The Global Language of Business

GS1 US Sunrise 2027 Technical Resource Guide

Solution Provider Readiness

Compliance for 2D Barcodes at Point-of-Sale (POS) >

Summary: This site includes readiness criteria for POS scanners, verifiers, printers, and barcode creation as well as a sortable table of solution providers that have attested to their solutions readiness.

Key Points:

- **Readiness Criteria:** Details the technical requirements for POS scanners to handle 2D barcodes
- **Solution Provider Attestation:** Includes a table of hardware and devices by manufacturer with their attested readiness

Resources & Tools

GS1 Barcode Syntax Resource >

Summary: The GS1 Barcode Syntax Resource provides tools for implementing GS1 Standards in barcodes. It includes validation rules, syntax conversion, and updates for GS1 Application Identifiers, ensuring consistent and accurate barcode creation and processing.

Key Points:

- **Validation Rules:** Ensures data accuracy before encoding into barcodes
- **Syntax Conversion:** Facilitates conversion between different GS1® syntaxes
- **Regular Updates:** Keeps users aligned with the latest GS1 Standards

Direct Links To:

- Barcode Syntax Dictionary >
- Barcode Syntax Tests >
- Barcode Syntax Engine >
- Barcode Syntax Resource User Guide >

GS1 2D Barcodes in Retail Test Suite >

Summary: The 2D Barcodes in Retail test suite provides guidelines for testing the capability of retail systems to handle 2D barcodes. It includes instructions for printing and scanning barcodes, evaluating system readiness, and ensuring compliance with GS1 Standards for data accuracy and processing.

Key Points:

- **System Readiness:** Details how to assess and update systems to handle 2D barcodes
- **Barcode Testing:** Details the steps for printing and scanning test barcodes
- **GS1 Compliance:** Ensures data accuracy and adherence to GS1 Standards

GS1 Digital Link Barcode Generator >

Summary: The GS1 Digital Link Barcode Generator demonstrates how different GS1 syntaxes can be applied in various data carriers, including plain syntax, GS1 element string syntax, and GS1 Digital Link syntax. It provides examples using Data Matrix and QR symbols for demo purposes.

Key Points:

- **Syntax Demonstration:** Showcases plain, GS1 element string, and GS1 Digital Link syntaxes
- **Data Carriers:** Examples include Data Matrix and QR symbols
- **Demo Purpose:** Barcodes are for demonstration only and not for real-world product use

GS1 Application Identifier Browser >

Summary: The GS1 Application Identifiers (AIs) page provides a comprehensive and searchable list of numeric AIs used to encode specific data elements in barcodes. It includes descriptions and data titles for each AI, facilitating accurate and standardized data representation in supply chain and retail applications.

Key Points:

- **Searchable Comprehensive List:** Includes detailed descriptions and data titles for each AI

GS1 GitHub Repository >

Summary: The GS1 GitHub repository hosts various projects related to GS1 Standards, including tools and libraries for GS1 Digital Link, barcode engines, and syntax engines. It provides resources for developers to implement and test GS1 Standards in their applications.

Key Points:

- **GS1 Digital Link Tools:** Includes documentation and libraries for implementing GS1 Digital Link
- **Barcode Engines:** Includes tools for creating and validating GS1 barcodes
- **Syntax Engines:** Includes resources for understanding and applying GS1 syntax in different contexts

Quick Reference

Sunrise 2027—Quick Start Guide >

Summary: The GS1 US Sunrise 2027 initiative guides the transition from 1D to 2D barcodes at retail POS. It emphasizes improved inventory management, product authentication, and sustainability. The initiative includes a Barcode Capabilities Test Kit to help retailers and solution providers prepare for the 2027 deadline.

Key Points:

- **Transition Plan:** Includes detailed steps for migrating to 2D barcodes as well as technical specifications and best practices
- **Barcode Capabilities Test Kit:** Includes a tool for evaluating system readiness and identifying gaps in processing 2D barcodes
- **Industry Collaboration:** Emphasizes the need for coordination among retailers, manufacturers, and solution providers to ensure a smooth transition

QR Codes Powered by GS1—Best Practice >

Summary: The GS1 Digital Link Quick Start Guide explains how to upgrade traditional QR Codes to include GS1 Digital Link URIs, enabling both product identification and access to digital information. It covers best practices for creating, structuring, and redirecting these URIs to enhance consumer interaction and business processes.

Key Points:

- **Dual Functionality:** GS1 Digital Link URIs serve as both product identifiers and web links
- **Best Practices:** Includes recommendations for using brand domains, subdomains, and redirection to improve user experience
- **Business Support:** Includes guidelines for including additional data like expiration dates and batch numbers to support supply chain and retail processes

GS1 Digital Link—Quick Start Guide >

Summary: The GS1 Digital Link Quick Start Guide explains the structure and implementation of GS1 Digital Link URIs in QR Codes for non-healthcare products. It covers the dual offline and online functions, syntax basics, and the importance of redirection to ensure proper product identification and information access.

Key Points:

- **Dual Functionality:** GS1 Digital Link URIs serve as both product identifiers and web links
- **Syntax and Structure:** Includes a detailed explanation of GS1 Application Identifiers and their hierarchical order
- **Redirection:** Emphasizes the need for redirection from the GS1 Digital Link URI to appropriate web pages

GS1 Digital Link FAQ >

Summary: The GS1 Digital Link section of the GS1 GO Customer Service Portal provides detailed information on the syntax, benefits, and implementation of GS1 Digital Link URIs in QR codes and NFC tags. It emphasizes the importance of redirection and the ability to connect to multiple information sources.

Key Points:

- **Syntax and Benefits:** Includes an explanation of GS1 Digital Link syntax and its advantages
- **Redirection Importance:** Highlights the need for proper redirection in QR codes
- **Multiple Information Sources:** Includes the ability to connect a single QR code to various data points

Detailed Guidelines

GS1 2D Barcodes at Retail Point-of-Sale Implementation Guideline >

Summary: The GS1 2D Barcodes at Retail Point-of-Sale Implementation Guideline provides comprehensive guidance for transitioning from linear to 2D barcodes in retail. It covers barcode creation, printing, scanning, and data management, emphasizing the benefits of 2D barcodes for inventory management, consumer engagement, and regulatory compliance.

Key Points:

- **Barcode Transition:** Includes detailed steps for migrating from linear to 2D barcodes, including technical specifications and best practices
- **Data Management:** Includes guidelines for encoding additional data in 2D barcodes to enhance traceability, inventory control, and consumer information
- **Implementation Support:** Contains practical advice for retailers, manufacturers, and solution providers to help ensure a smooth transition and maximize the benefits of 2D barcodes

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