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How to get	t an averag	e value of	a Real or In	nteger var	riable w	hich is	
sampled e	ory fived	interval (or	r samnled i	n ovorv D	(scan)	2	
sampled e			Sampled	il every ri	Le scanj	·	
					Downlo	ad FAQ-099 Demo	
Please refer to h C-functions - "Av	ttp://www.icpd er_N" and "Ave	as.com/en/faq/i r_F" (for WP-8x›	ndex.php?kind=2 <7, VP-2xW7 and	280#751 > FAQ XP-8xx7-CE6 o	-120 for two nly).	o better	
There is some applications to calculate the moving average of a Real or Integer variable. The Real or Integer variable is sampled once and calculated the moving average value at every fixed interval. To do that, user can use the "Averag_F" function block to get the moving average value of a Real variable. (Or the "Averag_N" function block to get the moving average value of an integer variable).							
Algorithm for th Consider the sar Then the averag next (F3+F4+F5+	e above applica npled data F1, F e value will be (F6+F7)/ 5 (Th	tion: 2 F10 at eacl F1+F2+F3+F4+F5 e oldest sampled	h interval and the 5)/ 5, then next a d data will be era	e given number verage value w sed)	r to calculat ill be (F2+F3	e the average is 5. 3+F4+F5+F6)/ 5,	
There is also some applications to calculate the average value of a Real or Integer variable. The Real or Integer variable is sampled once every fixed interval and calculated the average value during a given number of samples. To do that, user can use the "Gt_Ave_R" function block to get the average value of a Real variable. (Or the "Gt_Ave_N" function block to get the average value of an integer variable).							
There is also some applications to calculate the average value of a Real or Integer variable. The Real or Integer variable is sampled once in every PLC scan and then calculated the average value when the specified time is up. To do that, user can use the "Gt_Av_R2" function block to get the average value of a Real variable. (Or the "Gt_Av_N2" function block to get the average value of an integer variable).							
You can get the a http://www.icpo _demo.zip or http://www.icpo	above six functi las.com/web/pi las.com/en/faq,	on blocks at the oduct/download 'index.php?kind=	following address d/software/devel =280#751 > FAQ-	s. opment_tool/i 099	sagraf/docu	ıment/faq/faq099	
wdmo_74a.pi wdmo_74b.pi wdmo_74c.pi wdmo_74d.pi wdmo_74e.pi	a: which contair a: which contair a: which contair a: which contair a: which uses th	ns the "Gt_Ave_F ns the "Gt_Ave_I ns the "Gt_Av_R2 ns the "Gt_Av_N e "Averag_F" an	R" function block N" function block 2" function block 2" function block d "Averag_N" fur	nction blocks			
Note: "Averag_F W-8xx7/8xx6 (d	" and "Averag_N river 4.13A or la	l" are supported ter)	in the following	driver version.			

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uPAC-7186EG (driver 1.06 or later) iPAC-8x47 (driver 1.04 or later) WinPAC-8xx7/ 8xx6 (driver 1.08A or later) To use the "Averag_F" and "Averag_N" function blocks, please restore their library definition file "Averag_F.fia" and "Averag_N.fia" to your PC/ ISaGRAF as below.									
<u>File</u> <u>E</u> dit	Project Tools	Options <u>H</u> elp			2				
8837 111 111 111 111 111 111 111 1		aries ort IL program				XI			
Refei E	le <u>E</u> dit <u>T</u> ools	<u>Options H</u> elp	_						
Autho Date 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	function blocks configurations boards unctions function blocks function blocks function blocks proversion function	rai File s et cjc2	Image: SaGRAF - Librar Edit Icols Op unction Archive Standard IcP DA	E ≝ ties tions Help l note form	et	▲ } ■ (
Archiv	e - C function l	locks	16	× n		ue by a			
Atchive - C function blocks Workbench Archive cic_sts averag_f com_sts averag_n car_16 car_1r cic_d11 cic_sts cic_d12 com_sts cic_d13 cic_sts cic_d14 cic_d16 cic_d16 cic_16 cic_d11 cic_d16 cic_d11 cic_di16 cic_d11 cic_di16									
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To use the "Gt_A into your PC/ ISa	we_R", "Gt_Ave_ GRAF as below.	_N", "Gt_A	v_R2", "Gt_Av_ ISaGRAF - 1 File Edit Proje	N2", ple	ase restore th anagement Options <u>H</u> elp	e following f	our project files	
1.1: D				È <u>A</u> rc al Lib	hive 🕨	Projects		
Archive - Pi	rojects	- hina	2		ort IL program	s i-7530 "CAI	Nopen'	
Workb convert2 creation demo_74a demo_75a di_cnt example1 i8xx7 kit_2 project1 sample sin_x test232 testenet vbdmo_01 Archive loc	ench A wdmo_7 wdmo wd	rchive 1e 2a 2b 2c 4a 4b 4c 4d d GRAF\WINC	Back <u>up</u> <u>R</u> estore <u>C</u> lose <u>H</u> elp Compress <u>Browse</u>	test9	ion iL program	• out connecting t	<u>wo i-7</u>	
Then please crea	ite a new projec	t for your a	application, for	example	, the below "	project1".		
Then please create a new project for your application, for example, the below "project1".								
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		I	1	I			
Then get into the "wdmo_74d" for "isa	e "wdmo_74a" (w "Gt_Av_N2"). Se RAF - Project Mar dit Project <u>I</u> ools D D D D D D dimo_72b New dimo_72b New dimo_74a get a dimo_74b get a ISaGRAF - WDMO e <u>Make Project I</u> D D D D D D gin: <u>IND</u>	while "wd elect "Gt_/ nagement Options Hel @ 0 0 Wincon-8x47 Wincon-8x47 Wincon-8x47 Wincon-8x47 Wincon-8x47 Wincon-8x47 Minco	mo_74b" is for Ave_R", and co	"Gt_Ave py it to the o with RU-871 with I-8KE8 e e	e_N", "wdmo_ he "project1" • • • • • • • • • • • • • • • • • • •	74c" for "Gt_	_Av_R2",
	ISaGRAF - WD <u>File</u> <u>Make</u> Project <u>Open</u> <u>Dictionary</u> <u>Parameters</u> Diary <u>New</u> Program comment <u>Rename/Move</u> Arrange programs <u>Copy</u> <u>Copy to other proj</u> Delete	MO_74A - 1 Tools De} Ctrl+O	Programs pug Options Help W M I O get average re	al value			
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Now you can create a Ladder program in your project to use the "Gt_Ave_R" and "Gt_Ave_N" (or										
"Gt_Av_R2" or "Gt_Av_N2").										
of "A2" - Real val	riable. (For Integ	ger, please	use "Gt Ave I	N" in "wd	mo 74b.pia")		average value			
When "run1" is	True, it starts to	sample A1	every 1 secon	d. When	10 samples re	eached (that i	is 10 seconds			
later), it calculate	e the new avera	ge value to	• "Aver1".	and Malan	n 10 comulos	waa ah ad /tha	tio Toppondo			
later). it calculate	e the new avera	sample Az ge value to	every 0.5 seco "Aver2".	ona. wne	in 10 samples	reached (tha	it is 5 seconds			
Note: 1. Please	do not set 0 or	less than 0	to the "N" p	arameter	The "TIME"	' must less th	an T#6h			
2. The "G	it_Ver_R" is bett	er to run i	n the uPAC-71	86EG, iPA	.C-8x47, Winc	on-8xx7 and	WinPAC-8x47			
such advanced c	ontrollers. It is r	ot good to	run in the 40I	MHz CPU	: I-7188EG/XG	and I-8xx7.	Because the			
40MHz CPU will	be very slow wh	ien doing f	loating-point d	alculatio	n.					
I	run1	RU	F_AVE_R N_ eno	<						
			v_ QAV	ver1						
		10-N_								
		T#1s- <u>TIN</u>	/IE							
	run2	G	T_AVE_R		<u></u>					
ľ				or)	/ 1					
			<u> </u>	erz						
	т		4							
Or calculate dire	ctlv without the	"Run1" ar	n⊑id "Run2"							
	I	G RU	T_AVE_R N_ eno	<	>I					
			I_ QAv	er1						
		10-N_								
		T#1s- TI №	1E							
		G	T_AVE_R							
	ŀ			C						
				er2						
		10-N_	_							
	T#	500ms– <mark> TIM</mark>	E							

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