



**Notice of Potential Product Concern** 

Rockwell Automation issues a Product Notice when it identifies a product(s) anomaly that may cause commercial or customer satisfaction concerns.

## **AADvance Controller Sequential Function Chart Execution**

Reference: 2019-10-002

Date: October 2019

This Product Notice informs you of a potential anomaly that exists with firmware for the AADvance controller. When using Sequential Function Charts (SFC), AND divergences in the AADvance controller may lead to unexpected execution behavior. Customers are advised to avoid the use of the AND construct until updated firmware can be applied.







#### - Product Identification -

The affected products are AADvance controllers, catalog numbers T9110 and T9120, firmware versions 1.040.xx and prior. Firmware versions 1.040.xx and prior were released as part of S/W Issues 21 and prior.

**Note** – Product firmware may have been upgraded in the field. For installed product, the installed firmware version should be verified using the AADvance 1715 Collection Tool prior to taking corrective action. Only product with installed firmware versions 1.040.xx and prior require corrective action.

**Important** – Product hardware is not affected by this anomaly and <u>may not be returned</u> against this notification. Refer to the Corrections section of this document for firmware update information.

Processor Module					10
H/W Issue	<	S/W Issue	21		
Tested	AJB	W/O	12345		
Input/ Output	16119 BP: 380 m/	110730 • @ 15-34			
Ambient Temperature Range			Tamb = -25°C to +60°C		
Installation	ICSTT-RM4	-	Fuse Rating N/A		
WARNING -	uniess a ENT - Ne pas d	rea is knov deconnect d'etre dans	while circuit is l in to be non-ha er lorsque le une zone reco Produc	circuit es	

For installed T9110 product, the product identification information may be found on the product nameplate, located on the right side of the product. The catalog number will be in the upper right corner the software issue is in the S/W Issue field.

In the example shown to the left, the catalog number is T9110 and the software issue is 21. This product matches the information in the Product Identification section of this document. Prior to taking corrective action, the installed firmware version should be verified. Only product with installed firmware version 1.040.xx and prior require corrective action.



For new T9110 product still within its carton, the product identification information may be found on the carton label. The catalog number will be in the CAT field and the software issue is contained in the VER field. The software issue is the numeric portion of the VER field.

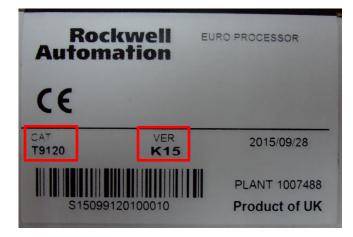
In the example shown to the left, the catalog number is T9110 and the version is K21. The software issue is the numeric portion of K21, or 21. This product must be firmware updated prior to installation and operation.

# Rockwell Automation

9120 Euro Processor	1067003	
W K W 15 NO S16119120100034		

For installed T9120 Eurocard product, the product identification information may be found on the product nameplate, located on the Eurocard connector. The catalog number will be in the top left corner and the software issue is in the SW field.

In the example shown to the left, the catalog number is 9120, or T9120, and the software issue is 15. This product matches the information in the Product Identification section of this document. Prior to taking corrective action, the installed firmware version should be verified. Only product with installed firmware version 1.040.xx and prior require corrective action.



For new T9120 product still within its carton, the product identification information may be found on the carton label. The catalog number will be in the CAT field and the software issue is contained in the VER field. The software issue is the numeric portion of the VER field.

In the example shown to the left, the catalog number is T9120 and the version is K15. The software issue is the numeric portion of K15, or 15. This product must be firmware updated prior to installation and operation.

The product identification information of these modules may also be obtained electronically using the Rockwell Automation AADvance 1715 Collection Tool. This tool may be downloaded from the Rockwell Automation Product Compatibility and Download Center (PCDC) at

<u>https://compatibility.rockwellautomation.com/Pages/MultiProductDownload.aspx?crumb=112</u>. In the "search" field enter "AADvance 1715 Collection Tool" and select the latest version for download and installation.

Use of the tool is described in Rockwell Automation Knowledgebase Article ID 68174.

In the collection tool, the output will list the details for each module in the system. T9110 and T9120 modules will be shown as Processor, with the type and firmware shown in the "Currently running operational firmware" line. In the example below, the example below, the module type is 9110, or T9110, and the firmware version is 1.040.5. This product is within the firmware revisions for this anomaly and is subject to this notification.

File View Help	
Processor A serial number T-1805-9110-7-50010 build K22	*
The 'T' shows that the module was assembled in Mexico from PCB assemblies built in Mexico.	
Currently running operational firmware, 9110 OS 354170 build 1.040.5 This is part of manufacturing S/W issue 22	
ASIC firmware:	-
390370 FPGA 325 (manufacturing S/W issues 20 to 22)	-
354280 LSP 157 (manufacturing S/W issues 9 to 22)	
354260 BUSP 152 (manufacturing S/W issues 18 to 22)	
The module build is K22 based on serial number hardware code and firmware.	
CIP Revision: 1.040.5	
Secondary boot: 160	
Resource 1, No resource loaded	
There are critical faults in the system log.	
In the Analysis view, right click on the processor/adapter to see the system log.	
These log entries include information which may identify the cause of a processor failure.	
There are entries in the module's Kernel Log of critical faults.	
Note that these stay in the module's memory as long as the system is powered or has a good battery. They may therefore refer to a very old event, often with old firmware.	-
	-
Analysis view Processor A Report	11

#### - Description -

A potential anomaly exists with firmware for the AADvance controllers catalog numbers T9110, software issues up through 21, and T9120, software issues up through 15. When using Sequential Function Charts (SFC), AND divergences in the AADvance controller may lead to unexpected execution behavior. Customers are advised to avoid the use of the AND construct until updated firmware can be applied.

At this time, Rockwell Automation does not support the use of SFC in safety related applications, regardless of the version of Workbench that is used. The following is from the AADvance Functional Safety System Implementation document, chapter 4, specific to Workbench 2.x:

"Language Selection ... Sequential Function Chart (SFC) (not supported by Workbench 2.0 in a safety related application)"

#### - Temporary Workarounds -

Customers are advised to avoid the use of SFC when programming a safety related application. If SFC use is required, the application must be fully tested to make sure all AND constructs resolve properly.

#### - Correction -

**Important** – Hardware is not affected by this anomaly and <u>may not be returned</u> against this notification.

Correction requires updating your AADvance T9110 and T9120 controllers to firmware version 1.41 or later. When available, corrected firmware can be downloaded from the Rockwell Automation Product Compatibility and Download Center (PCDC). Access the PCDC at

<u>https://compatibility.rockwellautomation.com/Pages/MultiProductDownload.aspx?crumb=112</u>. In the "search" field, enter AADvance. Select AADvance for the T9110 and AADvance Eurocard for the T9120.

Firmware correcting this anomaly will be available for a period of at least 18 months from the initial publication of this Product Notice or initial firmware posting on the PCDC.

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### - Requested Customer Action -

Rockwell Automation requests you take the following actions:

- Check if you have a product affected by this Product Notice. Refer to the Product Identification and Description sections of this document for product identification assistance.
- Continue to check incoming shipments for potentially affected product. Product in transit or in non-Rockwell
  Automation inventory may continue to contain potentially affected product for a period of time after the
  publication of this document.
- If you need additional assistance, please contact Rockwell Automation Technical Support. See Appendix A for local telephone numbers. Customers without TechConnect<sup>™</sup> support contracts should reference this Product Notice when calling.
- Customers with TechConnect support contracts may be able to <u>chat online</u> with support representatives. Reference this Product Notice when connected to a support engineer.

The most current version of this Product Notice is posted on the Rockwell Automation Support Center, <u>http://www.rockwellautomation.com/knowledgebase</u>, as ID number <u>1090854</u>. Additional languages may also be available at the end of this article attached as downloadable PDF documents.

If this Product Notice does not affect you because you do not have the products any longer, or if you are a Distributor, Rockwell Automation asks that you forward a copy of this notice, with any identifying documentation, immediately to the person or company that now has the product. We also ask that you contact Rockwell Automation Technical Support and provide the location of the affected units.

We appreciate your immediate cooperation. If you have any questions, please contact us.

Sincerely,

ROCKWELL AUTOMATION

You can register for Automatic Product Safety Advisories and Product Notices from Rockwell Automation by email. Go to the Support web page at <u>http://www.rockwellautomation.com/support</u> and click the *Search Knowledgebase* – *Get Answers* link. Sign in with your TechConnect Account or free Rockwell Automation Member Account and you can subscribe to important product updates, including Product Safety Advisories and Product Notices.

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### Appendix A Regional Technical Support Information

The following list can help you to contact the correct technical support center for your location. If your country is not listed, you can find a customer support number for your location by going to the Rockwell Automation Knowledgebase as <a href="https://rockwellautomation.custhelp.com">https://rockwellautomation.custhelp.com</a>. Mouse over *Support* and select *Find Local Support*, then enter your location information. If you have a TechConnect<sup>™</sup> support contract, please use the telephone number supplied to you with the contract.

Region / Country	Phone Number () International Code
Asia/Pacific	
Australia	1 800 762 593
China	400 620 6620
Hong Kong	+852 2887 4666
India	1 800 2000 121
Japan	03 3206 2785
Korea	(82) 2 2188 4400
Malaysia	1 800 80 4851
New Zealand	0800 27 27 25
Taiwan	080 902 0908
Thailand	(66) 2936 1500
Caribbean	
All Countries (English)	(1) 440 646 3223
All Countries (Español)	(1) 440 646 3650
Central America	
Argentina	800.666.0320
Belize	(1) 440 646 3650
Bolivia	(54) 800 10 0632
Brazil	(55) 11 5189 9500
Chile	800.53.0012
Colombia	01.800.700.2107
Costa Rica	0800.013.1215
Ecuador	58.212.949.0611
El Salvador	(52) 55 5246 2010
Guatemala	1.800.288.0108
Honduras	(52) 55 5246 2010
Mexico	001.888.365.8677
Nicaragua	(52) 55 5246 2010
Panama	001.800.203.3475
Paraguay	(54) 11 5554 4000
Peru	0800.535.36
Suriname	(1) 440 646 3650
Uruguay	(54) 11 5554 4000
Venezuela	800.1.00.3062

Region / Country	Phone Number
Europe	
Austria	(49) 211 41553 664
Belgium	(32) 2 716 8411
Czech Republic	(420) 28401 5911
Denmark	(45) 43 466 006
Finland	(358) 958 447 419
France	(33) 825303132
Germany	(49) 211 41553 664
Hungary	(420) 28401 5911
Ireland	(44) 01908 635245
Italy (Brescia, Milano e Padova)	(39) 199 11 99 00
Italy (Bologna,Firenze,Napoli, Roma e Torino)	(39) 199 11 99 22
Morocco	(33) 825303132
Netherlands	(31) 10 266 55 80
Poland	(48) 22 32 60 707
Portugal	(1) 440 646 3223
Slovakia	(420) 284015911
Spain	(34) 902 30 93 30
Sweden	(46) 46 19 93 91
Switzerland (German)	(41) 0844 84 84 11
Switzerland (French)	(41) 0844 84 84 12
Switzerland (Italian)	(41) 0844 84 84 13
United Kingdom	(44) 01908 635245
North America	
Canada	(1) 440-646-3223
United States	(1) 440-646-3223