Multi-Function QR Codes: Dual-Functionality & Advanced Use Cases

Barcodes & More · https://www.codereadr.com/knowledgebase/multi-function-qr-codes/

Multi-Function QR Codes - Overview

Multi-function QR codes enable powerful, dual-purpose functionality, combining consumer engagement and enterprise-grade validation. In this article, we'll explore what dual-function QR codes are, their benefits, and how to set up multi-function QR codes using CodeREADr's advanced features.

What Are Dual-Function QR Codes?

Dual-function QR codes are space-efficient solutions that serve two purposes simultaneously:

1. Consumer Engagement: When scanned by a consumer barcode app, these codes redirect to a mobile-optimized web page.
2. Enterprise Validation: Scanned by an enterprise app (like CodeREADr), the embedded ID is captured and validated, creating a formal scan record with timestamps and location data.

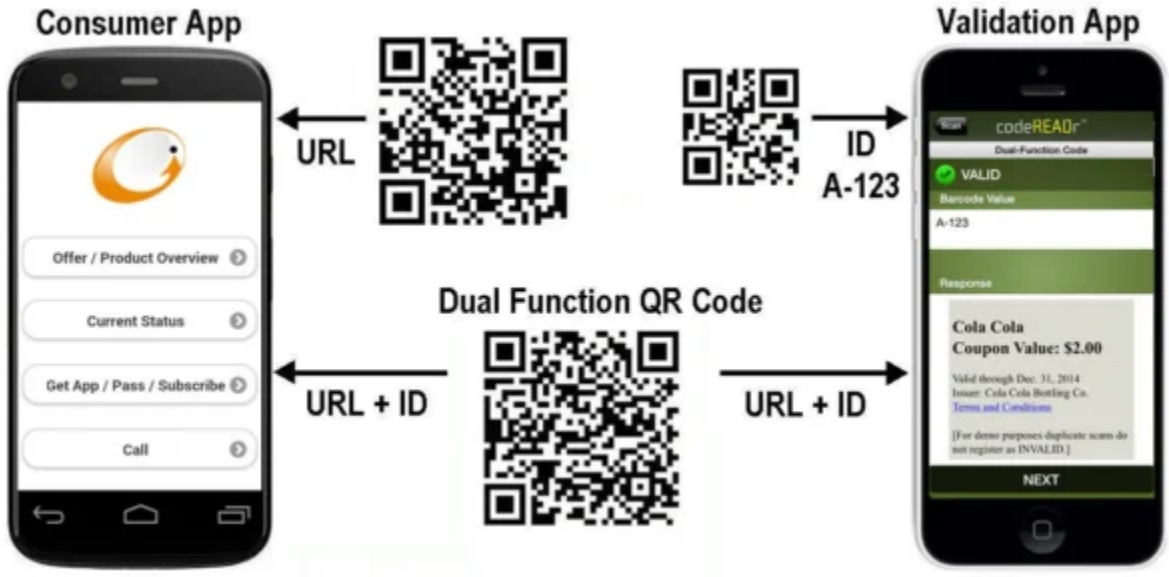
These codes combine a unique, variable ID with a URL. The URL opens a web page for consumer interactions, while the enterprise app uses the ID for operational tasks like tracking tickets, vouchers, or assets.

This technology is also compatible with NFC Tags, which provide additional security for applications like proof of presence.

Dual Function QR Codes Use Case Demonstration

- Consumer Scanning:
  - Use a standard barcode scanning app to scan a dual-function QR code.
  - The app will redirect you to a demo mobile web page.
- Enterprise Validation:
  - Download the CodeREADr app and log in with:
    - Username: temp
    - Password: demo
  - Scan the same QR code, and the app will validate the embedded ID (e.g., A-123).

Key Takeaway: A dual-function QR code combines the functionalities of a standard URL QR code and an ID-based QR code into a single, efficient solution.



What Are Multi-Function QR Codes?

Multi-function QR codes expand on the dual-function concept by embedding multiple IDs or URLs in a single code. These codes are designed for enterprise users rather than consumer engagement.

How They Work:

- The embedded IDs can be parsed based on the app user’s assigned task (or "Service").

- The app checks parsed IDs against a validation database hosted on CodeREADr or your own servers.
- The response to a scan indicates whether the ID is valid or invalid.



Real-World Examples of Multi-Function QR Codes

- Product Recalls:
  - A scanned barcode parses the product ID and serial number.
  - It validates the serial number against a recall database.
  - If valid, the product is flagged for recall.
- Grey Market Tracking:
  - A product’s ID and channel ID are parsed.
  - Validation determines if the product is sold outside its intended market channel.
- Space-Saving Validation:
  - Instead of multiple barcodes, a single QR code can embed all necessary IDs, reducing label size, cost, and scanning errors.

Setting Up Multi-Function QR Codes

To create multi-function QR codes, follow these steps:

1. Create a QR Code with Multiple IDs:
    - Embed the IDs in the code as a comma-separated string (no spaces).
        - Example: ID1,ID2,ID3,ID4,ID5

2. Configure CodeREADr for Parsing:
    - Use the 'Alter Scan Value' feature
    - Define a pattern for your QR code:
        - ^([\s\S]*?),([\s\S]*?),([\s\S]*?),([\s\S]*?),([\s\S]*)$
    - Specify replacement values for parsing:
        - $1, $2, $3, $4, and/or $5

3. Validate IDs:
    - Match parsed IDs against a database. If an ID is present, return a "Valid" response; otherwise, return "Invalid."

Why Use Multi-Function QR Codes?

- Efficiency: Combines multiple IDs in a single QR code, reducing label clutter.
- Accuracy: Minimizes scanning errors compared to using multiple barcodes.
- Cost Savings: Lowers printing costs by consolidating data into one code.
- Speed: Streamlines validation processes for faster operations.

By leveraging dual-function and multi-function QR codes, businesses can enhance both consumer experiences and operational efficiency. Whether you're managing assets, validating tickets, or tracking products, this technology offers a versatile and powerful solution.