SMART REMOTE IO WITH MLIO FLEXIBLE CONNECTIVITY AND WIDE IO CAPABILITIES

Product Information Note

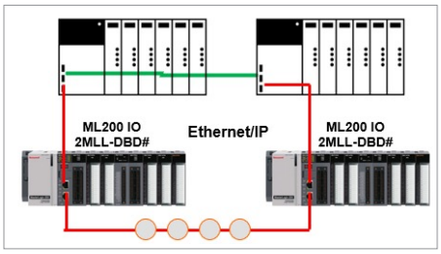
Smart Remote IO on MasterLogic PLC as one of solution reduces time and cost on configuration, maintenance, and integration based. Integrated with Honeywell Control system or other 3rd party Controller, it minimizes downtime through consistent support, and reducing total cost of ownership. Interface options, Built-in EtherNet/IP and ModbusTCP enable integration with a wide range of I/O modules, and connecting to devices, and CIP (Common Industrial Protocol).

MasterLogic Smart Remote IO (MLRIO) devices allow you to control their outputs, as well as monitor their inputs and externally connected sensors using the Modbus protocol. Built on the Honeywell Automation System (TPS), MasterLogic Remote IO controllers are infinitely flexible, as most of their capabilities come from installed modules.

Designed to work with any control system, MLRIO becomes a superior solution using MasterLogic PLC, ControlEdge PLC /RTU/ UOC(Experion), LEAP project execution, faster field device commissioning, and improved device diagnostics. Ethernet/IP & ModusTCP protocol provide smooth integration to a range of instruments from multiple vendors. Serial communication interface offers remote configuration and late design change flexibility for improved project implementation.

FLEXIBLE ARCHITECTURE DESIGN

Built-in EtherNet/IP protocol supports to connect to control system with multiple topologies such as Device Level Ring (DLR), Star, Line and Mixed topology to provide networking flexibility. Network topology flexibility helps in seamless connectivity to devices on new or existing EtherNet/ IP networks. Below are some representative examples.



Smart Remote Adapter offer a variety of connectivity options and engineering flexibility with support for a range of I/O devices and controllers. This advanced controller is being certified by ODVA for EtherNet/IP interoperability. Flexible engineering and integration enabled by Ethernet/IP communication significantly simplifies system design with components from multiple vendors and reduces the cost of engineering. MasterLogic PLC protects your investment on migration and expansion projects by offering seamless connectivity to existing infrastructure. Industrial facilities will also realize significant value from simplified configuration and

Honeywell

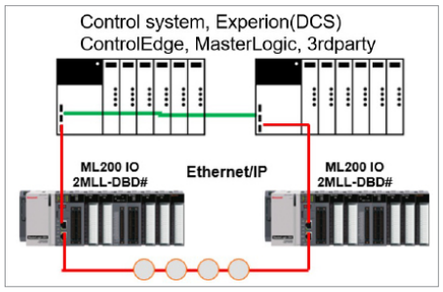


Figure 1: Ring Topology

KEY FEATURES OF SMART REMOTE ADAPTER

- Native Integration with ControlEdge PLC, UOC
- EtherNet/IP Server and Modbus TCP Server
- Class 1 and Class 3 messaging on Ethernet/IP
- Communication with EtherNet/IP controllers(Client)
- Adjustable scan rate, 3ms-8ms (less than 10msec max 63 stations)
- Support generic Ethernet/IP Modules based on ML200 and ML50
- Native integration with ControlEdge PLC
- IOM Configuration – IO parameters on SoftMaster and generating EDS on SoftMaster
- Ethernet/IP and MLIO modules support on same network via automatic scanning

CONNECTIVITY

Several device vendors support Ethernet/IP protocol and are certified by ODVA. With support for EtherNet/IP client and Server, Client can connect with a range of IO modules and devices using implicit and explicit messaging. A wide range of applications can be delivered by leveraging connectivity to Smart Remote adapter, to control a various IO modules, HART devices, an HMI panel, and interface modules based on serial communication. Smart Remote Adapter can be efficiently integrated due to connectivity based on standard open protocol. Engineers get a wide range of design choices, be it for topology, vendor, specifications or connection media, to deliver a solution to fit application requirements. Standard data models for accessing the process and device information significantly improve information available for controls and diagnostics.

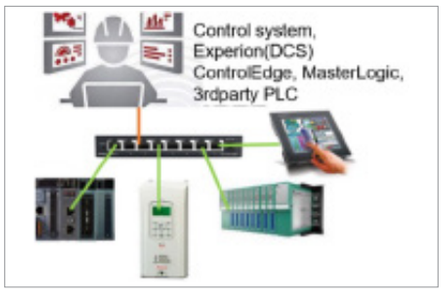


Figure 2: Star Topology

BUILT IN ETHERNET/IP SERVER

Hardware cost is reduced with a PLC system supporting multiple protocols on the same controller. MasterLogic PLC becomes more powerful with the addition of built in EtherNet/IP Server and Client functionality on the CPM (Control Processor Module). Locating the server and client on different Ethernet ports provides isolation between server and client devices connected to PLC. Moreover, using MasterLogic PLC as the EtherNet/IP server

A combination of I/O modules for ML200&ML50 and EtherNet/IP devices can be connected to the CPM, providing engineers with an additional level of flexibility on I/O network design.

Figure 3: Linear Topology

ODVA CERTIFICATION

MasterLogic PLC is certified by ODVA for conformance to EtherNet/IP standards and interoperability with other certified devices

SCALABLE TO A BROAD RANGE OF APPLICATIONS

Honeywell's PLC solution enables you to configure a control system with functionality to suit your specific needs. The controllers are scalable not only in their speed of processing, but also in their performance characteristics. In addition, they offer networking options across different communication standards.

Smart RemoteIO solution is designed to monitor equipment and processes used in water and waste water treatment, chemicals, mining, metals and minerals, power generation, Pharmaceutical, food & beverage, and the Oil and Gas, and general discrete control industry. It is also ideal for process industry applications such as instrument air handling, coal and ash handling, chiller controls, and drying equipment.

REMOTE IO AND ADAPTER OPTIONS

Smartt IO
- Standalone type
- General application
- Dual ports to relay point-to-point

Sensors
- Process, Flow Meters, Distance Sensors,
- Equipment Monitoring Sensor
- HART AI and AO

Interface
- Serial comm interface with slave
- Integrated with control system
- Diagnostic data

Adaptors
- Integrating with control system (EXP. LX, CEPLC, MLPLC)
- Interface with 3rd party, SCADA

Capabilities
- Wide IO capa., on various back-plane
- Hi-speed control IIoT and upload data

EXPERT SERVICE & SUPPORT

Honeywell has been recognized as an automation industry leader for more than four decades. Our technology is installed in some of the largest refineries, plants, mills and mines in the world.

Honeywell automation systems are easy to install and use, and are the most reliable and scalable systems available. Total Care and SESP service offerings are available for MasterLogic PLC. Refer to the Total Care PIN for more details.

An application migration tool, Smart RemoteIO Transition R100, is now available for Rockwell legacy PLC migration to MasterLogic PLC. It includes extensive pre- and post-migration reports; the result is an improved project schedule.

Honeywell understands that knowledgeable support and implementation services—delivered when and where they're needed—are critical to the success of any automation project.

PRODUCT RANGES

Smart IO, fixed IO points for function

ITEM NO	DESCRIPTION
MEL-D24C	24Vdc 32ch of Digital Input
MEL-DT4C1	24Vdc 16ch Digital Input, 16ch Digital Output
MEL-TR4C1	32ch Digital Output, SINK
MEL-RY2C	16ch Relay Output
MEL-AV8C	8ch Analog input, 1~5V/0~5V/0~10V/-10~10V
MEL-AC8C	8ch Analog input, 4~20mA, 0~20mA
MEL-DV4C	4ch Analog output, 1~5V/0~5V/0~10V/-10~10V
MEL-DC4C	4ch Analog output, 4~20mA, 0~20mA

REMOTE ADAPTER

All required IOs are combined modules from ML200 on 2MLL-DBDT/DBDF/DBDH and ML50 on MEL-BSSRT/BSSRF/BSSRH.

Available IOMs,

- Digital input and Digital output
- Analog input and Analog outpu HART)
- Serial Communication (except Profibus-DP, Master)

ITEM-ML 50	ITEM-ML 200	DESCRIPTION
MEL-BSSRT	2MLL-DBDT	100BASE-TX-UTP/CATS5
MEL-BSSRF	2MLL-DBDF	100BASE-FX Multi/Single-Mode Fiber-Optic
MEL-BSSRH	2MLL-DBDH	• 100BASE-TX-UTP/CATS5 • 100BASE-TX Multi/Single-Mode Fiber-Optic

For More Information

To learn more about MasterLogic PLC – Easy Integration and Flexible Deployment, visit www.honeywellprocess.com/PLC or contact your Honeywell account manager.

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