

PosFrame

A smart factory solution optimally controlled
with AI technology following big data analysis



“ A integrated Smart Factory Platform that uses IoT and AI technologies for comprehensive Big Data analysis to provide optimal control ”

A smart factory platform for process manufacturing and HTLL (heavy, thick, long, large) industries



An autonomous factory that is optimally controlled using AI technology following comprehensive big data analysis of all situations through the connection of data from production fields and processes with IoT

PosFrame

Do you want to implement a failure-free production system, predict quality defects, and simulate production process?

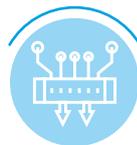
PosFrame
will be
by your side!

Why PosFrame?

PosFrame is a integrated platform that integrates IoT, big data, and AI and supports "data collection, arrangement, storage, analysis and control" for smart factory implementation.



The first smart factory platform in the world to be applied to HTLL (Heavy, Thick, Long, Large) and continuous processing



Integrated data collection, arrangement, storage, analysis and control functions provided



Advanced platform technology and stable technology support

What is PosFrame?

PosFrame is a platform that integrates IoT, big data and AI and supports "data collection, arrangement, storage, analysis and control" for smart factory implementation.

01

A decision-making support system based on real-time data



Supporting data-based decision-making for manufacturers by providing real-time collection, analysis and control of structured/unstructured data through various IoT sensors

02

New smart factory IT technology, all-In-one platform



A real-time, non-stop and scalable integrated smart factory platform equipped with new IT technologies such as IoT, Big Data and AI. Future IT technologies are continuously being added

03

Successfully applied to continuous processing, expanded to all industrial fields



Tracking analysis and management between pre- and post-processes has been made available through vertical and horizontal integration and the analysis of mass data generated in each unit of the facility/process in continuous processing.

What is Different?

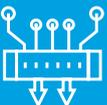
01



The most advanced smart factory platform in the world and the first to be applied to continuous processing

PosFrame is the proven world's first and world's best platform and is currently being used at POSCO group affiliates and external manufacturing companies in the steel, materials, energy and construction fields. In particular, it is the first in the world to be applied to continuous processing, which requires high-speed, 20 ms micro data processing.

02



Integrated data collection, arrangement, storage, analysis and control functions provided

PosFrame provides an environment where all data, including PLC/DCS, P/C, MES, SCM and ERP are vertically integrated and analyzed pre-and post-process and where quality, facilities, operation, energy, etc., are also integrated and analyzed. It also has a real-time control function.

03

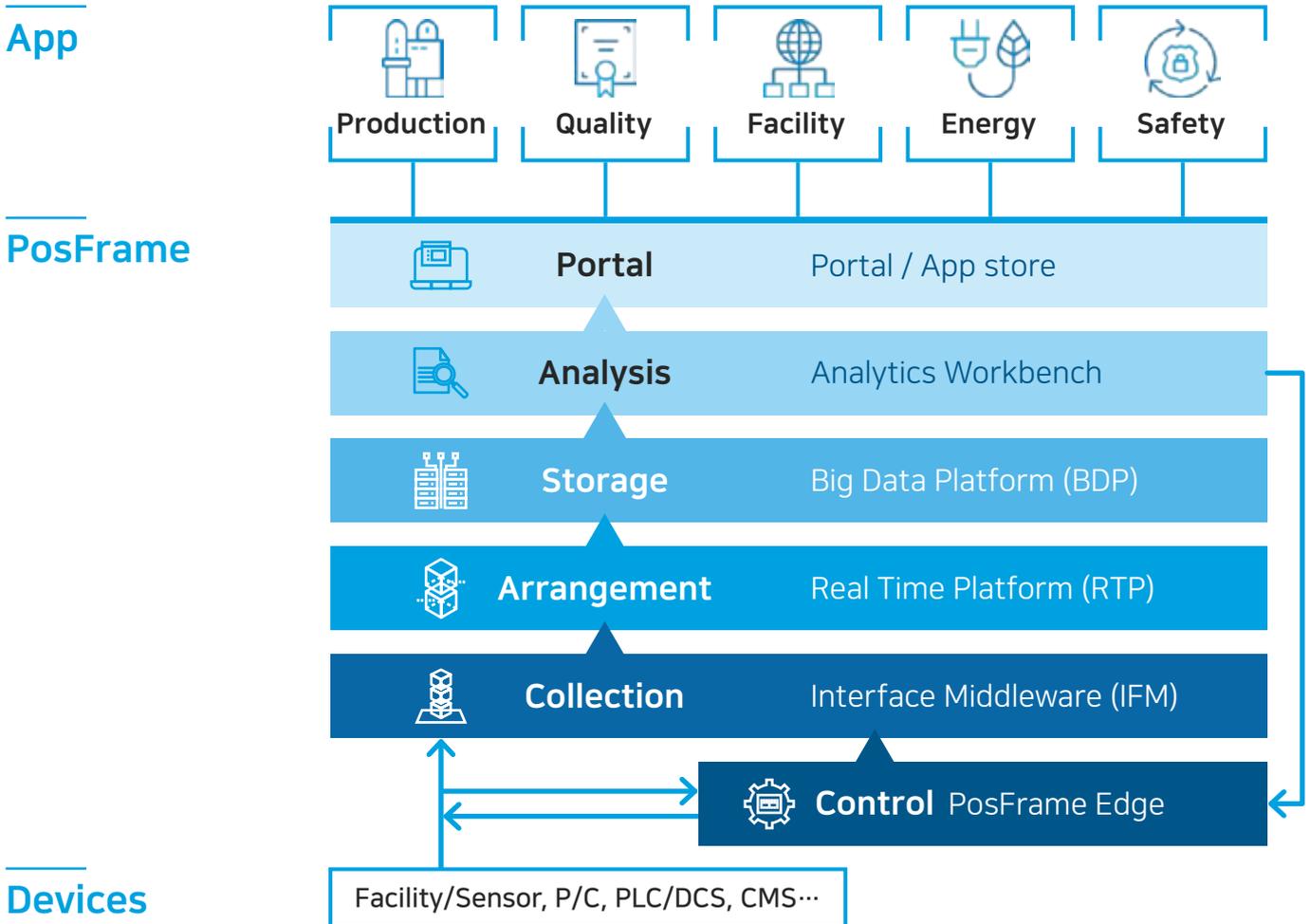


Advanced platform technologies and stable technical support are provided

PosFrame uses advanced technologies, such as customized platform architecture, infra design, real-time AI and provides stable technical support based on operation know-how accumulated over many years.

PosFrame Composition

PosFrame is an integrated platform that collects data generated in production fields, analyzes them and performs modeling to provide an application execution environment. It is composed of data collection, arrangement, storage, analysis, portal and control areas.



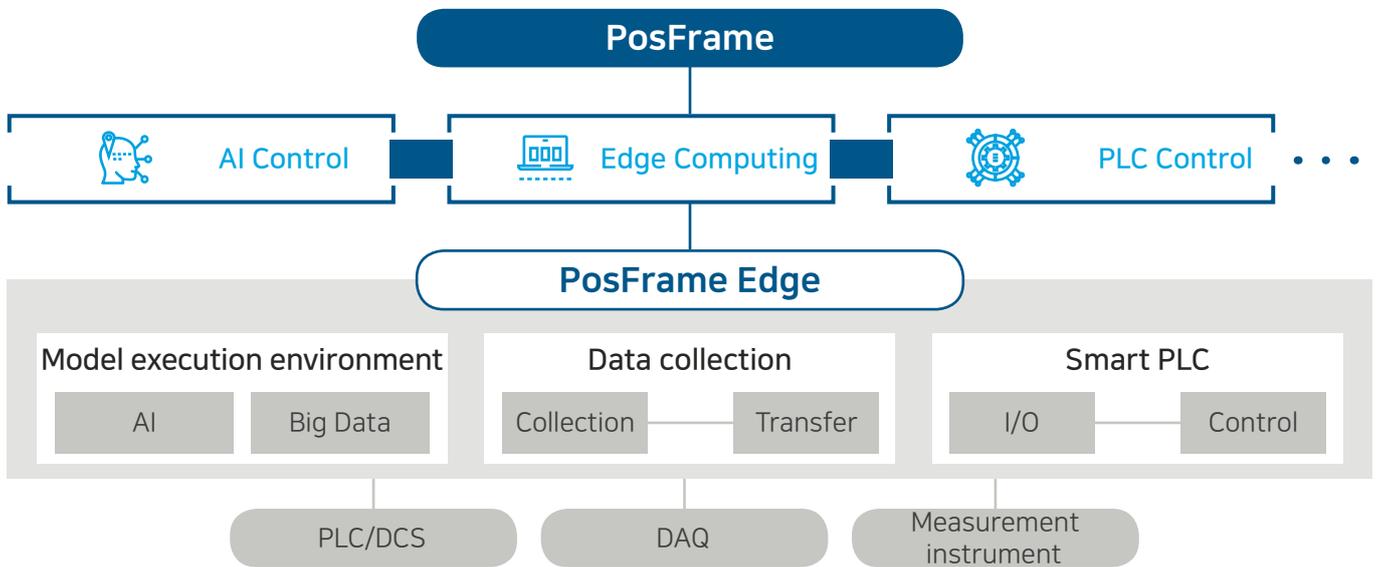
Smart Factory Total Service Provider

Providing all necessary services from smart factory diagnosis/consulting to platform design/ establishment/support in order to realize optimal smart factories that are best suited to the manufacturing environments of our customers



Major Functions

 <h2>Data Collection</h2> <p>InterFace Middleware (IFM)</p> <ul style="list-style-type: none"> Collecting structured/unstructured data from various heterogeneous devices and facilities at high speed 	 <h2>Data Arrangement</h2> <p>Real Time Platform (RTP)</p> <ul style="list-style-type: none"> High-speed parallel processing of standardized data in vertical-horizontal structure to enable integrated analysis Providing an alert function whenever an anomaly is detected in the process of real-time data processing 	 <h2>Data Storage</h2> <p>Big Data Platform (BDP)</p> <ul style="list-style-type: none"> Data sorted through RTP are stored at big data storage sites to be used in inquiries and analysis They are stored in a form that is ten time more compressed than what's used at a general big data storage site.
 <h2>Analysis</h2> <p>Analytics Workbench</p> <ul style="list-style-type: none"> A one-stop AI analysis solution with which workers in the field who are non-experts in analysis can handle the whole analysis process to improve the field and systemize it into a knowledge asset 	 <h2>Portal</h2> <p>Smart factory platform</p> <ul style="list-style-type: none"> Based on the app store, smart apps can be easily used Checking real-time production status indicators based on 3D factory layout, providing personalized indicators, charts and dashboards, etc. 	 <h2>Control</h2> <p>PosFrame Edge</p> <ul style="list-style-type: none"> PosFrame Edge controls facilities without delays by processing data in real time and executing AI and Big Data next to field facilities



Real-Time Data Collection

Collecting data from measurement instruments, PLC/DCS, DAQ, etc., connecting related systems after data pre-processing (calculation, filtering, etc.)

A Smart PLC Function

Facility sequence and process control using software PLC function

Real-time Model Control Based on Reinforcement Learning

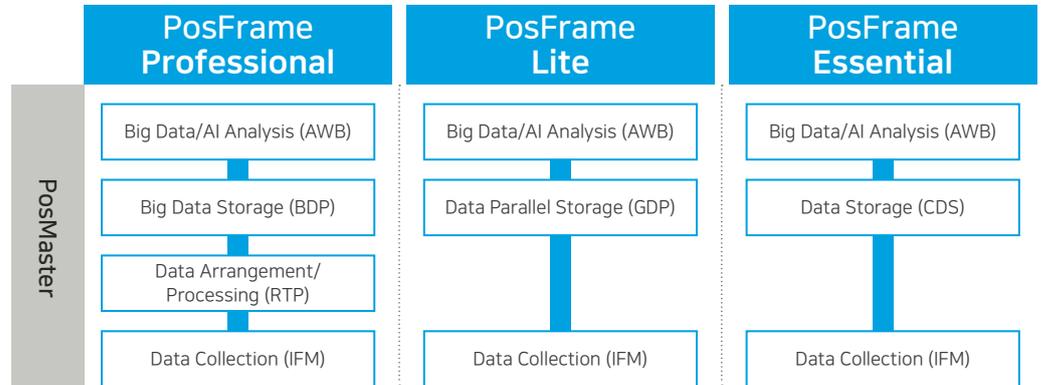
Supporting model optimization environment such as reinforcement learning using real-time AI, big data control model execution, and control results
 ※ PosFrame is utilized in the development of AI and big data models and performance management

Product lineup

The customer can choose between PosFrame and PosFrame Edge, based on functional requirements. A detailed type can be selected according to the customers' data capacity and field conditions

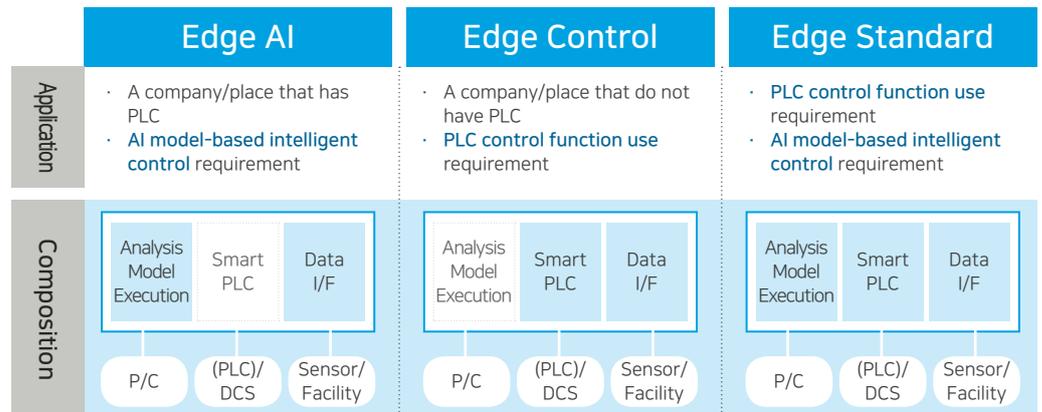
PosFrame Detailed Product Composition

Products are divided into large, middle and small, according to the data processing capacity, real-time processing requirements and cluster composition requirements.



PosFrame Edge Detailed Product Composition

Three types can be supported separately: data interface, AI analysis model execution and Smart PLC



Fields of Application



Production
Reduces lead-time



Quality
Secures quality in advance



Facility
Improves facility efficiency



Energy
Optimizes energy usage



Safety
Proactively manages safety



Providing "Technology Innovation" and
"Value Excellence" to clients

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