

An Introduction to UR Codes

Binding Humans to Identity Data & Privileges



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THE COLLEGE OF
EMERGENCY PREPAREDNESS,
HOMELAND SECURITY
AND CYBERSECURITY

UNIVERSITY AT ALBANY
State University of New York

Fraudulent Documents Examples



Card-based Security Features Do Not Solve IDV Problems (in-person or shown remotely)





When e-Passports are altered the chip is disabled to prevent detection.

Standardized Barcodes (PDF417) Increase Accuracy

2D Barcode



Machine
Readable
Zone (MRZ)



But they do not biometrically bind the holder to the encoded PII



FaceTec is a Pioneer in Biometric Verification

3.5+ Billion 3D Liveness Checks Annually

Biometric OEM for State & Federal Governments



FaceTec has 115+ Distribution Partners in 55 Countries

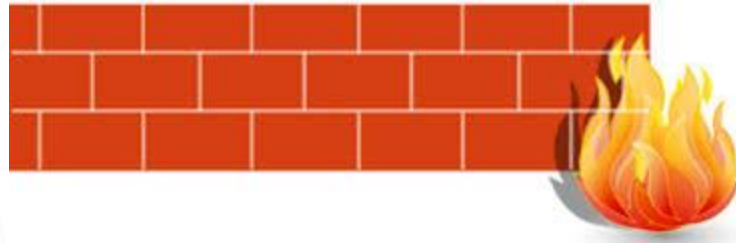


“UR Codes” in Universal QR Code Format

Cryptographically Signed Biometric Barcodes



72 Bytes of Face Data = zAAAD5fIALMkzIAABVlgAAC4SoAyqk0u4AG5AAAEj5ogAXKYHEFAF4AAVsgA/CFABIQoArOU



encode.urcodes.com

Add Info To UR[®]Code

414 x 532

Driver License:

Kevin Alan Tokay

1980-11-11

87654321

6' 0"

180

BLU

BMU

2023-01-01

2023-01-01

Generate UR[®]Code

encode.urcodes.com

facetec

UR[®]Code Generator

Download UR Code



UR Code - Specs & Contents

Typical UR[®] Code: 61x61 (v11)

Digital Signature = 85B

Encoded Face Data = 72B

URL = Average Length ~15B

Unique URID# = 11B

URL Protocol (https://) = 8B

Encoded Date = 5B

Encoder Version = 2B



Encodes Bytes = ~198

Characters Available for User PII = ~123

(Name, Address, Driver License #, Passport #, Email, etc.)

If >73 Characters of User PII is required, the UR[®]Code will expand to 61x61(v11) and store ~123 Characters of PII.



UR Codes – Verification flow



UR Code Scanned
by Codeholder
w/ Smart Device or
Webcam



Relying Party
Receives Data
of Codeholder w/
Digital Signature



Data Validated w/
Digital Sig & Public Key
of UR Issuing Authority



Codeholder Takes
Liveness-proven Selfie
for Relying Party



Face Data Match +
Digital Sig Validated =
PII Real & IDV Complete



Add a **UR Code** to an ID card, and any physical document or digital credential or app



For optimal real-world scanning, UR Codes should be printed at least:

$\frac{3}{4}$ " x $\frac{3}{4}$ " or 2cm x 2cm @ 300 DPI





Prove Legal Identity (Smartphone/Laptop/Kiosk)



- Selfie Matched to encoded Face Data
- Cryptographically signed
- Privacy-preserving 2-party check
- Face image can't be recovered
- Can open encoder or verifier's website
- *NEW Scan + Match App
- Free to encode & match forever

(attended/in-person use cases)





Scan + Match

FaceTec, Inc.

12+ Downloads Everyone 12+

Install < Share Add to wishlist

You don't have any devices



App support

About this app

Free Scanner for UR Codes (Special biometric barcodes) that can contain data from Driver Licenses, Passports, Credit Cards, and many other documents. This App allows you to Match the encoded face data to the UR Code to another face and provides a Face Match Level and validates the Digital Signature that proves the immutability of the personal info stored in the barcode.

For more information on UR Codes, their capabilities and for the ability to encode them visit <http://URCodes.com>

Updated on

Jan 3, 2025

Track

Data safety

Safety starts with understanding how developers collect and share your data. Data privacy and security practices may vary based on your use, region, and age. The developer provided this information and may update it over time.

< No data shared with third parties
UNUSABLE: Must have Anonymous device sharing

🛡️ No data collected





My UR Code

Alberto Lima - alberto@facetec.com

Owen McShane - owen@facetec.com

Trevor Chaplick - trevor@facetec.com



CODES
www.urcodes.com

