

Pharmaceutical Scanning & Verification Platform

Replace fragmented manual scanning with parallel, AR-powered processing. Real-time visual feedback directly on the packs being handled. Available as mobile app and stationary camera solution — shared cloud backend, unified data, scales across warehouses and countries.

THE PROBLEM

Pharmaceutical warehouses still rely on scanning packs one by one with hand or laser scanners, collecting data in spreadsheets, and managing FMD verification through disconnected systems where feedback is delayed or misaligned with actual handling. The result: errors, double scans, false alerts, paper-heavy compliance, and processes that do not scale.

NEXRX SCAN APP — KEY CAPABILITIES

Multi-Code AR Scanning

Scan multiple packs simultaneously using the smartphone camera with real-time AR feedback. Automatic deduplication, GTIN-to-product-name resolution on-screen. Zero-error process — no double scans, no missed packs. Single-batch mode warns on batch mixture; mixed-batch mode for multi-product sessions.

FMD Verification — Live or Delayed

Real-time verification against NMVOs with instant per-pack feedback during scanning. Or delayed batch verification with late check-out for decommissioning — supporting ex-EU operations and cross-border trade. Suspect packs isolated immediately via visual alerts and integrated resolution workflows.

Alert Handling & Pack Locking

Codes transmitted directly from scanned image — never relying on keyboard input or device language settings, eliminating false FMD alerts entirely. Packs queued for delayed operations are locked against live FMD actions. Batch execution follows controlled escalation: single-pack first, then scales progressively. All incidents auto-logged in a dedicated Incident Registry.

Inspect Mode

Find packs anywhere using AR overlays — by FMD status, expiry date, batch number, product code, serial number. For short-expiry picking, batch recalls, or targeted searches. Targets entered manually, scanned from reference pack, or pushed from backend portal (e.g. when overnight verification flags alerts).

Beyond FMD

Same scanning workflow for stock-taking, incoming goods receipt, outgoing shipment documentation, and pack aggregation into logistics units (EPCIS supported). All Data Matrix data captured without triggering FMD operations. Without verification latency, throughput exceeds 5,000 scans/min. One tool for all pack-level processes.

Session, Export & Team

On-screen session summary by product name, batch, and quantity. Export in CSV, XLS, XLSX, PDF. Push/pull to ERP via API. Web portal for reporting. Intuitive interface for fast onboarding. FMD operations assignable per user via permissions. Sessions pausable — all codes saved to backend, no data loss.

WORKFLOW

1

Scan

Point camera at packs. All visible Data Matrix codes captured simultaneously with coloured overlays.

2

Identify

Codes auto-deduplicated. GTINs resolved to product names. Operator ensures all packs are framed.

3

Verify

FMD runs real-time or configurable batch mode. Per-pack results: green = verified, red = alert.

4

Act

Isolate suspects immediately. Incidents auto-logged (date, time, device, user, FMD request/response).

5

Review

Revisit scans in web portal. Reporting, bulk operations, full audit trail access.

Hands-Free, High-Throughput Scanning

An add-on to the NexRx platform for hands-free scanning at fixed workstations. Connects via the NexRx Bridge on a local Windows workstation.

AI-Powered Pack Recognition

Locally deployed AI model automatically detects pack count, identifies packs missing an FMD code, and flags items that could not be read before they move down the line.

Hands-Free Operation

Operators place packs in the scanning area and move on. Ideal for processing large incoming goods deliveries without slowing down the workflow.

Built for Reliability

Top-down scanning with no glass surface dependency. Configurable scanning area up to 60 x 40 cm. Suitable for ambient and cold storage environments.

Recommended Workflow

Use camera at receiving stations for large incoming shipments and automatic issue detection. Use app for smaller batches, verification follow-ups, and locating specific packs at the shelf, in cold storage, or anywhere else.

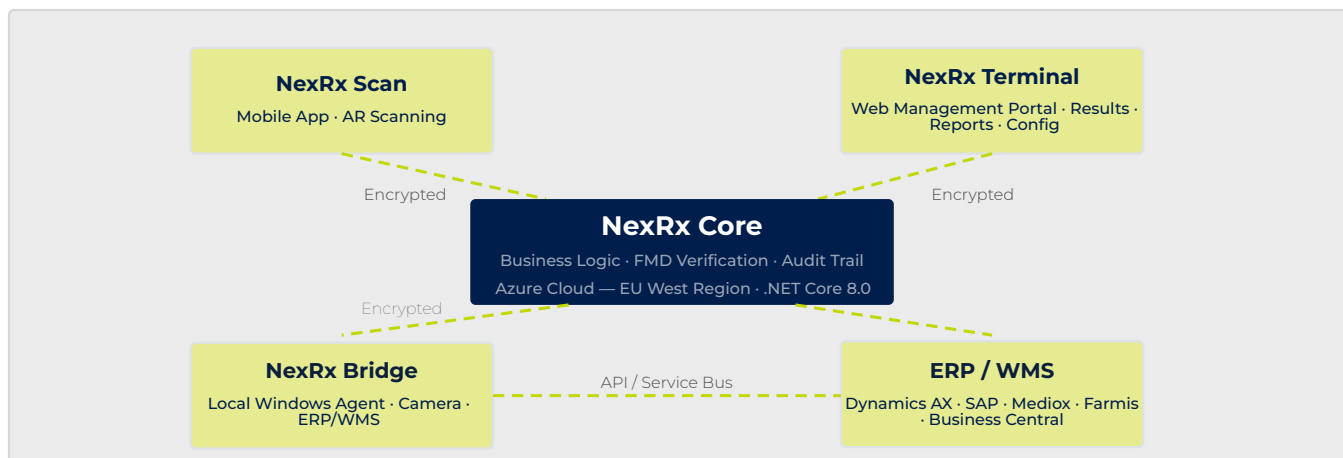
Feature Comparison

	Came	App
Best for	Large deliveries, high-volume workstations	All-size batches, ad-hoc, locating packs
Scanning style	Hands-free, stationary, AI-assisted	Portable, manual, on-the-go
AI detection	Pack count, missing FMD codes, unreadable	—
Inspect mode	—	Locate by expiry, batch, FMD status, any DM attribute
Portability	Fixed workstation	Fully mobile — incl. cold storage
Backend	Shared NexRx backend — all data, verification results & audit trails	

PLATFORM ARCHITECTURE

Client-Server with Clear Separation of Responsibilities

All GxP-relevant decisions are made exclusively by the Core. Mobile app, terminal, and bridge are presentation and relay layers only.



INTEGRATION

Connect Everything, Replace Nothing

REST API

JWT-authenticated, Swagger/OpenAPI documented. All scan, verification, and data export operations.

Azure Service Bus

Enterprise-grade message broker for real-time, asynchronous data exchange.

Webhooks (incl. Zapier)

Configurable webhook endpoints for event-driven automation. Native Zapier support for low-code scenarios.

Direct DB integration

Stored procedure calls to customer SQL Server databases for tight back-end coupling.

FMD Proxy API

Authenticated proxy enabling external systems to perform FMD verification/decommissioning through NexRx without own NMVO connection.

Local Agent (Bridge)

Connects on-premise ERP/WMS via local API endpoints, file-watch directories, or keyboard emulation.

Custom API endpoints

Template-based outbound payloads to customer-specific APIs with configurable headers and content types.

Standard exports

CSV, XLS, XLSX, PDF for reporting and documentation.

SECURITY & DATA PROTECTION

Enterprise-Grade by Design

Hosting

Microsoft Azure, West Europe region. On-premises deployment supported.

Encryption at Rest

Azure SQL Transparent Data Encryption (TDE).

Encryption in Transit

TLS 1.2+ on all connections. HTTPS (port 443) for all services.

Tenant Isolation

Dedicated database per customer. Data is never shared across tenants.

Access Control

RBAC, MFA via Microsoft Entra ID, device-level authentication.

Audit Trails

Tamper-proof logging of all actions. Full FMD request/response payloads. Who, what, when.

Data Retention

Scan history & FMD logs: indefinite. Audit trail: permanent. API logs: 90 days. Staging: 24h auto-cleanup.

Data Portability

Export all data at any time in standard formats or via API. No vendor lock-in.

Regulatory Alignment

Audit trails per EU FMD (2011/62/EU) and Delegated Regulation (2016/161).

COMPLIANCE & EU COVERAGE

Validated, Certified, Production-Ready

Validated under GAMP 5 principles, aligned with EU GMP Annex 11 requirements. Supports all three European FMD Blueprint system providers and the full range of FMD operations: verification, decommissioning, reactivation, and bulk operations.

12

COUNTRIES VALIDATED WITH NMVO

4

IN PRODUCTION

8

IN PROGRESS

3

FMD BLUEPRINT SYSTEM PROVIDERS

DEPLOYMENT & REQUIREMENTS

Cloud-Hosted SaaS — No On-Premise Infrastructure Required

Deployment options include shared tenants or a dedicated instance on arex PHARMA's cloud infrastructure. Typical deployment from sign-up to first scan: under one hour. Validation materials available on request for GDP/GMP-compliant integration.

NexRx Scan iOS 18 (iPhone 14 or newer) / Android 14

NexRx Terminal Any modern web browser

NexRx Bridge Windows 10 or later

Camera Connected via Bridge on local workstation

Network HTTPS (port 443) for all services; port 1433 for optional direct DB integrations

ABOUT

arex PHARMA GmbH

Pharmaceutical technology company headquartered in Germany with operations across the EU. Active in the pharmaceutical industry since 2008, arex PHARMA combines deep regulatory expertise with modern software development to build tools that solve real operational challenges in pharmaceutical logistics and compliance.

Ready to Modernise Your Scanning?

From sign-up to first scan in under one hour. No special hardware required.

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