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RIGHT TO REPAIR · GS1 SUNRISE 2027 (USA)

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: Costco

Costco — Supplier 2D barcode expectations

As Costco suppliers move to 2D barcodes, a resolver behind the GS1 Digital Link gives each supplier a role-aware passport — repair access, take-back and recall-ready lot traceability — activated on the identifiers they already carry, with no per-scan egress bill at warehouse-club scale.

This edition is an independent assessment prepared for a conversation with Costco; it implies no affiliation with or endorsement by Costco 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.

Bonus: repair information that doesn't rot

US Right-to-Repair asks you to keep repair information available — it does not dictate how you store it. We keep the link alive for the product's whole life, at no extra charge:



- ✓ **On your own domain.** The QR on the tool or appliance resolves to your domain, not ours — so the printed label keeps working even if you ever change platforms.
- ✓ **A portable, open record.** GS1 Digital Link + machine-readable JSON-LD, readable by any standard resolver — your repair data is never trapped.
- ✓ **An independent backup copy.** A static copy of each passport can be served from a separate backup location with no live database, backed by a funded Continuity Guarantee so links survive for the product's lifetime.

Not required by US Right-to-Repair law — a durability and trust bonus we include as standard.

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 in-perimeter 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, in-perimeter). Patent pending · GB2614583.9.