

# 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**

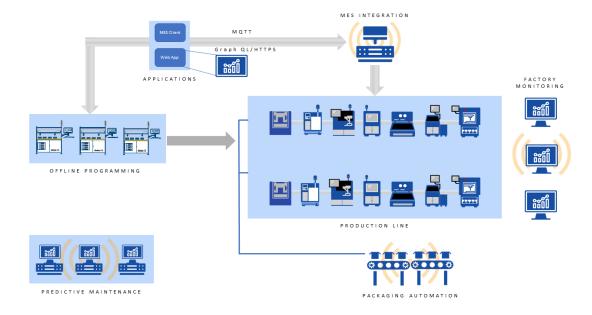
Redmond, WA

ANALYZE.

- www.dataio.com
- +1 800-3-DATAIO

info@dataio.com





## **Specifications**

#### SUPPORTED PROGRAMMING SYSTEMS

PSV7000

PSV5000

PSV3500

LumenX Desktop

FlashPAK III

### **EXAMPLE USE CASES CONNEX ENABLES WITH MOTT 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
- Inventory tracking
- Remote pause
- Barcode scanning

Graph QL is an open-source framework for data gueries that streamlines access to and useage 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
- \*Use Cases and reporting based on device functionality

#### **LICENSING**

- · 90 day free trial\*
- · Client & Site license
- \*Free trial includes GraphQL client sample application with system monitoring dashboards

# Sample Data Objects Supported

		Progi	Programmer	
Module	Event / Statistic	LumenX	FlashCORE	
Handler	TimeStamp	√	√	
	Handler Name	√	√	
	Handler IP	√	√	
	Handler Software Versions	√	√	
Programmer	Programmer Type	√	√	
	Programmer Software Versions	√	√	
	Programmer Serial Number	$\checkmark$	√	
	Programmer IP	$\checkmark$	√	
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 Manufacturer	√	√	
	Chip ID	√	√	
Device	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		V	

### **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.

Windows 10 x64 or Windows Server 2022 · Operating Systems:



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<sup>\*</sup>supports multiple PSV's simultaneously