

WR #	GSCN Name	Effective Date
WR 25-062	Multiple Data Carrier management (section 4.15)	Oct 2025

Associated Work Request (WR) Number:

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Background:

- WR 24-363 clarifies the use of EPC/RFID as an additional data carrier in many Application Standards described in section 2 of GenSpecs. Since EPC/RFID requires the use of instance level serialized identifiers, GSCN 24-363 makes clear that:
the GS1 identifier encoded in both EPC/RFID tag and accompanied barcode SHALL be the same (e.g., same GTIN value)
when the accompanied barcode encodes an instance level identifier, the identifier itself or both the identifier and serial component encoded in the EPC/RFID tag and accompanied barcode SHALL be the same (e.g., same GTIN and same Serial Number values)
- WR 25-061 introduces the use of QR Code with GS1 Digital Link URI and Data Matrix with a GS1 Digital Link URI as optional additional data carriers in many Application Standards described in section 2 of GenSpecs.
- Section 4.15.1 of GenSpecs provides requirements and guidance when multiple barcodes are attached/printed on a single object. With the introduction of multiple optional additional data carriers in Application Standards described in section 2, the section 4.15.1 needs to reflect these changes and provide consistent wording. Making section 4.15.1 more generic in regards the data carrier (not only barcodes) will simplify any future addition of optional additional data carriers.
- The new section 4.15.1 could also avoid duplicate wording in each individual application standard that propose optional additional data carrier choices.

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Figure 4-~~194-194-194-194-194-194-4-194-194-194-19~~ Short forms by date type

AIDC techniques are suggested over any manual process to ensure accurate and timely stock rotation. Every effort should be made to adopt an automated process to increase productivity and date management.

4.15 Multiple ~~barcode data carrier~~ management practices ~~for trade items~~ (cross-sector)

When additional ~~barcodes data carriers~~ are introduced into an existing scanning environment or business application, all application standard conformant ~~barcodes data carriers~~ SHALL remain as choices. This section provides a set of management practices intended to permit the use of multiple ~~barcodes data carriers~~ on the same ~~trade item entity~~. ~~Among these multiple data carriers, at least one SHALL be from the mandatory data carrier choices in the appropriate application standard profile, see section 8.~~

4.15.1 Multiple ~~barcode data carrier~~ management practices ~~for trade items~~ (all sectors and applications)

1. ~~Current standards~~**Barcode symbology identifiers:** All ~~barcode~~ scanning systems SHALL deploy symbology identifiers (see section 5.1.3) and when using GS1 Application Identifiers, process them according to GS1 rules (see section 7.8).
2. **Use of GTIN-GS1 identifier:** All GS1 data carriers ~~that are used for the same application~~ on an ~~entity-single trade item~~ SHALL encode the same ~~GS1 identifier (e.g., same GTIN, same GRAI, etc.)~~.
3. **Use of GTIN-GS1 identifier attributes:** When the ~~GS1 identifier GTIN~~ and ~~GTIN-GS1 identifier~~ attributes occur in multiple data carriers on a single ~~trade item entity~~, the attribute values SHALL be the same.
4. **GTIN plus attribute(s) flag:** When applications require GTIN plus additional data to be captured in ~~a multiple barcode environment data carriers~~, modifications to systems SHOULD be made to automate this requirement.
5. **Adjacent placement of barcodes:**
 - ~~5-a.~~ When two barcodes can be used for the same application (i.e., point-of-sale, point of care, general distribution) they SHOULD be placed adjacent to each other while maintaining their Quiet Zones. The orientation (stack or row of barcodes) or sequence (which barcode is placed on the left, right, top, or bottom) SHALL be determined by the brand owner.
 - b. When adjacent placement on one surface of an ~~object entity~~ is not possible, the barcodes SHOULD be placed on an adjoining surface of the ~~object entity~~. This practice does not supersede any section 6 barcode placement rule (e.g., 8 mm (0.3 inch) free space between barcodes and panel edge).
 - c. ~~When there is more than one barcode with a GS1 identifier on an entity, it is essential that the scanning systems will ensure:~~
 - i. ~~The system SHALL only process one set of the desired data.~~
 - ~~a-ii. Scanning systems SHOULD only produce one acknowledgement (e.g., beep) when multiple barcodes are scanned from the same entity.~~
6. **Non-adjacent placement of barcodes:** When two barcodes are used for different applications (e.g., point-of-sale, extended packaging), they SHOULD be placed non-adjacent to one another.
7. **Obscure placement of barcodes:** When a barcode is used for production control purposes only (e.g., Data Matrix encoded with a non-GS1 syntax to match label to product), it SHOULD be made as obscure as possible or even obstructed on the trade item package.
8. **Use of GS1-128, ~~or~~ 2D barcode ~~or~~ EPC/RFID as supplemental barcode data carrier with EAN/UPC or ITF-14 as the main barcode:** In general retail and general distribution, where EAN/UPC or ITF-14 is used to encode the GTIN and where a GS1-128, ~~a or~~ 2D barcode ~~or~~



an EPC/RFID tag is used to encode GTIN attributes, the same GTIN SHALL be encoded in all GS1 barcodes data carriers.

9. **GS1-128 as supplemental barcode:** When an EAN/UPC or ITF-14 is used to encode GTIN and where GS1-128 is used to encode GTIN attributes, GS1-128 SHOULD encode GTIN and the GTIN attributes in a single barcode to ensure accurate data association.
10. **Use of 2D barcode as supplemental barcode with GS1-128 as main barcode:** In general distribution, where GS1-128 is used to encode GTIN-a GS1 identifier and attributes, these element strings at a minimum SHALL be encoded in the supplemental 2D barcode.

4.15.2 Use of EPC/RFID as supplemental data carrier (all sectors and applications)

An EPC/RFID data carrier can only encode globally unique instance level identifiers (see section 3.11 and the current version of the EPC Tag Data Standard). When EPC/RFID is used as an additional data carrier, particular attention must be paid to the identifier used.

- a. GTIN, AI (01): When EPC/RFID is used as in addition to a barcode that encodes a GTIN, the SGTIN EPC, corresponding to a compound key of AI (01) and AI (21), SHALL be used. When the associated barcode encodes AI (21), it SHALL encode the same, brand-owner assigned Serial Number used to encode the Serial Number component of the SGTIN EPC on the EPC/RFID tag, taking care not to change any characters and neither add nor remove any leading zeros.
- b. ITIP, AI (8006): When EPC/RFID is used in addition to a barcode that encodes AI (8006), the ITIP EPC, corresponding to a compound key of AI (8006) and AI (21), SHALL be used. When the associated barcode encodes AI (21), this SHALL encode the same, brand-owner assigned Serial Number used to encode the Serial Number component of the ITIP EPC on the EPC/RFID tag, taking care not to change any characters and neither add nor remove any leading zeros.
- c. GRAI, AI (8003): When EPC/RFID is used in addition to a barcode that encodes AI (8003), the GRAI EPC SHALL be serialized. When there is a business need, the associated barcode can also encode a serialized GRAI. In that case the value of the serialized GRAI in the EPC/RFID and associated barcode SHALL be the same.
- d. GLN, AI (414): When EPC/RFID is used in addition to a barcode that encodes AI (414), and when there is a business need, the associated barcode can also encode a GLN extension component (AI (254)). In that case, the value of AI (414) and AI (254) in the EPC/RFID tag and associated barcode SHALL be the same.
- e. GDTI, AI (253): When EPC/RFID is used in addition to a barcode that encodes AI (253), the GDTI EPC must be serialized. When there is a business need, the associated barcode can also encode a serialized GDTI. In that case the value of the serialized GDTI in the EPC/RFID and associated barcode SHALL be the same.

4.15.2.15.3 GS1 multiple barcode management practice for general retail

In addition to the requirements outlined in section 4.15.1, the following rules apply to the use of multiple barcodes for general retail.

1. **Migration to 2D barcodes:** A GS1 DataMatrix, QR Code (GS1 Digital Link URI) or Data Matrix (GS1 Digital Link URI), SHALL be used in addition to the EAN/UPC, or a GS1 DataBar retail POS family of barcodes, to ensure stakeholders that are not yet able to consistently scan 2D barcodes are not negatively impacted. Application Standard Profiles in section 8 provide information on conformance requirements for the transition period and future use of 2D barcodes at retail POS.

When there is more than one barcode with GTIN on trade items, it is essential that the POS systems will ensure:

- The system SHALL only process one set of the desired data in the final transaction.