



**Data iO**

**OPTIMIZE.  
TRACK.  
ANALYZE.**

## CONNEX

Optimize the electronics manufacturing process by enabling integration of device programming into a connected factory

ConneX integrates inputs and outputs between a Data I/O PSV programming system and a connected electronics manufacturing facility to enable traceability, process analysis and two-way communication that improves factory efficiency and quality.



- REMOTE & PROACTIVE SERVICE
- REALTIME ADJUSTMENT
- POST PROCESS ANALYSIS
- ROOT CAUSE ANALYSIS
- TRACEABILITY
- YIELD TRACKING
- OPERATIONAL REPORTING
- SECURE MANUFACTURING



### Optimize

Optimize the programming processes with MES integration

Improve operator efficiency and quality with job commands sent between MES and a PSV system

Inventory management with Job and media validation

Real-time reporting with configurable dashboards



### Track

Track programming process for comprehensive traceability

Device and Job programming statistics reporting

Error message handling  
Yield tracking



### Analyze

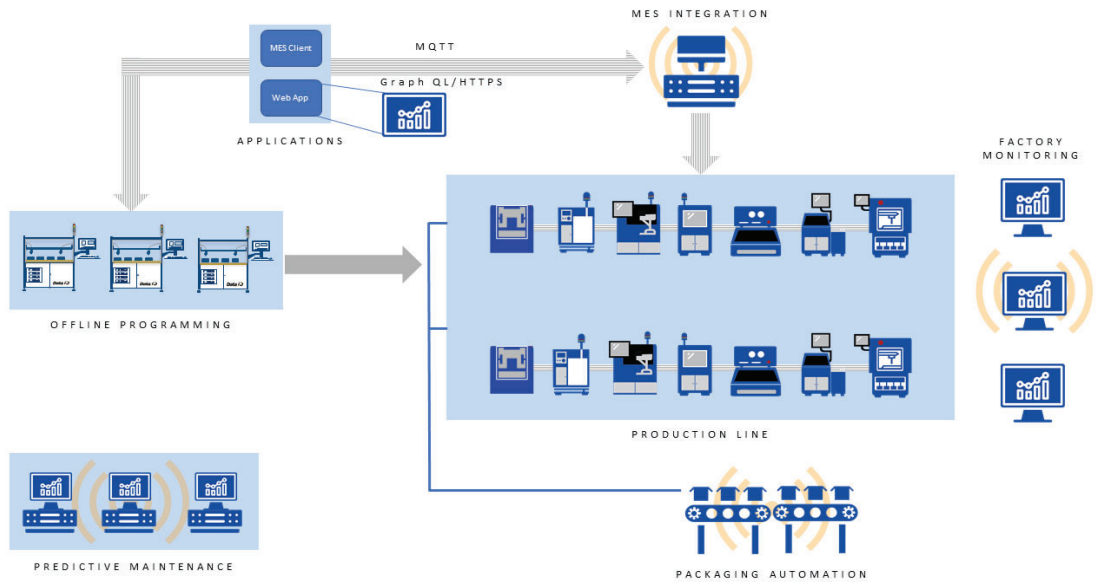
Analyze to enable real-time data-driven decisions

Root cause & post process analysis

Proactive service with predictive analytics  
Preventative maintenance analysis

## DATA I/O CORPORATION

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## Specifications

### SUPPORTED PROGRAMMING SYSTEMS

- PSV7000
- PSV5000
- PSV3500
- LumenX Desktop
- FlashPAK III

\*supports multiple PSV's simultaneously

### EXAMPLE USE CASES CONNEX ENABLES WITH MQTT APIS

MES Client and Web App receive data from PSV Systems. MQTT is a publish/subscribe open-source messaging protocol enabling event-driven two-way communication between machines.

- Load job
- Remote pause
- Inventory tracking
- Barcode scanning

Graph QL is an open-source framework for data queries that streamlines access to and usage of historical data for data visualization and analysis

- GraphQL APIs
- Sample GraphQL client application

### CONNEX SUPPORTS SENTRIX SECURITY PROVISION REPORTING FOR SECURE MANUFACTURING AND SUPPLY CHAIN OPTIMIZATION STRATEGIES:

- Key and Certificates
- Device ID

\*Use Cases and reporting based on device functionality

### LICENSING

- Free 30 day trial\*
- Client & Site license

\*Free trial includes GraphQL client sample application with system monitoring dashboards

### SYSTEM REQUIREMENTS

Data I/O recommends keeping your PSV systems up-to-date with the current system software (AH/CH) and programmer firmware and software (FlashCORE and LumenX) to get access to the full set of data objects supported by Connex.

- Operating Systems: Windows 10 x64 or Windows Server 2022

## Sample Data Objects Supported

Module	Event / Statistic	Programmer	
		LumenX	FlashCORE
Handler	TimeStamp	√	√
	Handler Name	√	√
	Handler IP	√	√
	Handler Software Versions	√	√
Programmer	Programmer Type	√	√
	Programmer Software Versions	√	√
	Programmer Serial Number	√	√
Adapter	Adapter ID	√	√
	Adapter Serial Number	√	√
	Adapter "clean count"	√	√
	Adapter Lifetime Actuations	√	√
	Adapter Lifetime Continuity Failures	√	√
	Adapter Failure Count	√	√
	Adapter Pass Count	√	√
	Socket Index	N/A	√
Job	Algorithm ID	√	√
	Job ID	√	√
	Job Name	√	√
	Job Description	√	√
	Device Name	√	√
Device	Device Manufacturer	√	√
	Chip ID	√	√
	Programming Result	√	√
	Algorithm ID	√	√
	Verification Duration	√	√
	Overhead Duration	√	√
	Blank Check Duration	√	√
	Erase Duration	√	√
	Error Message	√	√
	Handler Name	√	√
	Handler IP	√	√
	Handler Software Versions	√	√
Serial Data	√	√	
Programmer Hardware Versions		√	
Image Checksum		√	