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1 News

1.1 FTP-Site Link & Update

Our FTP server provides product information that is not available in Delta's Download Center on the global website, e.g. datasheets, technical notes, presentations, software, etc. You can visit our FTP site with below account info.

Host: ftp2.delta-europe.com/deltronics-eindhoven/customer-service/
 Username: den-eindhoven
 Password: BuPd2175

- **NOTE** After migration of the ftp-server, from now on it is only possible to access our FTP via TCP port 22/23. Therefore, please use common FTP clients such as FileZilla or Total Commander. Access with standard web browsers, like Edge, Chrome, Opera, etc. is not possible anymore.

2 Product update

2.1 **NEW** – Delta AC Servo ASD-B3 Series



The ASDA-B3 is the standard servo system, which features high tolerance, stable operation and high precision motion control functions. It creates a highly efficient, user-friendly operation environment and optimizes production efficiency and output value.

It is part of the 3rd generation of Delta servo systems and will be available in different configurations. The new smaller motor design, higher encoder resolution and power density are a few of the highlights of this product.

Highlights and Features:

- Evolution to an higher technical value product
- Increase servo drive adoption vs VFD / Pneumatics
- Fit for purpose / value for money design
- Simple and easy to use due GUI & tools

Applications:

ASD-B3 Family is a general-purpose servo package that can be used in different field accordingly the spec, for example;

- Machine tool
- Electronics
- Pick & Place
- Robot
- Packing
- Printing
- Textile



[Documentation](#)

2.2 **NEW** – The AS-FOPC02 Function Card

The AS-FOPC02 is an OPC UA function card for AS300 series CPU. It supports OPC UA server and has two built-in RJ45 Ethernet port (switched). With this function card, users have the key to IIoT world.

Highlights and Features:

- Supports OPC UA server
- Built-in RJ45 x2 (Switch mode)
- Max OPC UA client connections: 6
- Max OPC UA tags: 1000
- Provides Web UI for management

Specifications:

- Built-in RJ45 x2 (Switch mode)
- Supports OPC UA server
 - Max OPC UA client connections: 6
 - Max tags: 1000
 - No security certification feature
- Could only be installed on AS300 CPU expansion slot



[Documentation](#)

2.3 New – The AS04SIL-A Extension Module

The AS04SIL-A is a new extension module of the AS series PLC. It is a communication module which supports up to 4 channels IO-Link devices and can be separately configured in IO-Link master or standard I/O (SIO) mode. Moreover, it allows users to have the hybrid use of the IO link sensors and traditional sensors.

Product Features

- IO-Link master module
- Supports up to 4 channels of IO-Link devices
- Compliant IO-Link interface and system specification version 1.1.2
- Compliant IO-Link tester specification version 1.1.2
- Max data capacity: 32KB/channel; 128KB/module



[Documentation](#)

2.4 UPDATE – Firmware of C2000, CH2000 (V2.07) and C2000 Plus (V3.07)

See the new firmware release announcement of C200,CH2000 and C2000 Plus on our ftp-site in the model folder: e.g.
 /customer-service/Industrial Automation Products/Drive & Power Quality/VFD-C2000 Series/VFD-C2000 Plus/Firmware/Firmware Release Announcements

Changing Functions

- Add new language display: Polish error code and warning code display
- To modify the name of the Pr. 05-00 selection item 11
- To modify the setting range of the Pr.10-28 FOC Gain of Excitation Current Rise Time.
- To modify the setting range of the Pr.10-01 Encoder Pulses per Revolution.
- To modify ACI input setting range.
- To modify ACI input signal loss detection level.
- To modify the characteristic of Analog Three-point curve.
- To modify carry frequency upper limit.***
- To delete 11-60 bit3 Enable hardware limit function and add new function: bit11 operation direction definition.
- To modify ASR bandwidth setting range.
- To modify Pr.11-14 ASR Output Low Pass Filter Time default setting.

- To modify Pr.11-56~11-59 function definition:
- Add Pr.11-73 comments.
- Parameter 10-37 function modification:
- PMFOCPG control mode use new motor parameter tuning method: 05-00=11 Synchronized motor (SynM) parameter static auto-tuning
- Import the induction motor parameter default table (motor parameters default value are no longer be 0.00)
- When driving SynRM and the power range is less or equal to 3.7kW, the data display of Pr.05-40 and 05-41 is changed from 2 decimal point to become 1 decimal point.
- Change the DS402 object 0x603F configured method
- Add new EtherCAT/CANopen DS402 object
- When communicating with Ethernet/IP, the dynamic map can read/write data.
- EtherCAT Communication synchronization cycle time modification:
- To modify KPC-CC01 parameter setting restrain.
- Supports VFD Explorer Lite

New Functions

- Add new parameter: Pr.00-12 P2P positioning mode
- Add new parameter 09-74 Communication card control flag
- Explorer add new function: ASR bandwidth auto-tuning and inertia auto-tuning function.
- Add new control method: SRMSVC control mode(SynRM SVC)
- Add new parameter 10-60 Coordinate system setting
- Add new parameters: Pr.01-52 Zero-speed delay time, 01-53 Zero-speed delay level, 01-54 Zero-speed delay timeout time
- Add new parameter: 11-64 Single-point position creep speed
- Pr.07-12 has add new selection item: 4 Speed tracking by the motor vector flux
- Pr.03-19 has add new selection item: 4 Continue operation with Pr.01-11 (Output Frequency Lower Limit) and display warning code: ANL
- Pr.14-10 and 14-11 has add new selection item: 4 Continue operation with Pr.01-11 (Output Frequency Lower Limit) and display warning code: ANL
- Pr.10-00 add new selection item: 8: Tamagawa communication type absolute encoders
- Add new parameter: Pr.10-23 PG control flag
- Add new parameters: Pr.10-19 Encoder single-turn resolution and Pr.10-20 Encoder multi-turn resolution
- Add new parameters: Pr.11-61 Mechanism single-turn range(High byte) 、 Pr.11-62 Mechanism single-turn range(Low byte)
- Add new function: Interpolated Position Mode
- Add new function: Cyclic Synchronous Torque Mode
- The EtherCAT/CANopen add new object
- Add/Modify CANopen error code:
- With motion control, Explorer support for monitoring DS402 objects

New Accessories

- New motional card: **EMC-MC01**
- New software: **VFD Explorer Lite V1.00**

*** To modify carry frequency upper limit.

C2000:

230V Series [Normal Load]								
Power/ Control mode	VF · SVC		VFP		IMFOCPG · IMTQCPG		PMFOCPG · PMTQCPG	
	Settings	Default	Settings	Default	Settings	Default	Settings	Default
1~15HP [0.75~11kW]	2~15kHz	8kHz	2~10kHz	8kHz	2~8kHz	8kHz	4~8kHz	8kHz
20~50HP [15~37kW]	2~10kHz	6kHz	2~10kHz	6kHz	2~8kHz	6kHz	4~8kHz	6kHz
60~125HP [45~90kW]	2~9kHz	4kHz	2~9kHz	4kHz	2~8kHz	4kHz	4~8kHz	4kHz

230V Series [Heavy Load]								
1~15HP [0.75~11kW]	2~15kHz	2kHz	2~10kHz	4kHz	2~8kHz	2kHz	4~8kHz	4kHz
20~50HP [15~37kW]	2~10kHz	2kHz	2~10kHz	4kHz	2~8kHz	2kHz	4~8kHz	4kHz
60~125HP [45~90kW]	2~9kHz	2kHz	2~9kHz	4kHz	2~8kHz	2kHz	4~8kHz	4kHz

230V Series [Normal Load]		
Power/ Control mode	IMFOC · IMTQC	
	Settings	Default
1~15HP [0.75~11kW]	4~14kHz	8kHz
20~50HP [15~37kW]	4~10kHz	6kHz
60~125HP [45~90kW]	4~9kHz	4kHz

230V Series [Heavy Load]		
1~15HP [0.75~11kW]	4~14kHz	4kHz
20~50HP [15~37kW]	4~10kHz	4kHz
60~125HP [45~90kW]	4~9kHz	4kHz

460V Series [Normal Load]								
Power/ Control mode	VF · SVC		VFP		IMFOCPG · IMTQCPG		PMFOCPG · PMTQCPG	
	Settings	Default	Settings	Default	Settings	Default	Settings	Default
1~15HP [0.75~11kW]	2~15kHz	8kHz	2~10kHz	8kHz	2~8kHz	8kHz	4~8kHz	8kHz
20~50HP [15~37kW]	2~10kHz	6kHz	2~10kHz	6kHz	2~8kHz	6kHz	4~8kHz	6kHz
60~125HP [45~90kW]	2~9kHz	4kHz	2~9kHz	4kHz	2~8kHz	4kHz	4~8kHz	4kHz

460V Series [Heavy Load]								
1~15HP [0.75~11kW]	2~15kHz	2kHz	2~10kHz	4kHz	2~8kHz	2kHz	4~8kHz	4kHz
20~50HP [15~37kW]	2~10kHz	2kHz	2~10kHz	4kHz	2~8kHz	2kHz	4~8kHz	4kHz
60~125HP [45~90kW]	2~9kHz	2kHz	2~9kHz	4kHz	2~8kHz	2kHz	4~8kHz	4kHz

460V Series [Normal Load]		
Power/ Control mode	IMFOC · IMTQC	
	Settings	Default
1~15HP [0.75~11kW]	4~14kHz	8kHz
20~50HP [15~37kW]	4~10kHz	6kHz
60~125HP [45~90kW]	4~9kHz	4kHz

460V Series [Heavy Load]		
1~15HP [0.75~11kW]	4~14kHz	4kHz
20~50HP [15~37kW]	4~10kHz	4kHz
60~125HP [45~90kW]	4~9kHz	4kHz

CH2000:

Power/ Control mode	230V Series [Super Heavy Load]							
	Default	VF · SVC	VFP	IMFOCPG · IMTQCPG	PMFOCPG · PMTQCPG	PMFOC · IPMFOC	IMFOC · IMTQC	SRM FOC*
		Settings	Settings	Settings	Settings	Settings	Settings	Settings
1~15 HP (0.75~11 kW)	8 kHz	2~15 kHz	2~10 kHz	2~8 kHz	4~8 kHz	4~10 kHz	4~12 kHz	4~8 kHz
20~100 HP (15~75 kW)	6 kHz	2~15 kHz	2~10 kHz	2~8 kHz	4~8 kHz	4~10 kHz	4~12 kHz	4~8 kHz
460V Series [Super Heavy Load]								
1~20 HP (0.75~15 kW)	8 kHz	2~15 kHz	2~10 kHz	2~8 kHz	4~8 kHz	4~10 kHz	4~12 kHz	4~8 kHz
25~100 HP (18.5~75 kW)	6 kHz	2~15 kHz	2~10 kHz	2~8 kHz	4~8 kHz	4~10 kHz	4~12 kHz	4~8 kHz
125~600 HP (90~450 kW)	4 kHz	2~10 kHz	2~10 kHz	2~8 kHz	4~8 kHz	4~10 kHz	4~10 kHz	4~8 kHz

NOTE: SRMFOC control mode, the carry frequency default=4kHz.

C2000 Plus:

[Heavy Load]									
Power/ Control mode	VF · SVC		VFP		IMFOCPG · IMTQCPG		PMFOCPG · PMTQCPG		
	Settings	Default	Settings	Default	Settings	Default	Settings	Default	Default
VFD007~150C43A/E VFD007~110C23A/E	2~15kHz	8kHz	2~10kHz	8kHz	2~8kHz	8kHz	4~8kHz	8kHz	
VFD185~550C43A/E VFD150~370C23A/E	2~10kHz	6kHz	2~10kHz	6kHz	2~8kHz	6kHz	4~8kHz	6kHz	
VFD750~5600C43A/E VFD450~900C23A/E	2~9kHz	4kHz	2~9kHz	4kHz	2~8kHz	4kHz	4~8kHz	4kHz	
[Super Heavy Load]									
VFD007~150C43A/E VFD007~110C23A/E	2~15kHz	4kHz	2~10kHz	4kHz	2~8kHz	4kHz	4~8kHz	4kHz	
VFD185~550C43A/E VFD150~450C23A/E	2~10kHz	4kHz	2~10kHz	4kHz	2~8kHz	4kHz	4~8kHz	4kHz	
VFD750~3150C43A/E VFD550~900C23A/E	2~9kHz	4kHz	2~9kHz	4kHz	2~8kHz	4kHz	4~8kHz	4kHz	
VFD3550~5600C43A/E	2~9kHz	3kHz	2~9kHz	3kHz	2~8kHz	3kHz	4~8kHz	3kHz	

[Heavy Load]						
Power/ Control mode	IMFOC · IMTQC		PMFOC, IPMFOC		SRMFOC	
	Settings	Default	Settings	Default	Settings	Default
VFD007~150C43A/E VFD007~110C23A/E	4~12kHz	8kHz	4~10kHz	8kHz	4~8kHz	4kHz
VFD185~550C43A/E VFD150~370C23A/E	4~10kHz	6kHz	4~10kHz	6kHz	4~8kHz	4kHz
VFD750~5600C43A/E VFD450~900C23A/E	4~9kHz	4kHz	4~9kHz	4kHz	4~8kHz	4kHz
[Super Heavy Load]						
VFD007~150C43A/E VFD007~110C23A/E	4~12kHz	4kHz	4~10kHz	4kHz	4~8kHz	4kHz
VFD185~550C43A/E VFD150~450C23A/E	4~10kHz	4kHz	4~10kHz	4kHz	4~8kHz	4kHz
VFD750~3150C43A/E VFD550~900C23A/E	4~9kHz	4kHz	4~9kHz	4kHz	4~8kHz	4kHz
VFD3550~5600C43A/E	4~9kHz	3kHz	4~9kHz	3kHz	4~8kHz	4kHz

*** CH2000 has some new models with built-in braking chopper. Check the CH2000 release announcement, Chapter II. New Functions, point 1, page 14.

1. Add new power model

00-00	Identity Code of the AC Motor Drive					Default: ###
	Settings	Read Only				
00-01	Display AC Motor Drive Rated Current					Default: ###.##
	Settings	Read Only				

Pr.00-00 displays the identity code of the AC motor drive. Using the following table to check if Pr.00-01 setting is the rated current of the AC motor drive. Pr.00-01 corresponds to the identity code Pr.00-00.

230V Series										
Frame	A				B			C		
kW	0.75	1.5	2.2	3.7	5.5	7.5	11	15	18.5	
HP	1.0	2.0	3.0	5.0	7.5	10	15	20	25	
Pr.00-00	4	6	8	10	12	14	16	18	20	
Rated Current for Super Heavy Duty (A)	5	8	11	17	25	33	49	65	75	
Frame	D				E	F				
kW	22	30	37	45	50	75				
HP	30	40	50	60	75	100				
Pr.00-00	22	24	26	28	30	32				
Rated Current for Super Heavy Duty (A)	90	120	146	180	215	255				

460V Series											
Frame	A				B				C		
kW	0.75	1.5	2.2	3.7	5.5	7.5	11	15	18.5	22	30
HP	1	2	3	5	7.5	10	15	20	25	30	40
Pr.00-00	5	7	9	11	13	15	17	19	21	23	25
Rated Current for Super Heavy Duty (A)	3.0	4.0	6.0	9.0	12	18	24	32	38	45	60
Frame	D				E	F	G	H			
kW	37	45	55	75	90	110	132	160	185	220	280
HP	50	60	75	100	125	150	175	215	250	300	375
Pr.00-00	27	29	31	33	35	37	39	41	43	45	47
Rated Current for Super Heavy Duty (A)	73	91	110	150	180	220	250	310	370	450	550

Frame	D0-3	D3	D3	D3
Model name	VFD370CH43L-00	VFD450CH43L-00	VFD550CH43L-00	VFD750CH43L-00
kW	37	45	55	75
HP	50	60	75	100
Pr.00-00	488	489	490	491
Rated Current for Super Heavy Duty (A)	73	91	110	150

In previous models the braking chopper was included in Frame sizes A to C, up to 30kW. With the new models mentioned above this is included in models up to 75kW.

Release date:

C2000 and CH2000:

Firmware Version	Switching Period	
V2.07	Taoyuan	T2133
V2.07	Wujiang	W2145

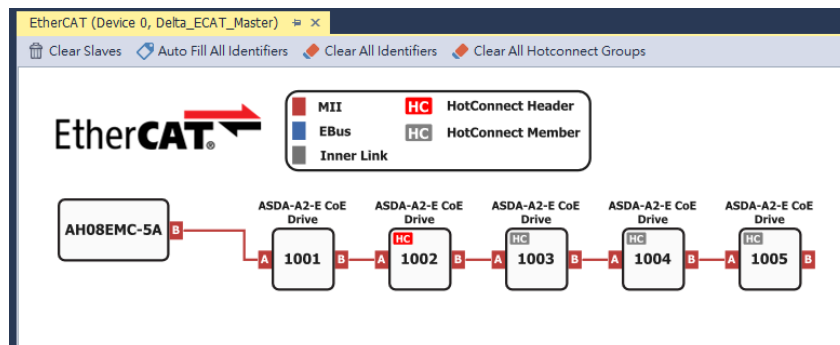
C2000 Plus:

Firmware Version	Switching Period	
V3.07	Taoyuan	T2133
V3.07	Wujiang	W2135

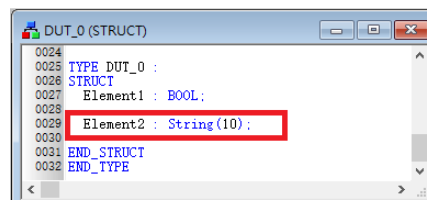
2.5 UPDATE – ISPSOFT Version 3.14 is released

See the announcement [DELTA_ISPSOFT_V3.14_T_EN_20211005](#) on our ftp-site in the folder:
 \Customer-Service\Industrial Automation Products\Control\PLC- Programmable Logic
 Controllers\Software\Release Announcement

- EtherCAT now supports Hot Connect Group function. You can configure EtherCAT slaves in a more flexible way.



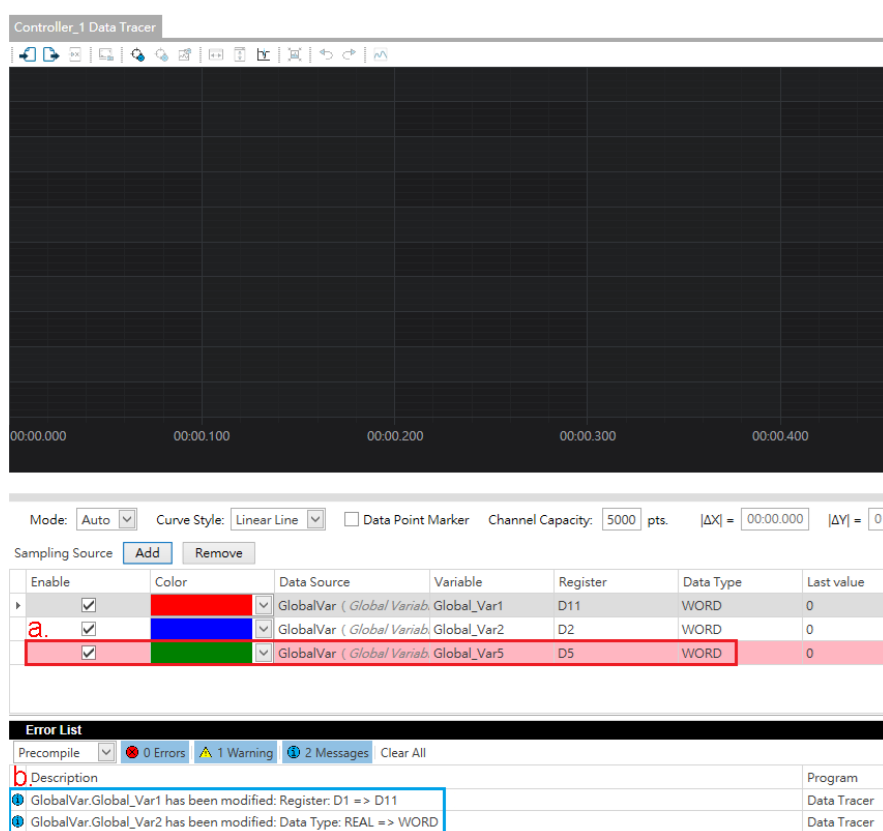
- Update the compiler for AS and AH Series modules. Now the User-Defined Data Type (DUT), including union and structure, their elements can be declared to String type as the example shown below. String (length)



- A new synchronization mechanism is added for Data Tracer, applicable to AH Motion, DVP Motion and AS Motion Series PLC.

Before starting Data Tracer, the synchronization mechanism checks if the data is correct. There are two scenarios when the data in Data Tracer and ISPSOft is not consistent.

- a. If the symbol of Data Tracer does NOT exist in the symbol table of ISPSOft, the execution of Data Tracer will NOT begin. And the symbol will be highlighted in red as the example shown below.
- b. If the symbol of Data Tracer does exist in the symbol table of ISPSOft, but its data type or its register is not consistent with what is stated in ISPSOft, the synchronization will still start and after that, the execution of Data Tracer will begin. The symbol with different data type or register will be listed in the Error List as the example shown below.



The screenshot shows the 'Controller_1 Data Tracer' window. It features a large black area for data visualization and a table below it. The table has columns for 'Enable', 'Color', 'Data Source', 'Variable', 'Register', 'Data Type', and 'Last value'. Three rows are visible, with the third row highlighted in red. Below the table is an 'Error List' section showing two errors: 'GlobalVar.Global_Var1 has been modified: Register: D1 => D11' and 'GlobalVar.Global_Var2 has been modified: Data Type: REAL => WORD'.

Enable	Color	Data Source	Variable	Register	Data Type	Last value
<input checked="" type="checkbox"/>	Red	GlobalVar (Global Variab	Global_Var1	D11	WORD	0
<input checked="" type="checkbox"/>	Blue	GlobalVar (Global Variab	Global_Var2	D2	WORD	0
<input checked="" type="checkbox"/>	Green	GlobalVar (Global Variab	Global_Var5	D5	WORD	0

Error List

Precompile: 0 Errors, 1 Warning, 2 Messages. Clear All

Description	Program
GlobalVar.Global_Var1 has been modified: Register: D1 => D11	Data Tracer
GlobalVar.Global_Var2 has been modified: Data Type: REAL => WORD	Data Tracer

- **Card Utility now supports the following modules.**
 - a. When selecting the DVP Controller Type, you can find new modules 50MC-04S and 50MC-16S in the list.
 - b. When selecting the AS Controller Type, you can find new modules AS532EST and AS564EST in the list.

New instructions

For AS Series PLC CPU: FSORT, ADPEAK, ADLOG, DHCCNT, DHCCAP, DHCCMP, DHCCMPT, DHCMEAS and HCDO.

For SA2 and SX2 PLC CPU: CANRS, XCMP and YOUT.

For ES3 PLC CPU: FSORT

The following issues are fixed and functions are modified:

- (1) Fixed an issue that if using IP Manager Tool to scan and add devices in, the same device will appear for multiple times in the scan result.
- (2) Fixed an issue that if HWCONFIG opens an ECAT Builder project that was created by old version of ECAT Builder, E-Bus device information will be shown incompletely.
- (3) Fixed an issue that if HWCONFIG opens a project that was created by ISPSOFT V3.02, the AH backplane information will be shown incompletely.
- (4) Fixed an issue that after the project is uploaded, if the name of EtherNet/IP Slave is user self-defined, the name will be shown as unreadable.
- (5) When creating a new AH Motion project, the latest version of DDF file will be used as default.
- (6) Fixed an issue that if the input contact of \$MOV instruction is an empty string, an error will occur while compiling.
- (7) Fixed an issue that the input contact of CHKADR instruction does NOT support T_POINTER and C_POINTER.
- (8) Fixed an issue that if the DVP Series PLC CPU project uses array-of-step typed symbols in SFC programming, an error will occur while compiling.
- (9) Fixed an issue that when in online monitoring mode, the value of array typed STRUCT data in the monitoring table is shown incorrectly.
- (10) Removed a prompted reminder window. If the confirmation button to execute Online Edit Change is NOT clicked, a reminder window prompts. This may cause communication timeout and the program NOT to be updated after the project is downloaded.
- (11) Removed the USB Driver from the contents of the ISPSOFT installation file to prevent the antivirus software misjudges the USB Driver as a malicious file and then stops the installation.
- (12) Now before the installation of ISPSOFT begins, the software checks if there is enough storage space in your system to ensure a successful installation.
- (13) For easier program editing and to improve productivity, you can use the hotkeys (alt+↑) and (alt+↓) to move the position of POU upward or downward in the project tree.
- (14) Added the register range check for equality of String Constants, (e.g. myString := "abcd"); during the execution of compiling. And added a warning to notify users that if an ending character is not counted or if it is counted and then exceeding the acceptable range to avoid illegal address error.
- (15) Modified the procedure to open a project. Now if there is an identification code in the project, there is no need to check for the identification code before opening the project. But if the program needs to be protected from opening, you need to set up the project password, function block password or subroutine password.

2.6 UPDATE – Firmware of AS02PU-A and AS04PU-A upgraded from V1.02.00 to V1.02.20

See announcement [DELTA_AS02PU_04PU_V1.02.20_T_EN_20210714.pdf](#) on our ftp-site in the folder: Customer-Service\Industrial Automation Products\Control\PLC- Programmable Logic Controllers\AS\AS Announcements

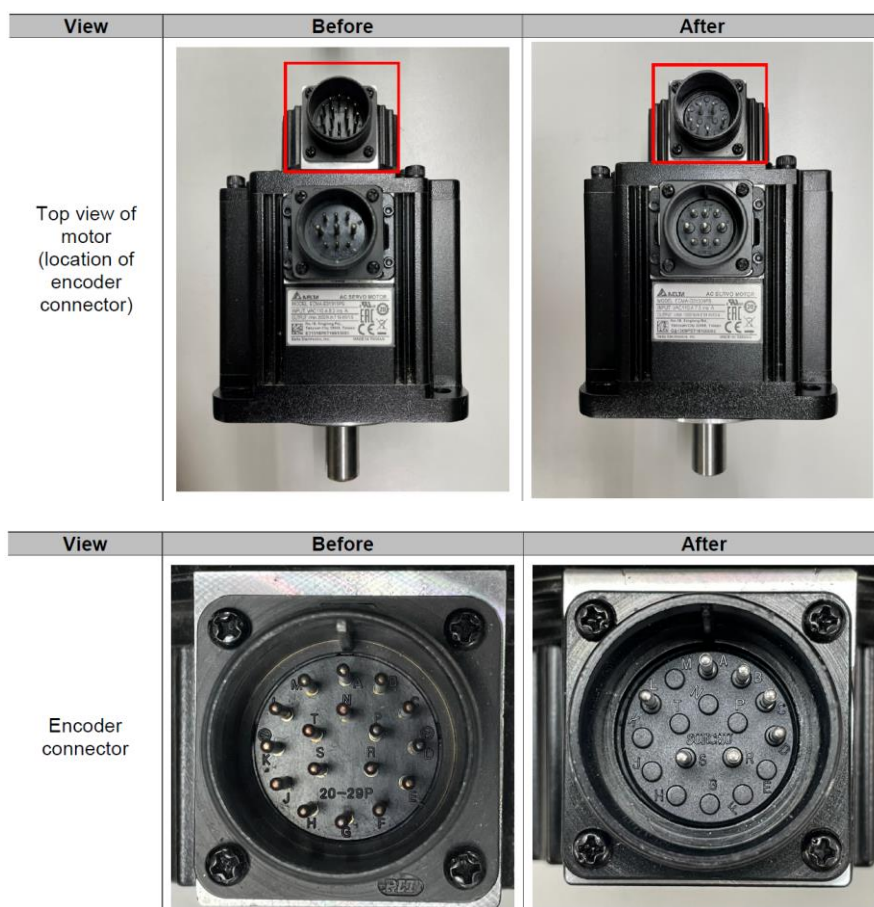
Corrections:

No.	Functions / Instructions	Descriptions
1	Output LED Indicator	The blinking frequency does NOT match the pulse frequency. For instance, the output LED indicator for an output frequency of 50Hz should be blinking every 10 ms but it looks like an output frequency of 1Hz with blinking every 500 ms.
2	DPUZRN	After the execution of this instruction, the current output position of the axis will NOT be cleared to zero. Users need to execute the instruction PUSTAT to clear it.
3		When in mode 1, if the target speed and the jog speed are set to the same value, it may cause homing stops incorrectly.
4	Software limit function	When setting the maximum and minimum value of the software limit position in 32-bit, the positioning output can NOT be stopped at the set maximum or minimum position.

2.7 UPDATE – the encoder connector for the ECMA and ECMC series is updated

Important: The change to the connector does not affect the use and installation of the motor. This change will be applied to the ECMA and ECMC motors produced from December, 2021.

Description: On the ECMA and ECMC motors, the pins not in use are removed from the 20-29P military connector. See the following for the appearance change.



2.8 UPDATE – DIAVH 15"PPC changed the placement of the motherboard

Without any change on the components, the appearance or the external dimension, DIAVH 15"PPC changed the placement of the motherboard to standardize the position of I/O ports for the benefits of sharing the same case mold.

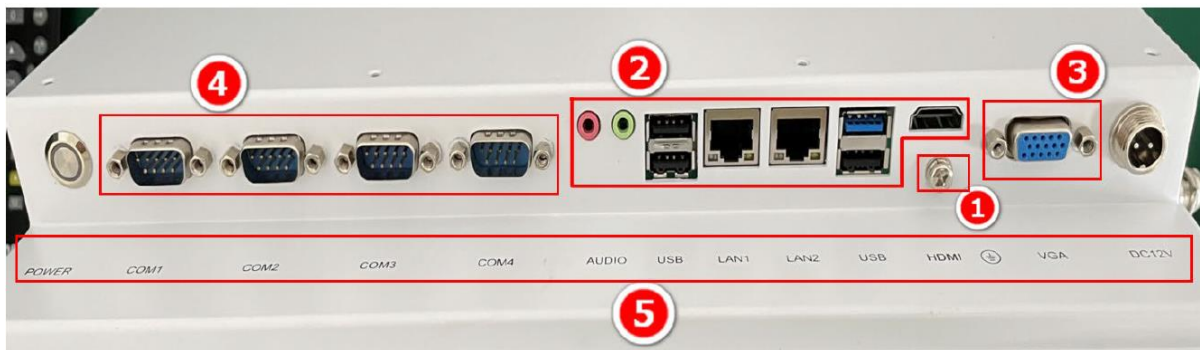
Purpose:

1. J1900 and C0re-I Series use the same case mold to save costs and time.
2. Designed to keep VGA port and DC power ports apart to prevent electromagnetic interference in day-to-day operations.
3. Connected wiring without utilizing the signal conversion adapter board for the COM ports in Core-i series.

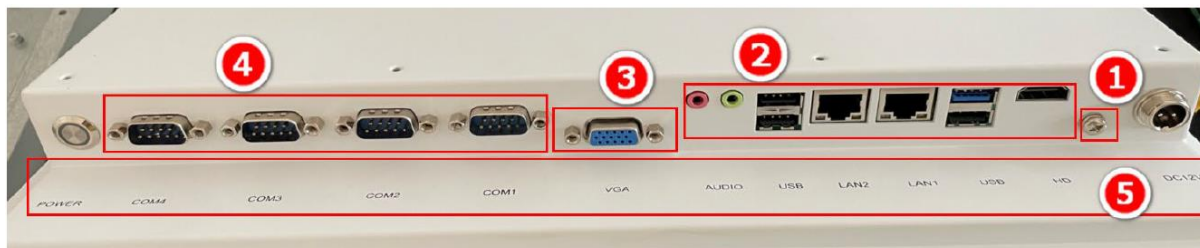
Description:

J1900 series changed the placement of the motherboard to standardize the position of I/O ports.

Before



After

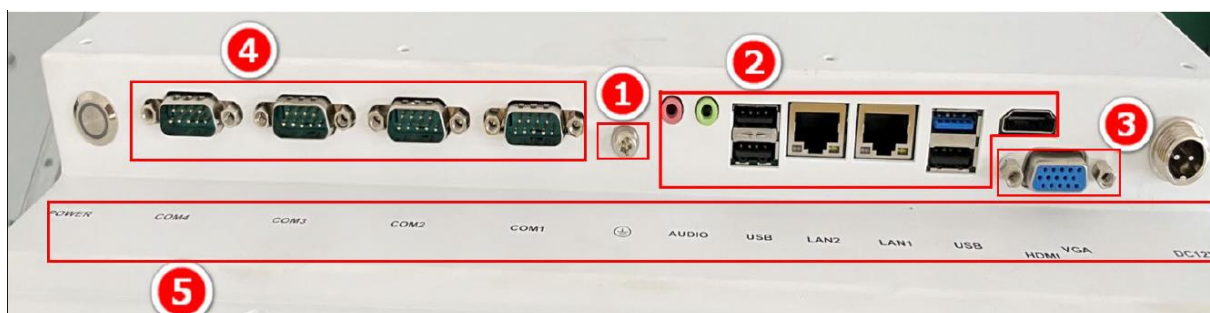


△ Significant differences

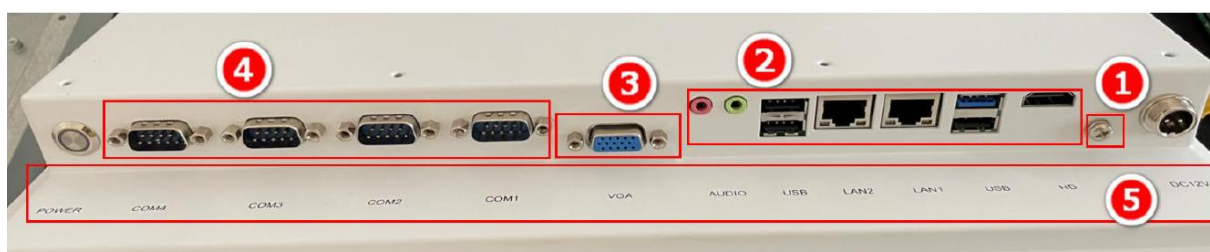
Number	Item	Difference
4	COM port	Rotated the COM port 180 degree and reversed the order of the COM ports.
5	Printing	<ol style="list-style-type: none"> 1. Changed the order of COM ports to 4, 3, 2 and 1. 2. Changed the wording "HDMI" to "HD".

- Core-i series changed the placement of the motherboard to standardize the position of I/O ports and connected wiring without utilizing the signal conversion adapter board for the COM ports.

Before



After



△ Significant differences

Number	Item	Difference
4	COM port	Connected wiring without utilizing the signal conversion adapter board.
5	Printing	Changed the wording "HDMI" to "HD".

- Applicable model names(part number):

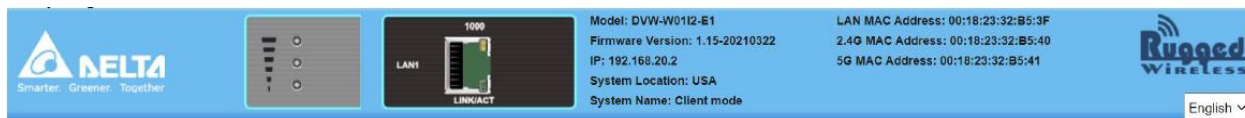
PPC	DIAVH-PPC15310x, DIAVH-PPC15510x, DIAVH-PPC15310xA, DIAVH-PPC15510xA, DIAVH-PPC15J10x, DIAVH-PPC15J10x
-----	--

- Release Date: Around December 06, 2021 (Week 2149), stock-dependent, running change.

2.9 UPDATE – The firmware of DVW-W01I2-E1 upgraded from V1.0 to V1.16

I. New Functions:

1. System information (on the top): Addresses of LAN MAC, 2.4G MAC, and 5G MAC are displayed.



2. System -> System Configuration: LAN Network Info and WLAN Network Info are displayed.

LAN Network Info	
MAC Address	00:18:23:32:B5:3F
IP Address	192.168.20.2
IP Subnet Mask	255.255.255.0
WLAN Network Info	
IP Address	
IP Subnet Mask	
Gateway	

3. Basic Configuration -> Network Configuration: Added Router Mode and Internet Interface for selection. You can select WLAN5GHz or WLAN2.4GHz in the Internet Interface and after that data transmissions of WAN and LAN can be done through NAT (network address translation).

Network Configuration

Cancel
Apply

Router Mode

Yes ▾

Internet Interface

WLAN 5G ▾

IP

DHCP-Client ▾

4. Basic Configuration -> Time Configuration: Added a new option to automatically adjust for daylight saving time.

(GMT+08:00) Beijing, Chongqing, Hong Kong, Urumqi ▾

☐ Automatically adjust for daylight savings time

Time Server 1

time.nist.gov

Time Server 2

5. WLAN2.4/5G -> WLAN2.4/5G -> Advanced Configurations: AMPDU can be enabled or disabled.

Advanced Configuration

Cancel
Apply

Transmission Power(dBm)

23 ▾

Beacon Interval(40-1000ms)

100

AMPDU

☐ Enabled
☒ Disabled

6. Maintenance -> WIFI Log: Wifi log is added for reference.

WIFI Log

Refresh Download

```
<179>Sep 10 11:45:32 syslog: <0x01020005> [Debug] [STA] ath0 : Auth failed,Privacy mismatch
<178>Sep 10 11:45:27 syslog: <0x01020005> [Debug] [STA] ath0 : Auth failed,Privacy mismatch
<177>Sep 10 11:45:22 syslog: <0x01020005> [Debug] [STA] ath0 : Auth failed,Privacy mismatch
<176>Sep 10 11:45:17 syslog: <0x01020005> [Debug] [STA] ath0 : Auth failed,Privacy mismatch
<175>Sep 10 11:45:11 syslog: <0x01020005> [Debug] [STA] ath0 : Auth failed,Privacy mismatch
<174>Sep 10 11:45:06 syslog: <0x01020005> [Debug] [STA] ath0 : Auth failed,Privacy mismatch
<173>Sep 10 11:45:01 syslog: <0x01020005> [Debug] [STA] ath0 : Auth failed,Privacy mismatch
<172>Sep 10 11:44:56 syslog: <0x01020005> [Debug] [STA] ath0 : Auth failed,Privacy mismatch
<171>Sep 10 11:44:51 syslog: <0x01020005> [Debug] [STA] ath0 : Auth failed,Privacy mismatch
```

7. Advanced -> Firewall Configuration (For Router Mode Only): Added NAT function and Port Forward function.

Firewall Configuration(For Router Mode Only)

Cancel Apply

Enable NAT Enabled

Port Forward Enabled

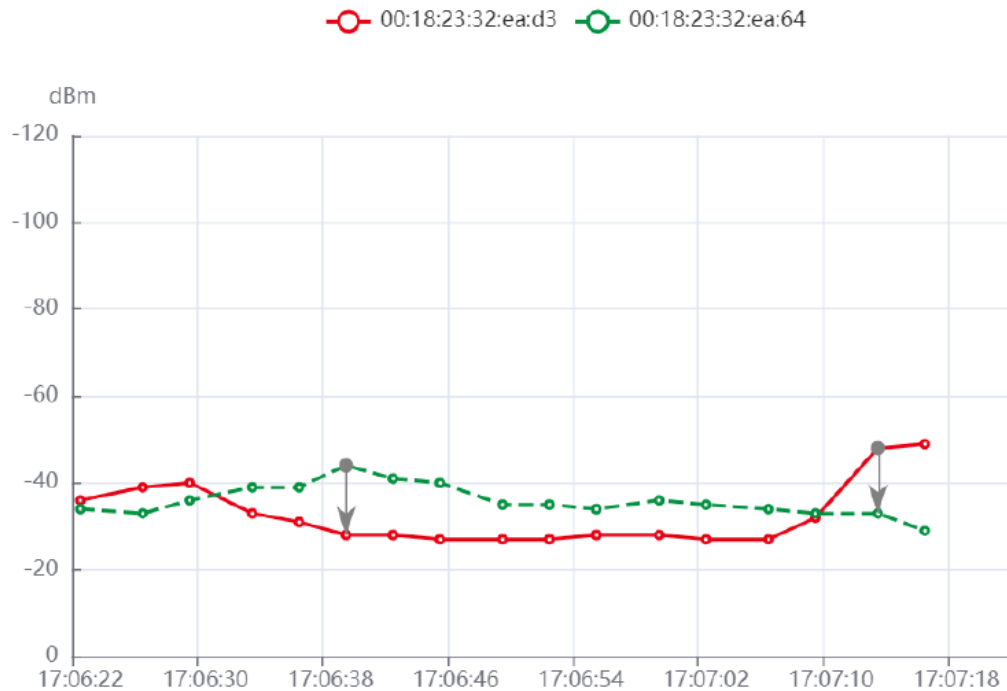
No.	Active	Protocol	WAN Port	LAN IP	LAN Port
1	<input checked="" type="checkbox"/>	TCP	502	192.168.1.100	502
2	<input type="checkbox"/>	TCP			
3	<input type="checkbox"/>	TCP			

8. Auto Warning Setting -> Syslog -> Syslog Event Types: Added the option "RSSI Report Events" and if the option is selected, the RSSI report is presented in a chart.

Syslog Event Types

Cancel Apply

Event	Active
Cold Start	<input type="checkbox"/>
Warm Start	<input type="checkbox"/>
Authentication Failure	<input type="checkbox"/>
IP Change	<input type="checkbox"/>
Password Changed	<input type="checkbox"/>
Configuration Changed	<input type="checkbox"/>
WLAN Connection or Disconnection	<input type="checkbox"/>
WLAN Role Change	<input type="checkbox"/>
WLAN Client Joined&Left	<input type="checkbox"/>
Firmware Update	<input type="checkbox"/>
RSSI Report Events	<input checked="" type="checkbox"/>
Disabled	<input type="checkbox"/>
Disabled	<input type="checkbox"/>



Note: The dashed line represents the AP on the current connection

II. Modified Functions:

- Fixed an issue that the button **Set Time** is pressed, but the device time cannot be synchronized with the current local time (computer time).

Local Time Configuration

The current time of device : 2021-09-07 23:51:02

Current Local Time : 2021-10-15 15:45:13

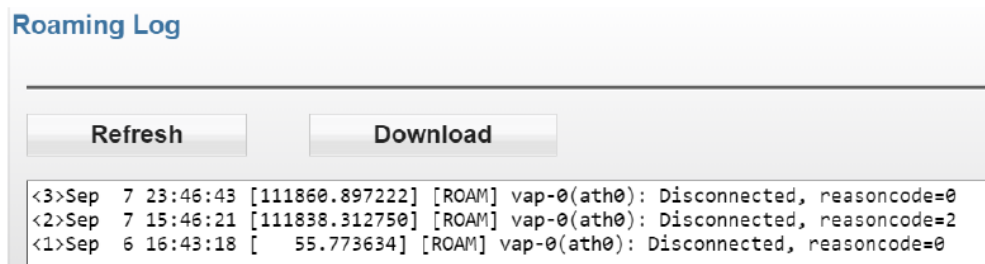
- System Log Export: Now the log is displayed and the log is updated every 5 seconds automatically.

System Log Export

```

Sep  7 23:50:26 kern.warn kernel: [112083.561756] [wifi0] FWLOG: [241646] RESMGR_OCS_GEN_PERIODIC_NOA
( 0x0 )
Sep  7 23:50:26 kern.warn kernel: [112083.556088] [wifi0] FWLOG: [241646] RESMGR_OCS_GEN_PERIODIC_NOA
( 0x0 )
Sep  7 23:50:26 kern.warn kernel: [112083.491922] send_vdev_down_cmd_non_tlv for vap 0
Sep  7 23:50:21 kern.warn kernel: [112078.563843] [wifi0] FWLOG: [236302] RESMGR_OCS_GEN_PERIODIC_NOA
( 0x0 )
    
```

- Roaming Log: Now the roaming log is updated every 5 seconds automatically and a **Refresh** button is added for an immediate refresh. A **Download** button is also added for downloading the roaming log.



- Fixed an issue that when the Client is in roaming mode and its connected AP is suffering from power loss, instead of connecting to other AP automatically, the Client stops roaming.
- Added a notice to remind users that if they need to use the scan function, the scan will disconnect the communication between Client and AP temporarily.

192.168.20.2 顯示

The scan will temporarily disconnect the communication between Client and AP, and the communication will automatically resume after the scan is completed. Do you want to continue the scan?

確定

取消

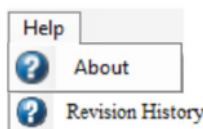
- WLAN 2.4G -> WLAN 2.4 -> Advanced Configuration: Now the maximum transmission power setting of 2.4GHz is increased from 21 to 23dBm.



2.10 UPDATE – IEXplorer software version is upgraded to V1.2.1.8.

I. New function

Toolbar -> Help: Added Revision History for reference.



II. Possible issues and improvements

- Fixed an issue that the devices on the device list cannot be displayed correctly. After scanning the devices in again, this issue still persists.
- Fixed the security vulnerability issues.

2.11 UPDATE – DVP-SE Version 2.04 is released

The functions which are modified and the functions which are added are described as below. All the issues below can be fixed by upgrading firmware to V2.03 or above (no tools are required).

Model List:

Series	Model Name	Firmware Version	Release Date
DVP	DVP12SE11T DVP12SE11R DVP26SE11T DVP26SE11R DVP26SE11S	V2.02 → V2.04	2021.12.01 (W2149)

Changes:

No.	Functions / Instructions	Descriptions
1	Left-side module communication	When DVP Slim series modules, including DVPDNET-SL and DVPCOPM-SL are connected to the PLC CPU, the data exchange table cannot be set correctly.
2		When DVP201LC-SL is connected to the PLC CPU, chances are the connected module cannot be detected.
3	Ethernet communication	When using network communication for a long time and without turning the power off for a rest, it may lead to broadcast storm and that may cause the communication to stop working.

New Instructions and Functions

No.	Functions / Instructions	Descriptions	Remarks
1	Ethernet communication	The network port 502 is only the port used for the Modbus TCP communication in the past. Now you can set a value in D1110 or D1111 to redefine the network port for Modbus TCP communication.	Note B-1

Note B-1:

D1110: When the PLC CPU is in Client mode, you need to set the value for the network port in D1110.

D1111: When the PLC CPU is in Server mode, you need to set the value for the network port in D1111.

The default value for D1110 and D1111 is 502. And both D1110 and D1111 are not retainable.

2.12 UPDATE – WPLSoft version 2.51 is released.

Description:

1. Fixed an issue that once the communication setting page is opened, the trouble shooting will show an error message “out of the index”.
2. Fixed an issue that after clicking the API "DBLD D0 K1" to edit but the page shows wrong wording "DBLD D0 K1 K1" in ladder diagram programming.
3. A new mechanism is created: when opening a corrupted file, if its main structure is not broken, the file can be opened.
4. When the device information is lost in the opened file, the system uses the default setting “EH3” instead.

2.13 DISCONTINUATION – HMI DOP-W is phased out

HMI DOP-W series is phased out. The already existing replacement product is the DOP-100 series, with exactly the same panel cut-out and more advanced functions. Please see below for the DOP-100 replacement models and their main differences:

DOP-W Series	DOP-100 Series Replacement	Main Differences
DOP-W105B	DOP-110IG	DOP-110IG only has one Ethernet port. It cannot play videos
DOP-W127B	DOP-112WX/MX	DOP-112WX/MX only has one USB host and no built-in speaker.
DOP-W157B	DOP-115WX/MX	DOP-115WX/MX only has one USB host and no built-in speaker.

Additional differences:

- Golden capacitor vs Battery: DOP-W series use golden capacitor to keep RTC data for around 1 week, the DOP-100 uses CR2032 battery, which can holds the date for several months.
- VESA mounting holes: Both 12" and 15" of DOP-W have VESA mounting interface, but the DOP-100 series does not support it.
- Metal enclosure: DOP-W models have aluminum case and DOP-100 models have plastic case.

The DOPSoft V4 and DIAScreen can import DOP-W projects (made with DOPSoft V2) and most of the project will be translated automatically. Only the video play function needs to be done via the DOP-100 software, DOPSoft V4 or DIAScreen manually.

2.14 DISCONTINUATION – DMV2000-CLX-HS is phased out

DMV2000-CLX-HS series and its cameras is phased out.

The main reason is that one of the fundamental hardware components inside the DMV2000 machine.

All applications using the DMV2000 series system can, moving forward with the DMV3000 series and the DIAVision VGR/IDM software, which can run on the Delta industrial PC solution.

DIAVision VGR/IDM software can be used in combination with our industrial cameras, till 5 MP, color and greyscale.

DMV3000 controller has it's own cameras up to 2 MP, Color and greyscale.

Please see below for the DMV2000 series replacement models:

DMV2000 Series	Replacement Models
Vision Controller: DMV2000-CL2-HS	Vision Controller: DMV3000-GE2, VL or Vision Software: DIAVision VGR/IDM
Vision Controller: DMV2000-CL4-HS	Vision Software: DIAVision VGR/IDM

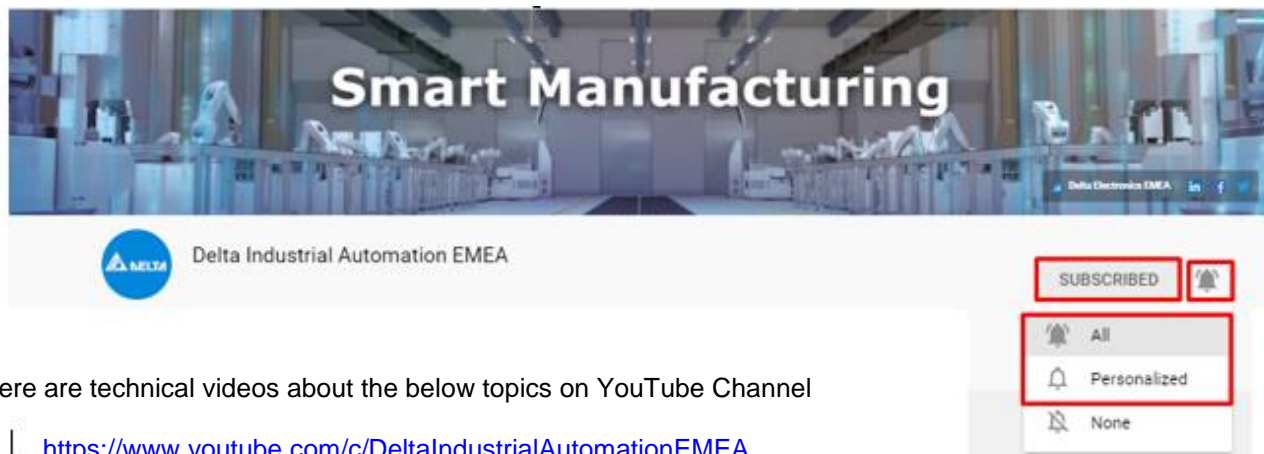
Main differences:

Model Name	DMV2000-CL2-HS	DMV2000-CL4-HS	DMV3000-GE2-VL
Voltage range	90% to 100% rated voltage	90% to 100% rated voltage	90% to 100% rated voltage
Rated current consumption	2 cameras: less than 3.4A	4 cameras: less than 4A	2 cameras: less than 2.5A
Vibration resistance	<ul style="list-style-type: none"> No error: 3 axes, 10 – 55Hz, 10 m/s² [1.0G], 10 minutes No damage: 3 axes, 10 – 55 Hz, 20 m/s² [2.0G], 2 hours 		5 – 8.4 Hz/3.5 mm and 8.5 – 150 Hz/1G; 1 hour; 3 axes
Shock resistance	<ul style="list-style-type: none"> No error: 200 m/s² (20G), 6-surface/3-edge/1-corner, 3 drops each No damage: 300 m/s² (30G), 6-surface/3-edge/1-corner, 3 drops 		Max. 15G XYZ axes/6 directions, 3 times each
Operating ambient temperature	0°C - 45°C		-10°C - 50°C
Storage temperature	-20°C - +65°C		-30°C - 85°C
Operating relative humidity	35% - 85% RH (non-condensing)		35% - 65% RH (non-condensing)
Altitude	Under 2000 m		Under 2000 m
Battery life	Over 5 years		Over 5 years
Dimensions	96*152.2*167.5 mm		65*152*167 mm

The DMV2000 software and program functionalities are identical. For applications that require only one or two cameras, please use DMV3000 as the replacement. As for high speed applications or if more than two cameras are required, then DIAVision software together with the IPC and a frame grabber card, will be the best solution.

3 Application

3.1 **NEW** – More technical videos are available on YouTube Channel



There are technical videos about the below topics on YouTube Channel

<https://www.youtube.com/c/DeltaIndustrialAutomationEMEA>

Subscribe and enable notification in order to get notifications on all our new videos.

1. [AX-3 High Speed Counter](#)
2. [DIADesigner – Set up a Programming Project](#)
3. [AX-308E Series Tutorial 23 – How to build the POU program interrupted by I/O](#)
4. [DIADesigner-AX | How to record data with trace](#)
5. [DIAVision VGR Tutorial Communication Function](#)
6. [AX-308E Series Tutorial 22 - How to Create the DMC Group Axis](#)
7. [AX-308E Series Tutorial 19 – How to create the Pulse Out](#)
8. [DIADesigner-AX | How to read machine state](#)
9. [AX-308E Series Tutorial 21 – How to Use the Counter as Master Axis to Control the Slave Axis](#)
10. [AX-308E Series Tutorial 20 - How to Create the E cam Profile](#)
11. [DIAVision VGR Tutorial - Lid and Tray Application](#)
12. [DIASelector - How to Select Delta Industrial Automation Products](#)
13. [AX-308E series Tutorial 18 – How to reset the Ethercat Master and Slave](#)
14. [DIADesigner - How to Create a library and use it](#)
15. [AX-308E Series Tutorial 17 – Motion State Transmission](#)
16. [DIADesigner - The New Features for Programming](#)
17. [Machine Vision System DMV2000 Tutorial - Tablet Stain Detection](#)
18. [AX-308E Series Tutorial 16 - How to Set Up the Trace Function](#)
19. [Variable Frequency Drives | Online Basic Training | April 2021](#)
20. [AX-308E Series Tutorial 15 - How to Create the Rotary EtherCAT Axis](#)
21. [DIADesigner - How to Configure a PLC](#)
22. [AX-308E Series Tutorial 14 - How to Create the EtherCAT to the Servo System \(A2-E\)](#)
23. [DIAStudio - How to integrate multi-devices in DIADesigner](#)
24. [DIAStudio - How to set up Communication Setting in DIADesigner and COMMGR](#)
25. [AX-308E Series Tutorial 13 - How to Setup the DVP RTU ECAT](#)
26. [AX-308E Series Tutorial 12 - Download and Upload the PLC Project File via HMI](#)
27. [DIADesigner - How to set up Position Plan Table](#)
28. [AX-308E Series Tutorial 11 - How to Connect to the Delta HMI](#)

4 FAQ

4.1 FAQ

Q I stopped the Delta Articulated Robot DRV Series by pressing the emergency stop button and then released the button when it was Servo off. However, it won't reset with the Alarm Reset. Do I need to shut it down and restart?two methods?

A 1. When the robot is operating normally and emergency is triggered, it will consider function, hardware, and wiring normal. If the Alarm Reset does not work in this case, perhaps the emergency stop button is not type 2B. Please check the Safety connector, and make sure you have reset both pins 1 and 2 and pins 3 and 4 for the Alarm Reset. For example, if pin 1 and 2 are triggered to stop and then reset, pin 3 and 4 need to do the same for Alarm Reset. However, if pin 3 and 4 remain short-circuited, errors will appear.

2. Pins 5 and 6 and pins 7 and 8 are for area sensors. Please refer to point one.

3. If the E?013 error code appears after a power reset of the controller, please check the Safety connector and make sure pins 1 and 2, pins 3 and 4, and pins 7 and 8 are short-circuited to avoid triggering the alarm or emergency stop.

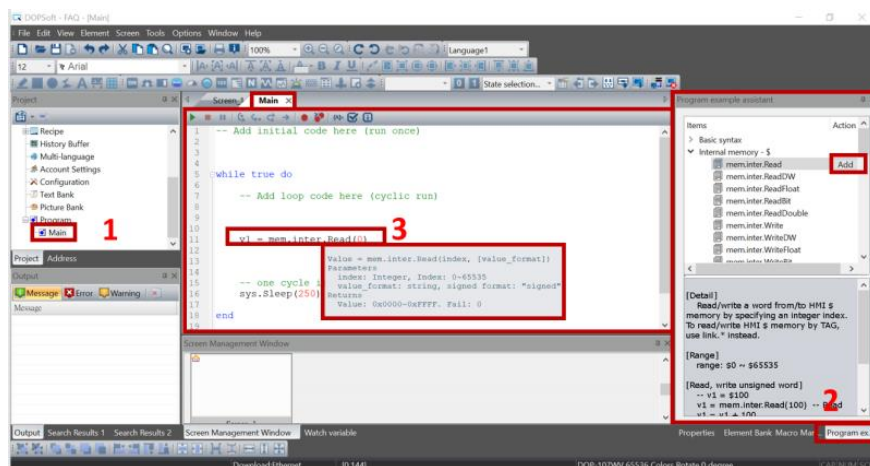
Q How do I read Excel CSV files in the SCADA system VTScada?

A Please use VTSCADA version 12.0.43 or above (Image 1), and prepare a CSV file (Image 2). Then follow the instructions below.

[Link](#)

Q How do I write Lua scripts for DOP-100?

A 1. DOPSoft 4.00.11 has a built-in Lua programming tool. To start script-writing, go to the "Project -> Program" menu and double click "Main".




2. You can write scripts directly or click "Add" in "Program Examples" at the right bottom corner to add scripts. For more information refer to the [Detail] section.

3. Position your mouse pointer over the scripts added in "Main" to see the instructions. For example, v1=mem.inter.Read(0) indicates that variable v1 is the value of internal memory \$0.

4. Search the Dop-100 Series Lua Instruction Manual for more information.

Q How do I change the logic of the I/O terminal signals for the Delta Vector Control Drive C2000 Series?

A The I/O terminal signals refer to the digital input and output signals. The logic of the input signals can be changed with the 02-12 parameter setting, and the output signals with the 02-18 setting. See the illustration below.


 The default for bit 0 (MI1) is FWD terminal, and the default for bit 1 (MI2) is REV terminal. You cannot use this parameter to change the input mode when Pr.02-00 ≠ 0.

 You can change the terminal ON / OFF status through communications.

For example: MI1 is set to 1 (multi-step speed command 1) and MI2 is set to 2 (multi-step speed command 2). Then the forward + second step speed command = $1001_2 = 9_{10}$.

As long as Pr.02-12 = 9 is set through communications, there is no need to wire any multi-function terminal to run forward with the second step speed.


bit15	bit14	bit13	bit12	bit11	bit10	bit9	bit8	bit7	bit6	bit5	bit4	bit3	bit2	bit1	bit0
MI14	MI13	MI12	MI11	MI10	MI9	MI8	MI7	MI6	MI5	MI4	MI3	MI2	MI1		


 Use Pr.11-42 bit 1 to select whether the FWD / REV terminal is controlled by Pr.02-12 bit 0 and bit 1.

✎ **02-18** Multi-function Output Setting

Default Setting: 0000h

Settings 0000h~FFFFh (0: N.O. ; 1:N.C.)

 This parameter is in hexadecimal.

 This parameter is set by a bit. If a bit is 1, the corresponding multi-function output acts in an opposite way.

Example:

If Pr. 02-13=1 and Pr. 02-18=0, Relay 1 is ON when the drive runs and is open when the drive is stopped.

If Pr. 02-13=1 and Pr. 02-18=1, Relay 1 is open when the drive runs and is closed when the drive is stopped.

bit setting

bit15	bit14	bit13	bit12	bit11	bit10	bit9	bit8	bit7	bit6	bit5	bit4	bit3	bit2	bit1	bit0
MO20	MO19	MO18	MO17	MO16	MO15	MO14	MO13	MO12	MO11	MO10	MO9	MO8	MO7	MO6	MO5