



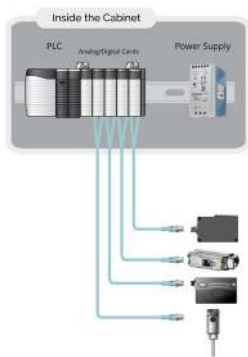
## ANALOG BLOCKS VS. CARDS

Conventional analog sensor applications require connecting sensors in the field to analog cards in a control cabinet. Cost can add up not only with each input or output card that is needed, but even more with wiring the further from the cabinet you go. Comtrol's analog I/O hubs allow the user to connect their analog devices in the field, saving on wiring costs and also offering the benefit of being connected to an IO-Link master and networked through a variety of protocols.

- 22% cost savings on 4 analog inputs
  - Compared to industry average analog cards with 4 inputs and cabling estimates
- 24% cost savings on 2 analog outputs
  - Compared to industry average analog cards with 4 inputs and cabling estimates
  - In addition, 2 analog inputs on same module with Comtrol
- Simplified and lower cost on cabling
  - Wire sensors back to cabinet for analog cards
  - Wire sensors to blocks in the field with Comtrol, one power/Ethernet cable back
  - Include diagram similar to:

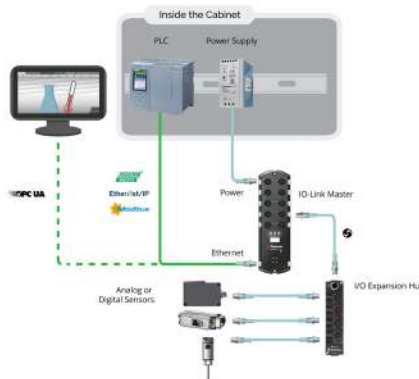
### Analog

Conventional Analog/Digital Cards and Wiring



### IO-Link

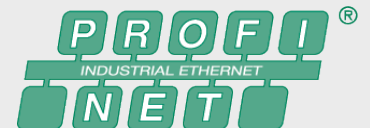
COMTROL I/O Expansion System



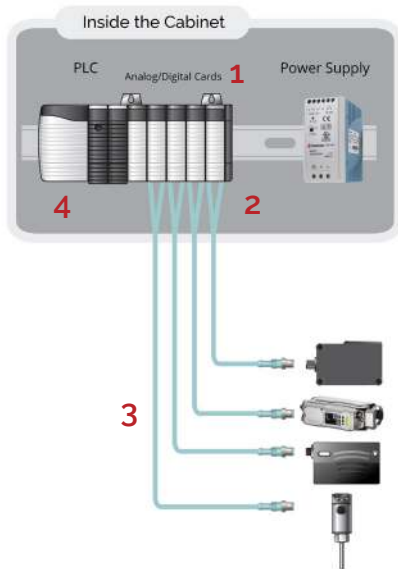
- Comtrol IO-Link analog hubs also include benefits such as:
  - Block diagnostics/status
  - Convenient interface to program and set up
  - Networking to protocols through the Comtrol IO-Link master
    - Ethernet/IP
    - Profinet
    - OPC UA
    - Modbus TCP



EtherNet/IP™

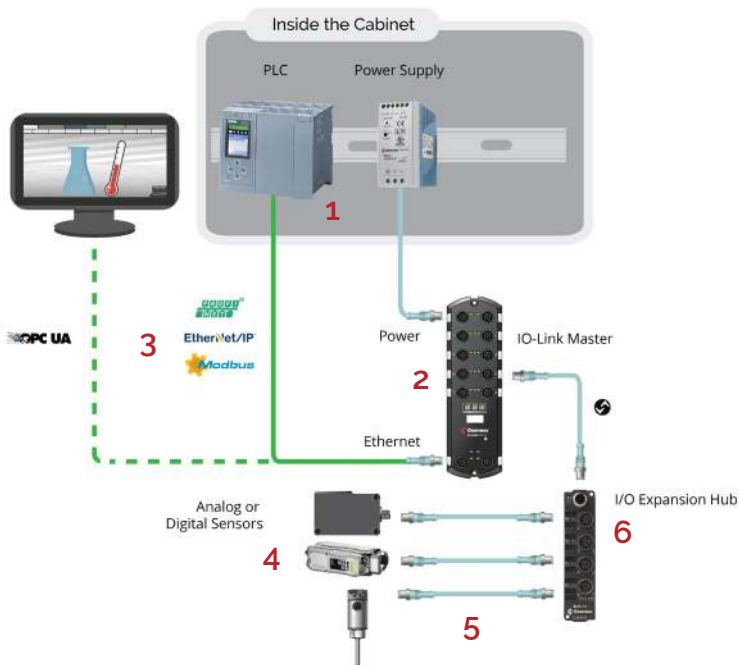


## Conventional Analog/Digital Cards and Wiring



1. More cabinet space occupied by PLC cards which add cost per point
2. Sensor wiring and terminations take up space, time and add cost
3. Cabling to sensors becomes more expensive the further you go from the cabinet
4. Sensors only connect to one protocol directly

## **CONTROL** I/O Expansion System



1. Only two cables are brought into the cabinet (Power and Ethernet)
  - commission cabinet faster, reduce wiring, reduce human error
  - valuable cabinet space is saved
2. IO-Link master can connect up to 8 expansion hubs, 16 sensor connections, or combination
3. IO-Link master can send data to multiple controllers and use multiple protocols (Multi-Link)
  - No PLC required
4. Sensors are connected at the application site which reduces cabling costs
5. Shorter cable lengths improve noise immunity for analog devices
6. Expansion hubs are intelligent IO-Link devices and connect analog or digital I/O to the IO-Link Master

## CONTACT AND SUPPORT INFORMATION

### Warranty Information

Control offers a 30-day satisfaction guarantee and 5-year limited warranty.

### Sales Support

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sales@control.com

### Technical Support

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