall framework.

Develop corresponding specific communication protocols.

GA/T 1049 is divided into 11 parts.

--- Part 1: General. Provides the architecture, general provisions, data packets, communication procedures, common operations and data objects of the communication protocol.

The purpose of this standard is to put forward technical requirements and standardize the common and common contents in the communication protocol.

--- Part 2: Traffic signal control system. Configuration parameters, operation information and control commands of traffic signal control system According to the objects and the operations they support, technical requirements are proposed, aiming to realize the business functions of traffic signal control on the platform.

--- Part 3: Traffic video surveillance system. Configuration parameters, operation information and control commands of the traffic video surveillance system According to the object, and the technical requirements for the operations it supports, the platform aims to realize real-time viewing, PTZ control, historical History playback and other functions.

--- Part 4: Traffic flow information collection system. Configuration parameters, collection data, control commands of the traffic flow information collection system the three types of data objects and the operations they support propose technical requirements, aiming to enable the platform to monitor the status of traffic flow detection equipment and collect Access to traffic flow data.

--- Part 5: Traffic violation monitoring and recording system. Configuration parameters, operation information, control commands, and other aspects of the traffic violation monitoring and recording system.

The three types of data objects and the operations they support are proposed to implement the operation and maintenance of traffic violation monitoring and recording equipment on the platform.

manage.

--- Part 6: Traffic information publishing system. Configuration parameters, operation information and control commands of the traffic information publishing system the technical requirements are put forward according to the objects and the operations they support, aiming to realize the release of traffic information with variable information signs as the main body on the platform.

Equipment operation and maintenance management and information release.

--- Part 7: Police vehicle and single police positioning system. Configuration parameters, operation information, control the three types of data objects and the technical requirements for the operations they support are proposed, aiming to realize the