

SECURE DATA ORCHESTRATION FOR INDUSTRY 5.0

Bridging Intelligent Automation and Digital Trust through Edge-Centric Security

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™), which operates as a native graph model. This architecture shifts security focus directly to the database level, supporting autonomy. 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.