



**Sensors**  
Converge



# Intelligent Industrial Edge

June 20–22, 2023 | Santa Clara, CA

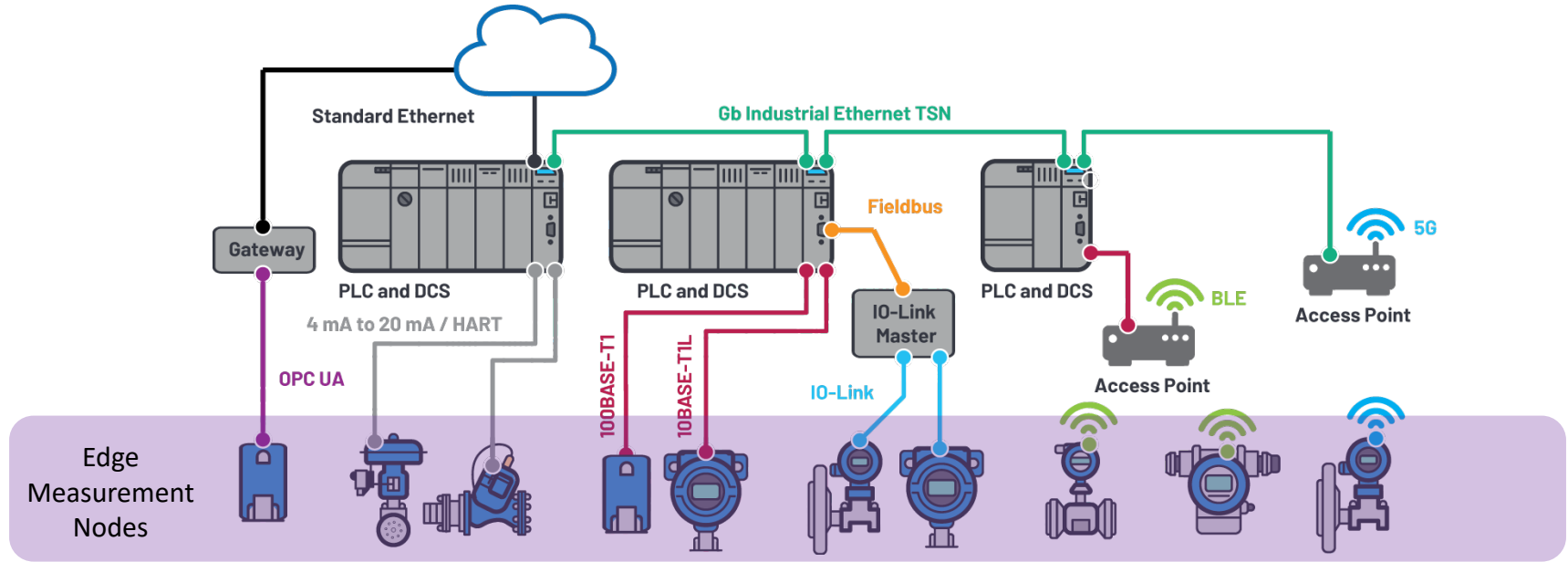
#SensorsConverge

# Agenda

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- Concept of “Industrial Edge”
- Why Industrial Edges needs to be intelligent
- How it saves tremendous amount of resources (sustainability)
- How it enables flexible manufacturing and increases productivity
- ADI Solutions for flexible manufacturing

# Concept of the “Industrial Edge”



**Wide range of sensing modality and connectivity options**

# Legacy Industrial Edges



Physical Interpretation



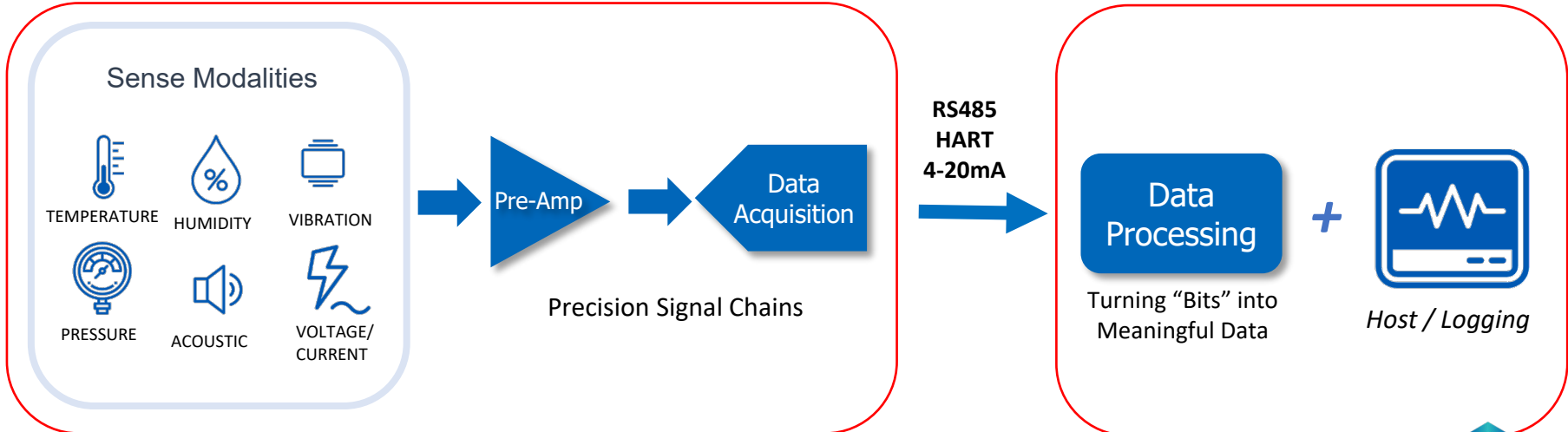
Data Acquisition



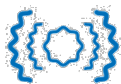
Low-Power Micros



Wired Connectivity



# Intelligent Industrial Edges



Physical Interpretation



Data Acquisition



Ultra Low-Power Micros



Embedded Security



Wired/Wireless Connectivity



Cloud Insights and Edge AI

ADI Capabilities for End-to-End Monitoring

## Sense Modalities



Pre-Amp

High-Precision Signal Chains

Data Acquisition

+

Smart Processing  
AI + M/L

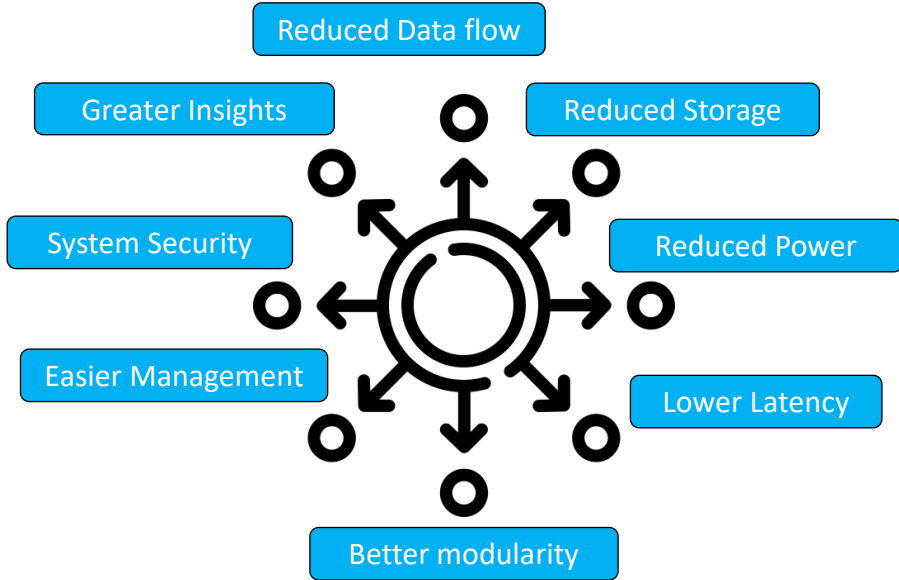
Turning "Bits" into  
Meaningful Data

IO-LINK  
10BASE-T1L  
Wireless

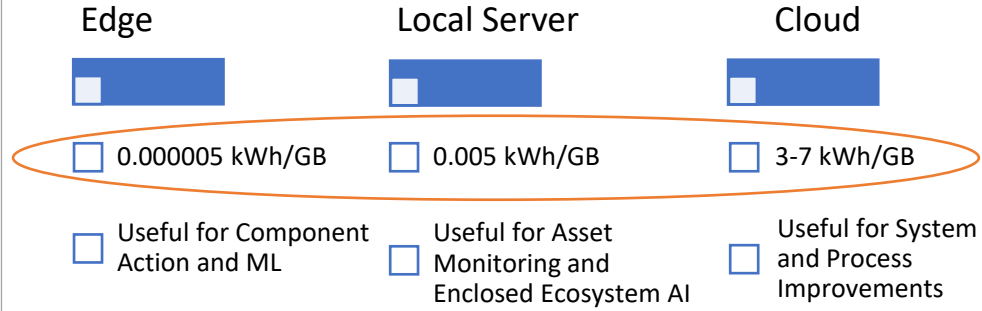


Host / Logging

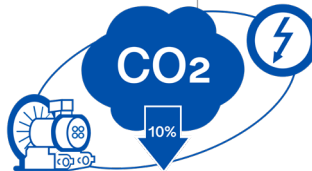
# What is driving the move to an Intelligent Edge?



It is estimated that data centers consume about 1% of all global electricity.

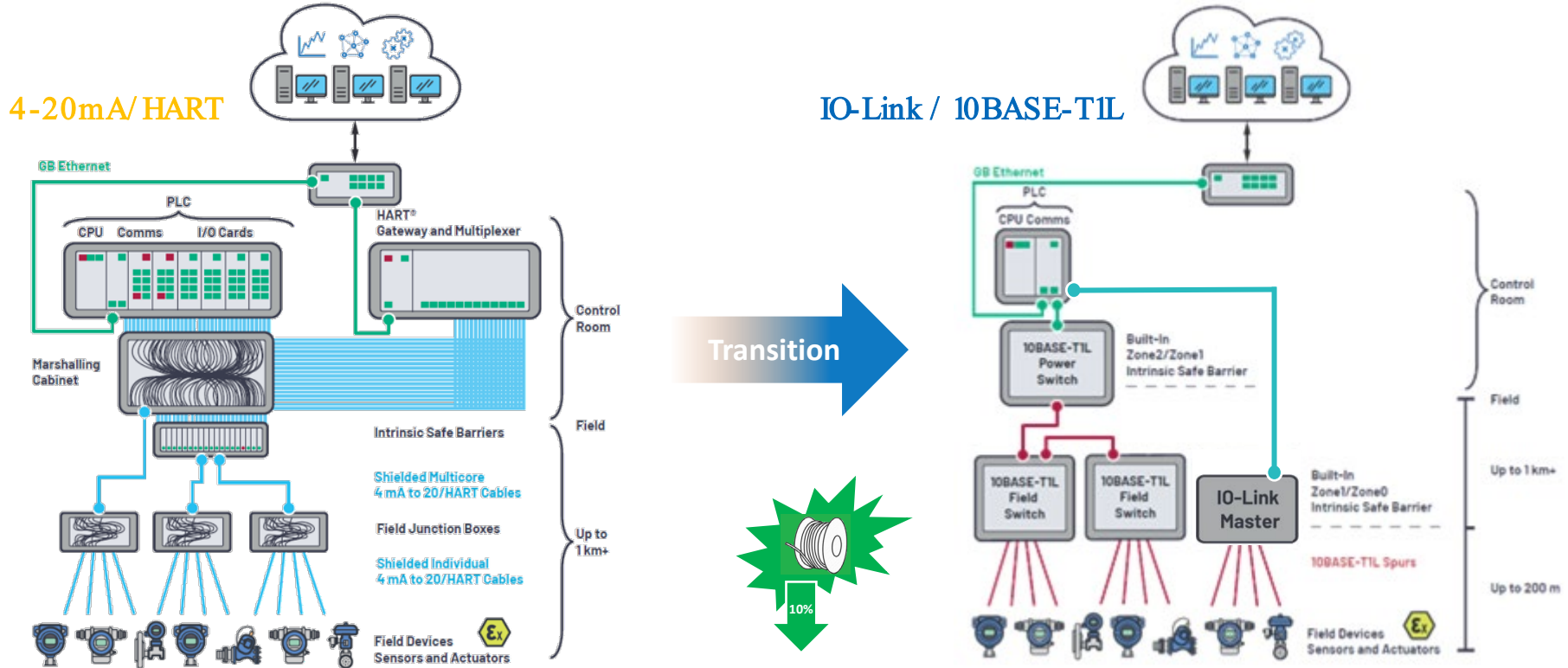


Only transfer what is needed  
Minimize duplication  
Limit data size and duplication through edge processing  
Obfuscate private information

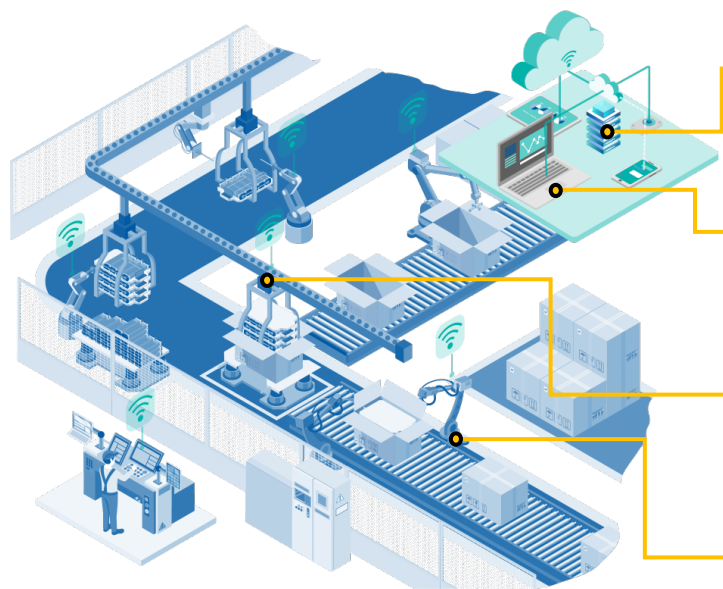


# Intelligent edges enable adaptive factory layout

## Enabling legacy systems to become Factories of the Future



# Flexible Modular Manufacturing



## IT/ OT integration

harmonized networks for complete factory data transparency and non-real time analytics and diagnostics

## Real-time decision making

enabled by ADI TSN Switching which aggregates data from fragmented networks for precise control and diagnostics

- MAX32662
- MAX32665
- MAX32690

## Seamless Connectivity

enabled by ADI's ethernet, IO-Link and Isolation that empower the digital backbone of the factory & the transition from Kbits to Gbits

- MAX22513
- MAX22520
- MAX14827A

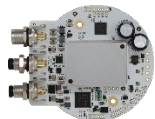
## Edge Intelligence

enabled by ADI's precision, sensing, measuring, and AI to enable the self-aware factory floor

- MAX40109
- ADA4254/55
- LTC6373



WIRELESS  
CONTROLLER



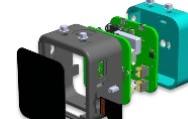
GRIPPER CONTROL



PRESSURE  
MONITORING



ENVIRONMENTAL  
DETECTION



MACHINE LEARNING





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