



# UNDERSTANDING CHECKPOINT TAG OPTIONS IN DIGITAL GUARD TOUR SYSTEMS

A digital guard tour system's accuracy and reliability depend on more than just the software—it starts with how checkpoints are marked and verified in the field. The checkpoint “tag” is the physical or visual marker a guard scans to confirm their presence at a specific location. Different tag types offer different benefits, costs, and durability profiles.

Here's a breakdown of the three most common checkpoint tag options—NFC tags, QR codes, and barcodes—along with when each is best suited for your operations.

## 1. NFC TAGS

**How They Work:** Near Field Communication (NFC) tags are small, programmable chips that communicate wirelessly with a mobile device or NFC reader when placed within a few centimeters. No physical contact is needed—guards simply tap the device to the tag to log the checkpoint.

### Pros:

- Fast, frictionless scans – Requires only a quick tap with no need to open a camera or align a scan.
- Durable and weather-resistant – Encased NFC tags can withstand outdoor environments, heat, cold, and moisture.
- Tamper-resistant – Harder to duplicate or fake compared to printed codes.
- No line-of-sight requirement – Can be hidden under surfaces for aesthetics or security.

### Cons:

- Higher cost per tag – NFC tags are more expensive than printed QR codes or barcodes.
- Requires NFC-capable device – Not all older smartphones support NFC.
- Installation effort – Usually affixed with adhesive or screws, so replacement takes more time.

### Best Use Cases:

- Outdoor or harsh environments where durability is critical.
- High-security settings where tamper prevention is a priority.
- Fast-paced patrols where every second counts for scanning efficiency.



## 2. QR CODES

**How They Work:** Quick Response (QR) codes are 2D printed patterns that can be scanned using a smartphone camera or QR scanner. Scanning the code logs the checkpoint location in the guard tour system.

### Pros:

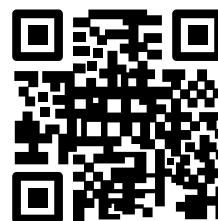
- Low cost – Can be printed on stickers or labels, even in-house.
- Easily replaceable – Quick to reprint and install if damaged.
- No special hardware requirement – Any camera-equipped device can scan them.
- Customizable – Can be branded with logos or placed on signage.

### Cons:

- Requires line-of-sight – Guard must open the camera and aim at the code.
- Vulnerable to wear and tear – Fading, scratching, or vandalism can make them unreadable.
- Easier to duplicate – Anyone with a phone can capture and reproduce the code.

### Best Use Cases:

- Indoor environments with controlled access.
- Sites where tags may need frequent replacement or relocation.
- Low- to medium-security operations where duplication risk is minimal.



## 3. BAR CODES

**How They Work:** Barcodes are one-dimensional printed patterns that require a barcode scanner or device with barcode-reading capability to register the checkpoint.

### Pros:

- Widely understood and supported – Most scanning devices and apps can read barcodes.
- Low cost – Similar to QR codes in printing and replacement expenses.
- Compact size – Can be applied in smaller spaces where QR codes would be too large.

### Cons:

- Lower data capacity – Stores less information than QR codes.
- Requires line-of-sight – Must be clearly visible to scan.
- More prone to read errors – Scratches or dirt can interfere more easily than with QR codes.

### Best Use Cases:

- Facilities already using barcode scanners for other operations.
- Environments where checkpoints are small, discreet, and space is limited.
- Legacy guard tour systems upgrading to digital without changing scanning hardware.



### 3. QUICK-REFERENCE COMPARISON TABLE

FEATURE/FACTOR	NFC TAG	QR CODES	BAR CODES
<b>Cost per tag</b>	High	Low	Low
<b>Durability</b>	Excellent – resistant to weather & impact	Moderate – can fade, tear, or smudge	Moderate – prone to scratches/dirt
<b>Scan speed</b>	Very fast (tap)	Moderate (camera alignment needed)	Moderate (scanner alignment needed)
<b>Security / Tamper resistance</b>	High – difficult to duplicate	Low – easy to copy	Low – easy to copy
<b>Installation</b>	Requires mounting (adhesive/screws)	Simple sticker or print placement	Simple sticker or print placement
<b>Device requirements</b>	NFC-enabled smartphone or reader	Any camera-enabled device	Barcode scanner or camera-enabled device
<b>Line-of-sight needed</b>	No	Yes	Yes
<b>Best environment</b>	Harsh outdoor or high-security	Indoor, low-to-medium security	Compact spaces or barcode-heavy facilities

### CHOOSING THE RIGHT TAG TYPE

The right checkpoint tag depends on your operational priorities:

- If speed and durability are most important → NFC Tags
- If cost-effectiveness and easy replacement matter most → QR Codes
- If integration with existing barcode systems is a priority → Barcodes

In many cases, organizations use a hybrid approach—for example, NFC tags in outdoor or high-security areas and QR codes or barcodes indoors. The key is to match the tag technology to the environment, the guard workflow, and your budget.

