



PCL-839+ and PCL-839 Comparison

With a shortage of the PDS-1024 motion chip, the PCL-839 is being replaced by PCL-839+. The PCL-839+ is practically identical to its predecessor. It's a low-cost 3-axis stepping motor control card that provides the most basic motion control functions like linear and 2D circular interpolation. Some improvements is offered though. The PCL-839+ supports a higher pulse out rate and a bigger position counter than PCL-839.

To help users migrate from PCL-839 to PCL-839+, Advantech provides compatible DOS and Windows® drivers for PCL-839+.

Please refer to the following tables to see the differences between PCL-839+ and PCL-839.



	PCL-839	PCL-839+
Max. Step Count	+/-262134 steps (18-bits)	+/- 16777215 steps (24-bits)
Max. Step Rate	16K pps	200K pps
Power Consumption	5V@300mA Max	5V@390mA Max 5V@330mA Typical
Isolation Voltage	500 Vrms	5000 Vrms
Motion Chip	PDS-1024	PCD-4541
R0	Down counter (18-bits)	Down counter (24-bits)
R3	NA	Acc/Dec (10-bits)
R4	Acc/Dec (10-bits)	Multiplier (10-bits)
R5	NA	Ramping-down (16-bits)
R6	Ramping-down (16-bits)	Idling pulse (3-bits)
R7	Multiplier (10-bits)	Output type (1-bit)

Software Drivers

- If you have designed your application with DOS drivers, you can use the existing application program code along with PCL-839+. All you have to do is replace the header file "PCL839.H" with the new header file "PCL-839P.H" and link to the new Library file (PCL839Px.LIB) then re-compile the program.
- For those who composed their application program with Windows drivers, the existing programmed code can be used.
- The most significant difference is for VC users, as the header and library file need to be changed

and re-compiled.

- For VB users, the header file needs to be changed to "839p.bas"
- Because of the different main motion chipset, the register format of PCL-839+ is different with PCL-839. For application programs that are written with direct I/O methods or using the command-interpreter provided by PCL-839, these files will not be executable with PCL-839+. Please refer to chapter 4 of the PCL-839+ manual to read more about direct IO operations.
- Some of the registers read back by function "status" are not available, please take care of it. Following is the list:

Status0								
PCL-839	INT	Operation	Freq.	R6	Counter	ORG	EL+	EL-
PCL-839+	INT	Operation	NA	NA	Counter	ORG	EL+	EL-

Status1							
PCL-839	Pulse	R0<R6	Ramp-up	SD+	SD-	R0	R0
PCL-839+	Pulse	R0<R6	Ramp-up	SD+	SD-	NA	NA

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