K-WATER X™

Transforming Existing Facilities with AI

eco AI INNOVATES

From Manual to Machine Intelligence: AI-Powered Water Treatment

K-Water X is a cutting-edge, AI-driven solution that transforms how water purification plants operate — making them smarter, cleaner, and more efficient. It overcomes the limitations of manual, experience-based operations and traditional PLC-based controls by enabling 24/7 fully autonomous operation. Using a combination of IoT sensors, big-data analytics, and advanced artificial intelligence, K-Water X continuously monitors, optimizes, and adjusts plant processes in real time, reducing human intervention while improving reliability, energy efficiency, and water quality.

HOW IT WORKS

K- Water X collects and analyzes sensor data in real time, then uses AI algorithms to self-operate key functions:

- Water Purification Process – Automates chemical dosing, sedimentation, filtration, and disinfection.
- Energy Optimization – Controls pumps, balances peak power, and saves energy in real time.
- Reservoir Valve Operation – Predicts inflow/outflow and autonomously manages valves to maintain stable water levels.

This integrated approach ensures safe, sustainable, and continuous water treatment and distribution.

USE CASES

- **K-Water Pilot Project (2020):** Achieved 98% AI model accuracy for chemical dosing and continuous, non-stop operation.
- **Seoul City (2021):** Stable AI-managed purification even during high turbidity from monsoon rains.
- **Pyeongtaek City (2023):** Implemented an autonomous water supply network, reducing maintenance stress and improving reliability.

By uniting AI, IoT, and big data, it delivers cleaner water, smarter energy use, and a safer, more sustainable operation — ensuring communities receive reliable water while reducing operational burdens and costs.