

Difference related to Interface (Serial, Parallel)

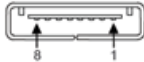
Replacement of DPU-414 by DPU-S445 would be handled as follows.

· If using serial interface on DPU-414, command type is different, but there is no major change in system configuration.

· If using parallel interface on DPU-414, it is difficult to replace with DPU-S445 because there is no conversion cable (parallel to USB).

In this case, we would like to ask customers to change the system configuration to serial or USB.

In case of USB, printer driver is required.

Specifications / Functions	Printing method			DPU-414-5xB-E	DPU-S445-0xC-E	
	Interface		Serial	Thermal serial dot printing	Thermal line dot printing	
			Parallel	RS-232-C	RS-233-C	
			USB	Centronics compliant	-	
			Bluetooth	-	USB2.0	
				-	Bluetooth Ver2.1+EDR	
	Input buffer		byte	28k	4k	
	Character mode		Number of dots/line	dot	9×320	832/line
			Character size	Half size	9×7	24×12 , 16×8
				Full size	—	24×24 , 16×16
			Number of column	Full size	40 columns	24dot Full :26 columns
				Half size	80 columns	24dot Half :52 columns
			Character type	Half size	Extended graphicss	Extended graphicss
				Katakana	Katakana	Katakana
				Full size	—	JIS 1 & 2 level Kanji
			User defined	User defined character	Code page 1252	Code page 1252
	Bit image mode		Number of dots/line	dot	8×320	832
	Connector		Power supply	Φ8(IN+)	Φ8(IN+)	Φ8(IN+)
			Serial	D-sub9P	3260-8S3 Hirose Electric co., Ltd	
			Parallel	Amphenol 36P	-	-
		USB	-	-	Mini Bタイプ	
H/W Specifications	Paper width		mm	112	112	
	Printing width		mm	89.6	104	
	Dot dimension		mm	0.23×0.2	0.125×0.0625	
	Paper feed pitch		mm	0.28	0.0625	
	Head feed pitch		mm	0.28	-	
	Printing speed max.			52.5pcs	90mm/s	
	Dimensions (W×D×H)		mm	160×170×66.5	145×135×58	
	Weight		g	580	490	
	Paper thickness		μm	65±5	59~125	
	Inner diameter of paper roll		mm	—	8mm min.	
	Outer diameter of paper roll		mm	48	50	
Environmental Specification	Temperature		Operating	°C	0~40	
			Storage		-20~60	
	Humidity		Operating	%RH	30~80	
			Storage		5~90	
Durability Specifications	Activation pulse resistance			—	100 Million	
	Abrasion resistance			500,000 line 40 column printing '8'	50km	

Command comparison				Nov. 2018
		DPU-414	DPU-S445	
Command		ESC/P Conformity	ESC/P conformity	Comments
Basic function code	BS	Back space	N/A	→Since DPU-S445 is a line printer, there is no equivalent command.
	HT	Horizontal tab	Execute Horizontal Tab	→It is possible to set it similar to DPU-414 by setting the number of digits with ESC 'd' command and left / right margin.
	LF	Line feed	Print and Line Feed	→The function is same. Similar setting can be done by setting the line feed amount.
	FF	Form feed	Page Feed (Form Feed)	→The function is same.
	CR	Carriage return	Print and Carriage Return	→On DPU-S445 this function code is same as Line Feed (LF). DPU-414 can select by DIP setting whether it becomes the same operation as LF or does not feed paper. (Operation returning to the same printing place)
	SO	Set double-width printing by line	Select Expanded Character Mode with Automatic Cancellation	→The function is same.
	SI	Set condensed printing	N/A	→Although the font size changes, similar printing can be possible by setting 16 dots and the space between characters.
	DC2	Reset condensed printing	N/A	
	DC4	Reset double-width printing by line	Cancel Expanded Character Mode with Automatic Cancellation	→The function is same.
	CAN	Cancel	Cancel Print Data in Buffer	→The function is same.
	DEL	Delete	N/A	→No equivalent command on DPU-S445.
Expanded function code	ESC '% n	Select user-definable characters	Set/Cancel Download Character Set	→The function is replaced by "Select Optional Font"
	ESC '&' s n	Register user-definable characters	Define Download Character	→The function is replaced by "Define Optional Font"
	ESC ':' s SP SP	Delete user-definable characters	N/A	→The function is replaced by "Optional Font Area Release"
	ESC '0'	Set 11-dot line feed	Set 1/8-inch Line Spacing	→The function is same. Nearly equal line feed amount (DPU-S445 is slightly longer)
	ESC '2'	Set 15-dot line feed	Set 1/6-inch Line Spacing	→The function is same. Nearly equal line feed amount (DPU-S445 is slightly longer)
	ESC '3'	Set line feed length in half dots	Set n dot-line Line Spacing	→The function is same. Nearly equal line feed amount (DPU-S445 is slightly longer)
	ESC ' ' n1 n2 n3	Function setting	N/A	→The function is replaced by "Function setting "(DC2 'k' n1 n2 n3 n4)
	ESC ' ' s n m	Font copy	N/A	→The function is replaced by "Define Download Character "
	ESC ' ' n s	Backup control for user-definable characters	N/A	→"User Area Data Registration/Clears" is the same function (command is different)
	ESC '@'	Reset	Initialize Printer	→The function is same. The RAM is not cleared.
	ESC 'A' n	Set line feed length in dots	N/A	→The function is replaced by "Set n dot-line Line Spacing". 1/2 dot unit line feed amount setting.
	ESC 'C' n	Set page length	Set Page Length at n Lines	→There is a "Set Page Length at n Inches" as a similar function.
	ESC 'E'	Set emphasized printing	Select Emphasized Print Mode	→It is a command that combines "Emphasized Print Mode"and "Double Print Mode" of DPU-414.
	ESC 'F'	Reset emphasized printing	Cancel Emphasized Print Mode	Both commands are Emphasized (It becomes the same result)
	ESC 'G'	Set double-strike printing	Select Double Print Mode	→Same as Emphasized Print Mode
	ESC 'H'	Reset double-strike printing	Cancel Double Print Mode	
	ESC 'J' n	Paper feed in half dots	Print and Feed Paper	→The function is same. Nearly equal line feed amount (DPU-S445 is slightly longer)
	ESC 'K' n1 n2	Set single-density bit -image graphics mode	N/A	→There is a "Set Bit Image Mode" as a similar function, but the size of the print result differs..
	ESC 'L' n1 n2	Set horizontal double-density bit-image graphics mode	N/A	And commands are different.
	ESC 'N' n	Set skip length	Set Bottom Margin	→The function is same.
	ESC 'O'	Reset superscript or subscript printing	Cancel Bottom Margin	→The function is same.
	ESC 'Q' n	Set right margin	Set Right Margin	→The function is same.
	ESC 'R' n	Select international characters	Select International Character	→The function is same. The assignment of each language is different. Changing by SWDIP is possible.
	ESC 'S' n	Set superscript or subscript printing	N/A	→No equivalent command
	ESC 'T'	Reset superscript or subscript printing	N/A	
	ESC 'U' n	Select printing direction	N/A	→No equivalent command due to line thermal.
	ESC 'W' n	Select double-width printing	Select/Cancel Expanded Character Mode	→It is possible to set it similar to DPU-414 by "Select Character Font Size" and "Set Character Spacing".
	ESC '^' m n1 n2	Set vertical double-, and quadruple-density bit-image graphics mode	N/A	→The function is same with "Set Bit Image Mode".
	ESC 'c' n	Select special characters	N/A	→No equivalent command
	ESC 'l' n	Set left margin	Set Left Margin	→The function is same.
	ESC 'z' n	Select zero font	N/A	→No equivalent command

Note : Basically serial printer and line printer are different. It might be necessary to change settings by related command even on the same command, and operation might be slightly different.

