

SECURE DATA ORCHESTRATION FOR INDUSTRY 5.0

Bridging Intelligent Automation and Digital Trust through Edge-Centric Security

TUCSON, AZ — BC Automation and Asterion DB have launched a strategic partnership to provide the foundational data security required for Industry 5.0. This collaboration integrates Asterion DB's extensible data orchestration with BC Automation's Manufacturing Intelligence Platform (MIP) to secure human-machine collaboration and verifiable digital trust at the core of next-generation manufacturing.

The initiative addresses the critical need for managing unstructured data—such as process flow diagrams, technical documentation, and proprietary graphic files—directly at the industrial edge. By utilizing a non-schema-based architecture, the partnership enables the deployment of containerized knowledge packages that remain functional even in environments without constant cloud connectivity.

Foundational Security for Industry 5.0

Built on Asterion DB's API-first design and BC Automation's Symmetrical Parallel Aggregation (SPA™), this architecture shifts security focus directly to the database level. Key features include:

- **Fine-Grained Digital Trust:** The system provides the capability to hide information from users who do not have specific access rights, ensuring a zero-trust enforcement model.
- **Edge-Centric Resilience:** Supporting local data stores on compute nodes ensures operational integrity for mission-critical infrastructure in factories.
- **Immutable Knowledge Repositories:** Block-centric versioning ensures data integrity and provides a robust, secure-by-design defense against ransomware.
- **Secure Human-Centered AI:** A protected environment for feeding local models, such as Gemma, with authorized datasets to improve prediction accuracy.