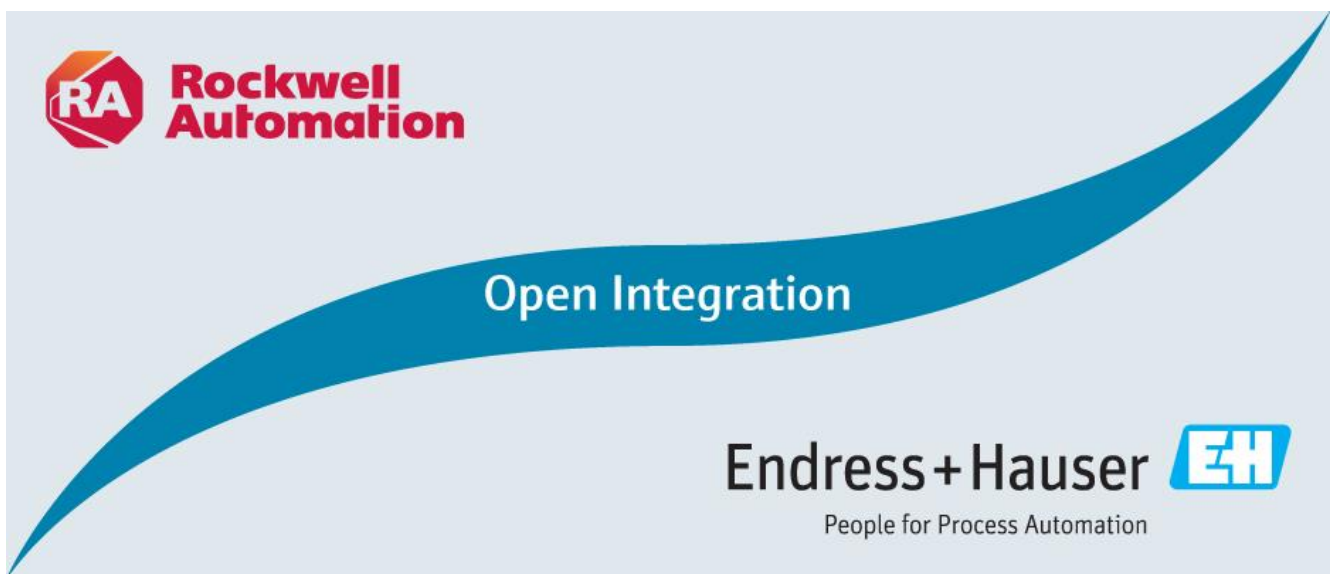# List of Tested Devices and Versions RA01

Rockwell Automation ControlLogix and EtherNet/IP plus HART for Food & Beverage Industry

Supported by:

Table of Contents

1   Document Information

1.1   Purpose and Scope

This document lists all relevant components and devices with versions as used for testing of the Reference Topology RA01. All content of this document is jointly developed, reviewed and approved by Rockwell Automation and Endress+Hauser as a common deliverable of Open Integration.

1.2   Document History

This is version 1.01.00 of this document. Version history:

Version	Released	Description
1.00.00	2018-10	Initial version
1.01.00	2020-08	Update to PlantPAx 4.x and new FactoryTalk® Linx Comm/ModuleDTMs

1.3   Related Documents

Please refer to related documents as listed below:

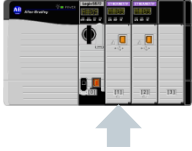| Document	Description
SD02272S/04/EN/02.20	Reference Topology RA01
SD02273S/04/EN/02.20	Integration Tutorial RA01
SD02274S/04/EN/02.20	Integration Test Summary RA01

2 Process Control System

2.1 Reference Software

RA Rockwell Automation	Detail	Description
Studio 5000	Function	Configuration and commissioning of system backbone, all I/O and control strategies for Rockwell Automation controllers
	Order code	9324-RLD600ENE
	SW version	Version 32.02.00 Full Edition
	Operating system	Windows 10 Pro 64 bits (1803)
	Other relevant information	
FactoryTalk® View Studio	Function	FactoryTalk® View Studio for FactoryTalk View Enterprise (both Site Edition and Machine Edition). Configuration software for HMI development
	Order code	9701-VWSTENE
	SW version	11.00.00
	Operating system	Windows 10 Pro 64 bits (1803)
	Other relevant information	
RSLinx Classic	Function	RSLinx Classic for Rockwell Automation Networks and Devices is a comprehensive factory communication solution, providing Allen-Bradley programmable controller access to a wide variety of Rockwell Software and Allen-Bradley applications.
	Order code	RSLinx Classic Lite
	SW version	4.11.00
	Operating system	Windows 10 Pro 64 bits
	Other relevant information	
RA Library of Process Objects	Function	Rockwell Automation Library of Process Objects. Includes Studio 5000 Add-On Instructions and FactoryTalk View Global Objects and Faceplates for Process Automation
	Order code	n/a
	Library version	4.10.01
	Operating system	Windows 10 Pro 64 bits (1803)
	Other relevant information	Library version 4.10.01 files: PlantPAx_Process_Library_v4.10.01.zip Endress_and_Hauser_Library_v4.10.01.zip

Compatibility verification of installed components can be found on Rockwell Automation web site (menu Compatibility / Download Center / Multi Product Selector / Find Downloads):

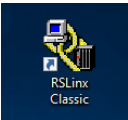|	Studio 5000 system 32.02.00	FactoryTalk View Site Edition 11.00.00	Process Library 4.10.01
Compatibility			
Studio 5000 system 32.02.00 System	✔	ⓘ	●
FactoryTalk View Site Edition 11.00.00	●	✔	✔
Process Library 4.10.01	●	✔	✔
Other Products - Compatibility			
Rockwell Services			
Operating Systems	Studio 5000 system 32.02.00	FactoryTalk View Site Edition 11.00.00	Process Library 4.10.01
General			
Windows 10			
Windows 10 Enterprise 2019 LTSC		✔	
Windows 10 Enterprise, 64-bit, Version 1809		✔	
Windows 10 Professional, 64-bit, Version 1809		✔	
Windows 10 Enterprise, 64-bit, Version 1803		✔	
Windows 10 Enterprise, 32-bit, Version 1803		✔	
Windows 10 Professional, 64-bit, Version 1803		✔	
Windows 10 Professional, 32-bit, Version 1803		✔	
Windows 10 Enterprise, 64-bit, Version 1709		✔	
Windows 10 Professional, 64-bit, Version 1709		✔	
Windows 10 Enterprise, 32-bit, Version 1709		✔	
Windows 10 Professional, 32-bit, Version 1709		✔	
Windows 10 Enterprise, 64-bit, Version 1703		✔	
Windows 10 Enterprise, 32-bit, Version 1703		✔	
Windows 10 Professional, 64-bit, Version 1703		✔	
Windows 10 Professional, 32-bit, Version 1703		✔	
Windows 10 Enterprise, 64-bit, Version 1607		ⓘ	
Windows 10 Enterprise, 32-bit, Version 1607		ⓘ	
Windows 10 Professional, 64-bit, Version 1607		ⓘ	
Windows 10 Professional, 32-bit, Version 1607		ⓘ	
Windows 10 IoT Enterprise 2016 LTSB		ⓘ	

2.2 Reference Hardware

	Detail	Description
ControlLogix	Function	Controller
	Order name, code	1756-L82E ControlLogix 5580 Controller
	FW version	V32.012
	Other relevant information	

3 Plant Asset Management System

3.1 Reference Software

	Detail	Description
FieldCare	Function	Configuration, commissioning and condition monitoring of intelligent field devices.
	Order code	SFE500-NEGB101
	SW version	V2.14.00
	DTM library	V2.47.01 Y-HART CommDTM V1.04.00.620 / 2015-05-08
	Operating system	Windows 10 Pro 64 bits

	Detail	Description
CommDTM FactoryTalk® Linx™ CommDTM	Function	FactoryTalk® Linx CommDTM for path thru communication with EtherNet/IP and HART devices
	Order code	
	SW version	V1.3.269
	Other relevant information	
RSLinx Classic	Function	RSLinx Classic for Rockwell Automation Networks and Devices is a comprehensive factory communication solution, providing Allen-Bradley programmable controller access to a wide variety of Rockwell Software and Allen-Bradley applications.
	Order code	RSLinx Classic Lite
	SW version	4.11.00
	Operating system	Windows 10 Pro 64 bits
	Other relevant information	

4   Field Network Infrastructure

4.1   Reference Hardware

4.1.1   EtherNet/IP I/O Network

The EtherNet/IP I/O Network is mandatory for this reference topology, with relevant impact to integration tests. It may be built in a Star, Device Level Ring or Linear Bus Topology, as well as any combination of those. Rockwell Automation and Endress+Hauser recommend using the components as listed below:

Reference hardware:

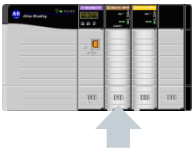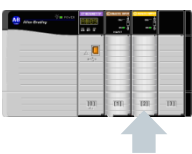| Rockwell Automation	Detail	Description
Stratix 5400	Function	Managed Industrial Ethernet Switch with Static and InterVLAN Routing.
	Order name, code	1783-HMS16TG4CGN
	FW version	Version 15.2(7) EA
	CommDTM	
	Other relevant information	

4.1.2   HART I/O

HART I/O is necessary to connect complementary HART devices, as required if EtherNet/IP options are not available or not reasonable to be used. This topology considers two alternative HART I/O options provided by Rockwell Automation:
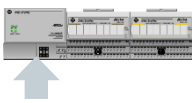
4.1.2.1   1756 ControlLogix I/O

Reference hardware:

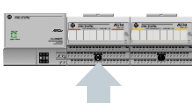| Rockwell Automation	Detail	Description
ControlLogix EtherNet/IP Bridge	Function	EtherNet 10-100M Bridge Module (2-Ports)
	Order name, code	1756-AENTR
	FW version	10.001
	CommDTM	FactoryTalk® Linx CommDTM V1.3.269
	Other relevant information	Path thru support by FactoryTalk® Linx CommDTM, see chapter 3.1

Rockwell Automation	Detail	Description
ControlLogix HART Input Module	Function	Analog Differential Isolated Input HART - Current 8 Pts (36 Pin)
	Order name, code	1756-IF8IH
	FW version	1.001
	ModuleDTM	1756-IF8IH/A V1.0.2
	Other relevant information	Path thru support by FactoryTalk® Linx CommDTM, see chapter 3.1
ControlLogix HART Output Module	Function	Analog Output HART Isolated - Current 8 Pts (36 Pin)
	Order name, code	1756-OF8IH
	FW version	1.001
	ModuleDTM	1756-OF8IH/A V1.0.2
	Other relevant information	Path thru support by FactoryTalk® Linx CommDTM, see chapter 3.1

4.1.2.2 1794 Flex I/O

Reference hardware:

Rockwell Automation	Detail	Description
Flex IO	Function	FLEX I/O Dual Port EtherNet/IP Adapter Module
	Order name, code	1794-AENTR
	FW version	1.017
	CommDTM	
	Other relevant information	Path thru support by FactoryTalk® Linx CommDTM, see chapter 3.1
Flex IO	Function	Isolated Input HART Analog Module, 8 Point
	Order name, code	1794-IF8IH
	FW version	1.1
	ModuleDTM	
	Other relevant information	Path thru support by FactoryTalk® Linx CommDTM, see chapter 3.1
Flex IO	Function	Isolated Output HART Analog Module, 8 Point
	Order name, code	1794-OF8IH
	FW version	1.1
	ModuleDTM	
	Other relevant information	Path thru support by FactoryTalk® Linx CommDTM, see chapter 3.1

5 Field Devices

5.1 EtherNet/IP devices

Endress+Hauser	Detail	Description	Device Type
Liquiline	Function	Liquid Analyzer Transmitter	0x109C
	Order Code	CM444-AAM2DA0F260BAAAAZ1	
	Serial No.	KC008405G00	
	FW version	01.07.03	
	EDS	EH_AN_Liquiline_CM44x_0x109C_0x02_0x01.zip	
	AOP	EH_EIP_AN_Liquiline_0x109C_0x02_AOP-1.22.zip	
	DTM	n.a.	
Promag 100	Function	Electromagnetic Flow Transmitter	0x103A
	Order Code	5H1B02-AADNBBNFFAS0AAEEB73Z1	
	Serial No.	KC108B19000	
	FW version	01.01.03	
	EDS	EH_ETH_FL_Promag 100_0x103A_0x02_0x01.zip	
	AOP	EH_EIP_FL_Promag100_0x103A_AOP_1_65_01.zip	
	DTM	Promag 100 / 5x1B / EIP / FW 1.01.zz / Dev. Rev. 2	
		V1.6.0.174 / 2015-05-29 / DTM Library 2.47	
Promag 300/500	Function	Electromagnetic Flow Transmitter	0x103C
	Order Code	5H5B02-AAINAAAAGAABERFDAS0AA1ABEB	
	Serial No.	MB11C719000	
	FW version	01.00.05	
	EDS	EH_EIP_FL_Promag300500_0x103C_0x01_EDS.zip	
	AOP	EH_EIP_FL_Promag300500_0x103C_0x01_AOP.zip	
	DTM	Promag 300 500 / 5x3x 5x5x / EIP / FW 1.00.zz / Dev. Rev. 1	
		V1.10.0.59 / 2017-12-01 / DTM Library 2.47	

Endress+Hauser [EH] People for Process Automation	Detail	Description	Device Type
Promass 100	Function	Coriolis Flow Transmitter	0x104A
	Order Code	8F1B08-AADNBBNSAAASAAE71Z1	
	Serial No.	KC08BB02000	
	FW version	01.02.02	
	EDS	EH_ETH_FL_Promass100_0x104A_0x03_0x01.zip	
	AOP	EH_EIP_FL_Promass100_0x104A_AOP_1_65_01.zip	
	DTM	Promass 100 / 8x1B / EIP / FW 1.02.zz / Dev. Rev. 3	
		V1.6.0.463 / 2015-05-29 / DTM Library 2.47	
Promass 300/500	Function	Coriolis Flow Transmitter	0x103B
	Order Code	8E3B08-AAINAAAGARSAD2SHA1ABEB	
	Serial No.	MB09E602000	
	FW version	01.00.05	
	EDS	EH_EIP_FL_Promass300500_0x103B_0x01_EDS.zip	
	AOP	EH_EIP_FL_Promass300500_0x103B_0x01_AOP.zip	
	DTM	Promass 300 500 / 8x3x 8x5x / EIP / FW 1.00.zz / Dev. Rev. 1	
		V1.10.0.94 / 2017-12-01 / DTM Library 2.47	
Memograph M	Function	Advanced Data Manager	0x107A
	Order Code	RSG45-AA2CAAAAA1E1AA	
	Serial No.	M603FA04484	
	FW version	02.04.03	
	EDS	EH_ETH_CO_Memograph_M_0x107A_0x02_0x01.zip	
	AOP	EH_EIP_CO_MemographM_0x107A_0x02_AOP-1_7.zip	
	DTM	n.a.	

bürkert FLUID CONTROL SYSTEMS	Detail	Description	Device Type
Industrial Ethernet Gateway	Function	EtherNet/IP Gateway Type ME43	0x21CC
	Order Code	307390	
	Serial No.	1002	
	FW version	A.02.09.01	
	EDS	00696465_008652_KONF_D\EtherNetIP\ EthernetIP-Buerkert-AirLINE-8652.eds	

5.2 HART devices

Endress+Hauser	Detail	Description	Device Type
Cerabar M	Function	Absolute and Gauge Pressure Transmitter	0x0019
	Order Code	PMP51-AA21JA1KGBGCJA1+AAPA78	
	Serial No.	KC01B601129	
	FW version	01.00.03	
	HART revision	6.0	
	DTM	Cerabar M 5x / PMx 5x / V1.00.xx	
		V1.4.188.39 / 2017-03-31 / DTM Library 2.47	
Deltapilot S	Function	Hydrostatic Level Transmitter	0x111A
	Order Code	FMB70-ABA1F121GCAAPA72Z1	
	Serial No.	KC0095010AE	
	FW version	02.30.06	
	HART revision	7.0	
	DTM	Deltapilot S / FMB 70 / HART / Fw 2.30.zz / Dev. Rev. 23	
		V1.4.189.51 / 2018-02-19 / DTM Library 2.47	
iTHERM	Function	Temperature Transmitter	0x11CC
	Order Code	TR10-ABA1CAS1M2000TZD	
	Serial No.	KC05CE14152	
	FW version	01.01.16	
	HART revision	7.5	
	DTM	iTEMP / TMT82 / HART / FW 1.01.zz / Dev.Rev2	
		V1.10.423.4213 / 2018-03-01 / DTM Library 2.47	
Cerabar S	Function	Absolute and Gauge Pressure Transmitter	0x1118
	Order Code	PMC71-ABA1H1GAAAA+PA72Z1	
	Serial No.	KC03140109C	
	FW version	02.30.06	
	HART revision	7.0	
	DTM	Cerabar S / PMx 7x / HART / FW2.30.zz / Dev.Rev.23	
		V1.4.189.51 / 2018-02-19 / DTM Library 2.47	

	Detail	Description	Device Type
Liquicap M	Function	Capacitance Level Transmitter	0x001D
	Order Code	FMI51-A1ARCJA3A1A1	
	Serial No.	KC004E010F0	
	FW version	01.03.02	
	HART revision	5.0	
	DTM	Liquicap M / FMI 5x / 1.03.xx	
		V1.4.188.39 / 2017-03-31 / DTM Library 2.47	
Deltabar S	Function	Differential Pressure Transmitter	0x1117
	Order Code	PMD75-ABA7D11BAAA+PB72Z1	
	Serial No.	KC02950109D	
	FW version	02.20.04	
	HART revision	7.0	
	DTM	Deltabar S / xMD7x / HART / FW2.30.zz / Dev.Rev.23	
		V1.4.189.51 / 2018-02-19 / DTM Library 2.47	
Levelflex	Function	Guided Radar Level Transmitter	0x1122
	Order Code	FMP51-AAACCAAAA4GDJAAEH71Z1	
	Serial No.	N202500112C	
	FW version	01.03.01	
	HART revision	7.5	
	DTM	Levelflex / FMP5x / HART / FW 1.02.zz / Dev.Rev.4	
		V1.10.1.2369 / 2017-06-08 / DTM Library 2.47	
Smartec S	Function	Conductivity Transmitter	0x0097
	Order Code	CLD134-PMV538HB1	
	Serial No.	KC011305G00	
	FW version	01.19.00	
	HART revision	5.0	
	DTM	Smartec S / CLD 132 / V1.11	
		V1.4.188.39 / 2017-03-31 / DTM Library 2.47	

	Detail	Description	Device Type
Micropilot	Function	Radar Level Transmitter	0x1128
	Order Code	FMR51-AAACCABAA5RVJAAEH72Z1	
	Serial No.	N2008D01134	
	FW version	01.02.02	
	HART revision	7.5	
	DTM	Micropilot / FMR5x / HART / FW 1.02.zz / Dev.Rev.3	
		V1.10.0.913 / 2017-06-08 / DTM Library 2.47	
Prowirl 200	Function	Vortex Flow Transmitter	0x1138
	Order Code	7F2B15-AAACCA1AASK+AA74Z1	
	Serial No.	KC104519000	
	FW version	01.02.04	
	HART revision	7.4	
	DTM	Prowirl 200 / 7x2B / HART / FW1.02.zz / Dev.Rev.03	
		V1.8.0.431 / 2016-09-12 / DTM Library 2.47	
Prosonic M	Function	Ultrasonic Level Transmitter	0x0011
	Order Code	FMU40-ANB2A21	
	Serial No.	N201510109A	
	FW version	01.04.02	
	HART revision	5.0	
	DTM	Prosonic M / FMU 4x / V4.xx	
		V1.4.188.39 / 2017-03-31 / DTM Library 2.47	

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