GETTING STARTED

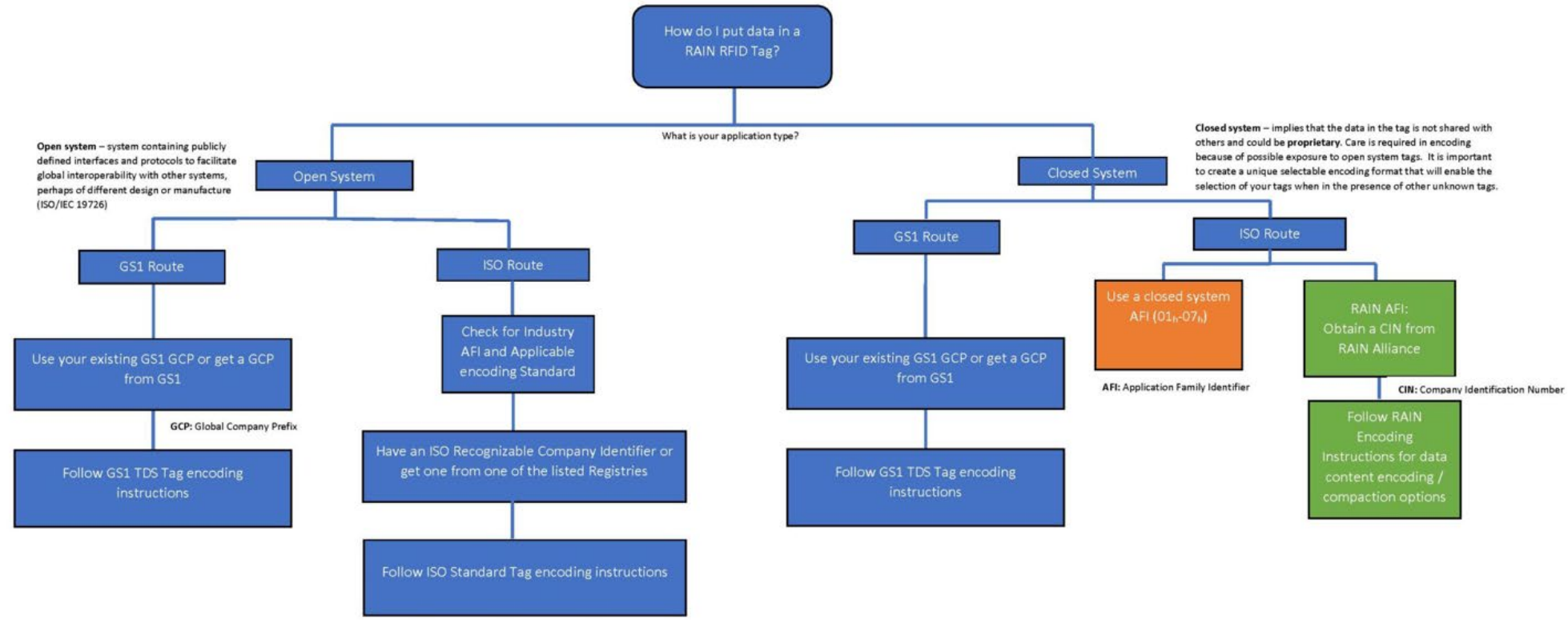
1. How to Choose a Standardized Numbering System

Choosing the right numbering system for RAIN RFID tag data is one of the most important aspects of any deployment. Consistent with the decision tree below, the RAIN Alliance recommends this 3-step process for selecting a tag numbering system:

1. **If there's an applicable GS1 standard for your application space – follow it.**
    - GS1 is active in many industries adopting RAIN RFID—including retail, healthcare, logistics, and food.
    - See here for more on GS1 tag data standards: https://www.gs1.org/standards/tds

2. **If GS1 is not active in your application space, look for ISO-based industry specific organizations for tag data standards**
    - Examples of organizations with ISO numbering systems include IATA for aviation, ATA for aerospace manufacturers, VDA for German automotive, AIAG for North American automotive, MIL-STD 129 for U.S. Department of Defense, and ISO/IEC 20248 for secure digital signatures and vehicle identification.
    - For a complete listing of ISO numbering system options see: https://www.aimglobal.org/uploads/1/2/4/5/124501539/iso-iec_15961-2_data_constructs_register_2021-09-22.pdf

3. **For *anything else*, including asset tracking, closed-loop logistics, or any use case that isn't covered by options #1 and #2, use the RAIN Alliance ISO numbering system.**
    - This numbering system is intended for closed systems, defined by ISO/IEC 19762-1 as an "application which is intended for use by a closed group of users" and "a closed group of users is typically within a single organisation or subject to a specific agreement."
    - This numbering system allows for maximum flexibility for diverse RAIN RFID use cases, while ensuring compatibility with existing GS1 encoding standards.
    - See here for more info: https://rainrfid.org/wp-content/uploads/2022/05/RAIN-Alliance-Tag-Encoding-Guideline.pdf



Updated June 2024

2. Registering for a RAIN Alliance Company Identification Number

The first step in implementing the RAIN ISO numbering system is registering for a Company Identification Number (CIN) with the RAIN Alliance. The RAIN Alliance is a CIN issuing agency per ISO/IEC 15459.

4 lengths of CINs are available, to cover deployments of a few hundred tags to hundreds of millions.

CIN Length	Recommended deployment size
2 digits / 8 bits	≥ 1,000,000,000 tags/year
4 digits / 16 bits	≥ 10,000,000 tags/year
6 digits / 24 bits	≥ 100,000 tags/year
8 digits / 32 bits	≥ 1,000 tags/year

Select the CIN length appropriate for your deployment size. Note that a single company or group of companies may therefore have more than one CIN.

- Apply for a CIN
- CIN Registry
- RAIN Alliance Tag Encoding Guideline

The RAIN Alliance will provide the issued CIN in a few different formats: hexadecimal, decimal, and Extensible Bit Vector (EBV-8) hexadecimal. Most encoding software works in hexadecimal, while decimal is the ISO unit. The EBV-8 format allows for variable length data up to 32 bits, and ensures uniqueness of tag data for all CIN lengths. If you're unfamiliar with EBV-8 and the conversion between decimal and hexadecimal, there are additional details in the tag encoding guidelines and the encoder/decoder tool.

Price

There are two pricing options (annual and perpetual) for all CIN types:

Class 4 (8 digit)
Pricing Options

- *$250 fee at the time of submission plus $250 annually thereafter, falling due on the anniversary of allocation, OR*
- *$1,000 perpetual fee at the time of submission*

Class 3 (6 digit)
Pricing Options

- *$500 fee at the time of submission plus $500 annually thereafter, falling due on the anniversary of allocation, OR*
- *$2,000 perpetual fee at the time of submission*

Class 2 (4 digit)
Pricing Options

- *$750 fee at the time of submission plus $750 annually thereafter, falling due on the anniversary of allocation, OR*
- *$3,000 perpetual fee at the time of submission*

Class 1 (2 digit)
Pricing Options

- *$1000 fee at the time of submission, and $1000 annually thereafter, falling due on the anniversary of allocation, OR*
- *$4000 perpetual fee at the time of submission*

In all cases, someone who initially opts to pay an annual fee may switch to a perpetual license at any time by paying the relevant perpetual license fee for the Class. No discount will be offered in respect of any previous annual payments made.

Anyone who already has a CIN as of the date of implementing these changes will not have any change to the pricing that was agreed at the time when they received their CIN (except that they will have an option to purchase a perpetual license at 4* their annual fee).

Payment may be made by credit card or by invoice. The CIN number will not be issued until payment is received.

More Information

- GS1 RFID
  - https://www.gs1.org/standards/rfid
- List of 8 bit AFI Assignments
  - https://www.aimglobal.org/uploads/1/2/4/5/124501539/iso-iec_15961-2_data_constructs_register_2021-09-22.pdf
- RAIN ISO+CIN Standard:
  - https://rainrfid.org/cin/
  - https://rainrfid.org/technology/rain-alliance-iso-numbering-system
- RAIN Relevant Standards List
  - https://rainrfid.org/wp-content/uploads/2022/05/RAIN-RFID_TWG_RAIN_RFID_Relevant_Standards_FINAL_20220503-v1.3.pdf