

A GS1 QR code is not a Right-to-Repair code. DSRProtocol is the resolver that turns it into one.

A GS1 Digital Link identifies the product. Right-to-Repair needs functional access — manuals, diagnostics, spare parts and service history. DSR is the regulated resolver layer that turns a scan into a repair access gateway, and it is the upgrade path GS1 Sunrise 2027 makes mandatory across U.S. retail.



Sunrise 2027 ready · Right-to-Repair ready



Prepared for: Kroger

Kroger — Grocery traceability + Sunrise 2027

As one of the largest U.S. grocers, Kroger sits at the intersection of GS1 Sunrise 2027 2D checkout and FSMA 204 fresh-food traceability. A role-aware resolver gives Kroger owned-brand and its suppliers recall-ready lot traceability, repair/return access and audience-scoped views — all on the one GS1 Digital Link, on top of the GTINs Kroger already runs.

This edition is an independent assessment prepared for a conversation with Kroger; it implies no affiliation with or endorsement by Kroger and is based on public information.

A GS1 QR is an identifier. Right-to-Repair is functional access.

Anyone can mint a GS1 Digital Link QR — but a GS1 code carries only identity: a GTIN, a batch or lot, a serial and a few attributes. It does not carry disassembly steps, wiring diagrams, torque specifications, diagnostic codes, spare-parts catalogues or service history. Right-to-Repair laws require that functional content — and that requires a regulated resolver behind the code.

DSRProtocol is the resolver layer that turns a simple GS1 QR into a full repair access gateway — role-aware, lifecycle-aware and audit-ready.

GS1 gives you

- The number (GTIN)
- The syntax (GS1 Digital Link)
- Batch / lot & serial
- A basic resolver

DSRProtocol adds

- ✓ Role-aware routing (consumer ↔ technician)
- ✓ Repair manuals & safety instructions
- ✓ Diagnostics & fault codes
- ✓ Spare-parts catalogues
- ✓ Service & repair history
- ✓ Firmware update pathways
- ✓ Digital twin & lifecycle state
- ✓ Dual-compliance routing

[See the Sunrise 2027 brief](#)[See the Right-to-Repair brief](#)[Download as PDF](#)

The link is the standard. The repair gateway is the product.

The GS1 Digital Link is open and interoperable by design — that is its strength. So “anyone can make a GS1 QR” is both true and beside the point. The value was never the code on the box; it is the resolver behind it, the role-aware repair access it unlocks, and what happens across the ten-to-twenty-year service life of a product. DSR is that resolver.

Why GS1 Sunrise 2027 is a tailwind

Sunrise 2027 is not a law; it is a GS1 retail-infrastructure mandate for U.S. checkout to read 2D by the end of 2027. It moves the entire market onto the exact technology DSR already runs:

- ✓ **It makes GS1 Digital Link mandatory** — U.S. brands move from 1D UPC to 2D resolver-based identity, the upgrade DSR is built to deliver.
- ✓ **It makes resolvers standard retail infrastructure** — DSR is a full resolver with lifecycle routing and multi-audience segmentation, not a link shortener.
- ✓ **It unlocks Right-to-Repair** — every product gains a GS1 Digital Link QR; DSR turns that into role-aware repair access.
- ✓ **It supports FSMA 204** — the same code carries batch/lot identity, supply-chain visibility and traceability routing for food.

[Explore the DPP product](#)[Read the Continuity Guarantee](#)

Your buyers are already asking: Walmart, Kroger, Target, Costco

 **Target: 2D at U.S. checkout by the end of 2027**

GS1 Sunrise 2027 is the largest scanning change in U.S. retail history: by the end of 2027, checkouts read 2D (GS1 Digital Link QR and DataMatrix) alongside the legacy UPC. Major retailers are setting supplier expectations now — and every one of them turns the code on your pack into a doorway. DSR is the resolver behind that doorway.

Walmart

2D at checkout on the Sunrise 2027 path

Kroger

Grocery traceability aligned with FSMA 204

Target

Owned-brand DPP and recall readiness

Costco

Supplier 2D barcode expectations

[What retailers are asking for](#)[See the Sunrise 2027 brief](#)

One scan. Different access for every role.

The same GS1 QR resolves to different content depending on who scans it. An owner sees care and recycling; a technician sees schematics, torque specifications and fault codes; a regulator sees compliance and traceability; a recycler sees materials, safe disassembly and take-back — all role-aware, resolved at the edge.



Scan to try it on your own phone

ONE GS1 DIGITAL LINK · ONE SCAN

Aurora X900 — Dishwasher

WHO IS SCANNING?

Owner

Technician

Regulator

Recycler

CARE, WARRANTY & RECYCLING

- ✓ How to clean the filter safely
- ✓ Warranty status and registration
- ✓ Book a certified repairer nearby
- ✓ Return and recycling instructions

Illustrative demo — sample data, not a live device.

Open standard on top. Proprietary architecture underneath.

The GS1 Digital Link standard is open by design; the resolver transformation layer that turns identity into functional, role-aware access — combining zero-egress routing with hardware-level validation — is protected by our patent-pending IP. Competitors can print a QR; they cannot replicate the layer that turns a scan into a compliant repair gateway.

PATENT PENDING — UK APPLICATION GB2614583.9

A UK Intellectual Property Office application. Patent pending; priority documents are available to foreign offices via WIPO DAS.

Reasons a DSR code is not just a GS1 QR

1

Repair access, not just identity

A scan opens manuals, diagnostics, parts and service history — a GS1 code alone opens nothing.

2

Role-aware routing

Consumers see care and recycling; technicians see schematics, torque specifications and fault codes — from the same code.

3

The Sunrise 2027 upgrade path

The GS1 Digital Link you must adopt by 2027 is exactly what DSR already runs at scale.

4

FSMA 204 traceability

Batch and lot identity, supply-chain visibility and audience-scoped views — out of the box, not a consulting project.

5

Secure NFC when a QR is not enough

A QR can be copied; an NTAG 213/215/424 DNA tap cannot. DSR supports a hybrid QR + NFC identity.

6

Lower running cost

No per-scan egress bill at scale: a code read millions of times does not carry a per-read charge.

How a scan becomes repair access

One GS1 code, role-aware repair access — resolved, not hard-coded.



1

Scan

A technician or owner scans the product's GS1 Digital Link QR (or taps its NFC).



2

Resolve

DSR identifies the product, the user's role and the lifecycle state at the edge.



3

Route

The resolver routes to the right repair content for that role and model.



4

Repair access

Manuals, diagnostics, parts, service history and firmware pathways open.



A note for regulators and retail buyers

Right-to-Repair compliance requires functional access behind the identifier, not the identifier alone. DSR is the regulated resolver layer that turns a GS1 Digital Link into role-aware repair access — manuals, diagnostics, spare parts, service history and firmware pathways — while remaining ready for GS1 Sunrise 2027 2D checkout, FSMA 204 traceability, and secure NFC (NTAG 213/215/424 DNA) where a QR alone can be copied. Resolved with no personal data on the path (PII-free, zero-egress). Patent pending · GB2614583.9.

