

ICS 35.020
CCS A 13



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

GB/T 7408.2-2025

**Date and time - Representation for information interchange -
Part 2: Extensions
(English Translation)**

Issued on: October 31, 2025

Implemented on: October 31, 2025

Issued by: State Administration for Market Regulation

Table of Contents

Preface	
Introduction	
1 Scope	
2 Normative References	
3 Terms, Definitions, Symbols, and Abbreviations	
4 Extension of time-scaled components and units	
5 Grouping time scale unit	
6 Set Representation	
7 Explicit representation of dates and times	
8 Date and Time Expression Qualification	
9 Unspecified number	
10 Extended Time Interval Representation	
11 Explicit forms of duration and extensions	
12 Date and Time Selection	
13 Cyclic time intervals with repetition rules	
14 Date and Time Calculations	
15 Configuration Files	
Appendix A (Informative) Configuration File. Extended Date/Time Format	
Appendix B (Informative) Interaction between Qualifying Time Intervals and Optional Sections	
Appendix C (Informative) Compatibility of this document with the duplication rule of the Internet Engineering Task Force (IETF) Memorandum of Understanding (IETF RFC 5545)	
Appendix D (Informative) Date and Time Formula Evaluation and Duration Elements	
References	

Foreword

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

Drafting.

This document is Part 2 of GB/T 7408, "Representation for Interchange of Date and Time Information". GB/T 7408 has been published as follows.

part.

---Part 1: Fundamental Principles;

---Part 2: Extension.

This document is equivalent to ISO 8601-2:2019 "Representations for the Interchange of Date and Time Information - Part 2: Extensions".

The following minimal editorial changes have been made to this document.

---Incorporates amendments to ISO 8601-2:2019/AMd1.2025; the relevant clauses are indicated by vertical margins.

The double lines (||) are marked;

---The reference clause "5.4.3" in the definition of the time-scale component symbol "intexpr" in 3.2.2 is corrected to "5.5" (see 3.2.2);

---The reference clause "5.4.2" in the definition of the composite component symbol "positiveDuration" in 3.2.3 is corrected to "5.5.2" (see 3.2.3);

---The reference "4.3.2" to "implicit form of the century" in 4.4.1.8 is corrected to "4.3.12" (see 4.4.1.8);

---In section 4.8.2b), "the implicit form of the advanced sub-year grouping range is [21] to [41]" is corrected to "[25] to [41]" (see 4.8.2);

---In Example 9 of section 6.3, the definition of ".1983-12-31" as "December 31, 1983" is corrected to "December 31, 1983 or..." "Before" (see 6.3);

--- Correct the example "2018Y1M15D/2M10D" in Example 2 of 7.14.2 to "2018Y1M15D/1M10D" (see 7.14.2);

--- Correct the example "Z5H0M" in example 7.14.3 to "Z5Y0M" (see 7.14.3);

---In Example 2 of 8.3.5, the definition of "11? D" as "the 11th calendar week" is corrected to "the 11th calendar day" (see 8.3.5);

---The explanation of "?..2004-? 06-11" in Example 2 of section 8.4.5, which was "the calendar year and calendar month are approximate values", is corrected to "the calendar year and calendar month are approximate values".

The definition of "2004-11" in Example 5, which states "the year and day are known; the month is approximate and uncertain," should be corrected to.

"The calendar year and calendar day are known; the calendar month is approximate and uncertain" (see 8.4.5);

--- Correct "apply '/P9D'" in Example 3 of 12.10 to "apply '/P10D'" (see 12.10);

---Correct the result "'P3Y15M3DT-10M'" in Example 6 of 14.2 to "'P-1Y5M3DT-10M'" (see 14.2);

---The statement in Example 4 of 14.7.3, "The upconversion overflow of the clock component '90M' can be represented as '1M30M'", is corrected to "Clock".

The upward conversion overflow energy of component '90M' is expressed as '1H30M' (see 14.7.3);

---The "Apply carry-over to the component overflowing from the upconversion in Appendix D.4.2 Example 1.'2023Y6M31D';" is obtained from this.

The notation '2023Y6M31D' is corrected to 'Apply the carryover to the component overflowing from the upward conversion. '2023Y6M1D';'.

The resulting representation is '2023Y6M1D'; in Example 3, the result of expressing 'P1Y10M3D-P2Y5MT10M' is 'P3Y15M3DT-10M' should be corrected to 'P1Y10M3D-P2Y5MT10M'. The result of expressing 'P1Y10M3D-P2Y5MT10M' is 'P-1Y5M3DT-'.

10M' (see D.4.2).

Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents.

This document was proposed and is under the jurisdiction of the National Electronic Business Standardization Technical Committee (SAC/TC83).

Introduction

GB/T 7408 aims to provide a standard representation of dates and times for information exchange, in order to minimize the risk of misunderstanding and confusion.

GB/T 7408 consists of two parts.

---Part 1: Basic Principles. The purpose is to define the Gregorian calendar dates and times based on the 24-hour system, and their combinations.

representation.

---Part 2: Extensions. The purpose is to define alternative representations of Gregorian calendar dates and times based on the 24-hour system.

GB/T 7408 (all parts) corresponds one-to-one with ISO 8601 (all parts) to ensure that the date and time representation is consistent with international standards.

Alignment.

Date and Time Information Interchange Representation Part 2: Extension

1 Scope

This document specifies alternative representations of Gregorian calendar dates and times based on the 24-hour system, and is a variation of the tables defined in ISO 8601-1.

An extension of the symbol.

This document applies to the representation of dates and times involved in information exchange, and also to times based on Coordinated Universal Time (UTC).

Representation of time shift.

These extensions include.

---Approximate date, indefinite date, or partial date not specified;

---Extension of time interval;

---The division of a year;

---Setting and selecting calendar dates;

---Group time scale unit;

---The repeating rule of the loop time interval;

---Date and time calculations.

This document does not apply to non-Gregorian calendar date formats or non-24-hour time formats. This document does not provide date and time representation methods.

Character encoding.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included.

For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies.

This document.

GB/T 7408.1-2023 Representation for the Interchange of Date and Time Information - Part 1: Fundamental Principles (ISO 8601-1:2019) IDT) ISO 8601-1 Representation for the Interchange of Date and Time Information - Part 1: Fundamental Principles Note. GB/T 7408.1-2023 Representation for the Interchange of Date and Time Information - Part 1: Fundamental Principles (ISO 8601-1:2019, IDT)