BOS – Integration Engine
HOW BOS CONNECTS TO THE OUTSIDE WORLD
(Official)

Event-Driven, Secure, Controlled Integration Layer

1. Core Doctrine

The BOS Integration Engine exists to connect BOS safely with external systems and hardware without exposing core business logic or compromising data integrity.

2. Role Within BOS

The Integration Engine acts as a controlled gateway between BOS internal engines and third-party services such as payment gateways, biometric devices, accounting software, banks (read-only), and messaging platforms.

3. Integration Philosophy

All integrations are event-driven and permission-based. External systems never write directly into BOS core data. They submit events or receive read-only data.

4. Hardware Integrations

Supported hardware integrations include fingerprint scanners, POS devices, kiosks, QR scanners, and future smart cash management hardware. Hardware devices act only as data capture tools.

5. Software & SaaS Integrations

BOS can integrate with external accounting systems, ERP tools, CRM platforms, and analytics tools using APIs and standard data formats.

6. Payment & Messaging Gateways

Integration with card processors, mobile money providers, bank APIs (read-only), email, SMS, and WhatsApp is handled through secured adapters. Sensitive credentials are never exposed to BOS users.

7. Security & Access Control

All integrations require explicit authorization, scoped access, and are governed by business roles and country-specific rules.

8. Failure Handling & Resilience

Integration failures are isolated and do not block core BOS operations. Retries, fallbacks, and alerts ensure resilience.

9. Audit & Observability

Every integration interaction is logged with timestamps, payload references, and actor identity. This provides full traceability for audits.

10. AI Boundaries

AI may analyze integration data patterns and failures but cannot change integration configurations or credentials.

11. What the Integration Engine Is Not

The Integration Engine does not expose raw databases, does not allow uncontrolled third-party writes, and does not act as a general automation platform.

12. Final Doctrine

The BOS Integration Engine ensures that external connectivity enhances business operations without undermining security, governance, or data truth.