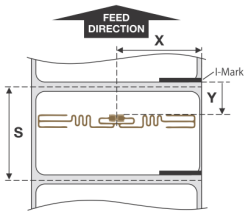
CL4NX UHF Inlay Configuration Guide

In order to successfully configure your CL4NX UHF printer, you will need the following information about your label.



X: Liner Edge to Center of Chip
Y: Optimum Encoding Position*
S: Minimum Inlay Separation

*Y: Measured from tail edge of I-mark to lead edge of inlay when I-mark sensor is used.
Measured from lead edge of label to edge of inlay when Gap sensor is used.

Feed direction will affect encoding. This is signified using the inlay images in the following table.

Standard Antenna Position determined by value of Y. When Antenna Pitch is "Short", Standard Antenna Position can be set to any position; "Blue", "Yellow", or "Green".

Region	Manufacturer	Inlay [IC Chip]	Feed Direction	Position(mm) X	Position(mm) Y	Position(mm) S	Power (dBm) Write	Power (dBm) Read	Antenna Pitch	(Y=) Standard Antenna Position (mm) Blue	Yellow	Green
G	Alien Technology	ALN-9640 "Squiggle" [Alien Higgs3]		47.5-57	3-5	21	24	14	Short	-	-	-
				47.5-57	18-36	33	16	7	Standard	18-23	24-29	30-36
G	Alien Technology	ALN-9662 "Short" [Alien Higgs3]		35-45	0-5	23			Short	-	-	-
				35-65	10-24	50	24	16	Standard	10-14	15-20	21-24
F	Alien Technology	ALN-9762 "Short" [Alien Higgs4]		50-60	0-5	20		13	Short	-	-	-
				50-60	15-22	43		10	Standard	15-18	19-22	-

The value of "Y" will affect printer configuration of Antenna Selection and Antenna Position.

CL4NX UHF Inlay Placement & Configuration Table

This recommendation has been tested successfully at SATO. Results may vary in the actual customer installation due to overall system tolerances. Validation of functionality in the actual system is therefore recommended.
In no event shall SATO be liable for any faults arising out of use of or inability to use the product.

G Placement and Configurations globally valid with minor variation.
F Valid for Frequencies that fall within the FCC range, 902-928MHz

Feed Direction
The arrow in the header of table indicates the direction in which labels are output from the printer.

Region	Manufacturer	Inlay [IC Chip]	Feed Direction	Position(mm) X	Position(mm) Y	Position(mm) S	Power (dBm) Write	Power (dBm) Read	Antenna Pitch	(Y=) Standard Antenna Position (mm) Blue	Yellow	Green
G	Alien Technology	ALN-9640 "Squiggle" [Alien Higgs3]		47.5-57	3-5	21	24	14	Short	-	-	-
				47.5-57	18-36	33	16	7	Standard	18-23	24-29	30-36
G	Alien Technology	ALN-9662 "Short" [Alien Higgs3]		35-45	0-5	23	24	18	Short	-	-	-
				35-65	10-24	50	24	16	Standard	10-14	15-20	21-24
F	Alien Technology	ALN-9762 "Short" [Alien Higgs4]		50-60	0-5	20	24	13	Short	-	-	-
				50-60	15-22	43	24	10	Standard	15-18	19-22	-
F	Alien Technology	ALN-9610 "Squig" [Alien Higgs3]		22.5-42	2-5	21	24	13	Short	-	-	-
				22.5-62	15-24	85	24	15	Standard	15-18	19-24	-
F	Alien Technology	ALN-9710 "Squig" [Alien Higgs4]		22.5-62	3-6	21	24	15	Short	-	-	-
				22.5-37	14-28	80	23	20	Standard	14-18	19-24	25-28
F	Alien Technology	ALN-9720 "HiScan" [Alien Higgs4]		19.5-59	0-3	31	24	18	Short	-	-	-
				34.5-59	14-32	80	24	17	Standard	14-17	18-24	25-32
G	Alien Technology	ALN-9654 "G Tag" [Alien Higgs3]		46.5-56.5	1-10	25	20	17	Short	-	-	-
				46.5-61.5	14-30	58	14	10	Standard	14-18	19-24	25-30
F	Alien Technology	ALN-9728 "Garment Tag" [Alien Higgs4]		22.5-37.5	0-5	36	23	15	Short	-	-	-
				22.5-62.5	6-19	105	24	18	Standard	6-9	10-14	15-19
F	Alien Technology	ALN-9728-90 "Garment Tag" [Alien Higgs4]		-	-	-	-	-	Short	-	-	-
				15-35	24-37	85	18	10	Standard	-	24-30	31-37
F	Alien Technology	ALN-9730 "Squiglette" [Alien Higgs 4]		-	-	-	-	-	Short	-	-	-
				55	17-24	26	24	11	Standard	17-20	21-24	-
G	Alien Technology	ALN-9630 "Squiglette" [Alien Higgs 3]		40-55	0-4	22	24	16	Short	-	-	-
				40-70	15-33	59	24	17	Standard	15-23	24-28	29-33
G	Arizon	AZ-9762 [Alien Higgs4]		35-50	0-3	25	24	19	Short	-	-	-
				40-65	11-36	48	24	17	Standard	11-19	20-28	29-36
G	Avery Dennison	AD-110m5 [Impinj Monza5]		21.5-46.5	4-11	22	24	16	Short	-	-	-
				36.5-46.5	11-32	65	24	20	Standard	11-17	18-25	26-32

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Region	Manufacturer	Inlay [IC Chip]	Feed Direction	Position(mm)			Power (dBm)			(Y=) Standard Antenna Position (mm)		
				X	Y	S	Write	Read	Antenna Pitch	Blue	Yellow	Green
F	Avery Dennison	AD-171m5 [Impinj Monza5]		13.5-53.5	7-10	18	24	16	Short	-	-	-
				13.5-23.5	11-35	60	24	19	Standard	11-18	19-27	28-35
G	Avery Dennison	AD-227m5 [Impinj Monza5]		47.5-57.5	0-10	31	24	19	Short	-	-	-
				47.5-57.5	13-36	38	16	11	Standard	13-20	21-28	29-36
G	Avery Dennison	AD-232iL [NXP UCODE G2iL]		-	-	-	-	-	Short	-	-	-
				45-70	12-35	62	24	16	Standard	12-19	20-27	28-35
F	Avery Dennison	AD-233m5 [Impinj Monza5]		40-55	0-4	24	24	19	Short	-	-	-
				40-70	15-37	63	23	17	Standard	15-21	22-29	30-37
G	Avery Dennison	AD-235u7 [NXP UCODE 7]		35-50	0-5	20	24	12	Short	-	-	-
				35-65	10-40	59	19	12	Standard	10-20	21-30	31-40
F	Avery Dennison	AD-318m5 [Impinj Monza5]		21-46	0-3	31	24	19	Short	-	-	-
				31-61	11-31	52	23	19	Standard	11-17	18-24	25-31
F	Avery Dennison	AD-370u7 [NXP UCODE 7]		-	-	-	-	-	Short	-	-	-
				18.5-48.5	67-90	86	17	14	Standard	67-79	80-90	-
F	Avery Dennison	AD-224iL [NXP UCODE G2iL]		47.5-57.5	0-10	24	24	19	Short	-	-	-
				47.5-62.5	16-37	41	24	15	Standard	16-22	23-29	30-37
G	Avery Dennison	AD-317iL [NXP UCODE G2iL]		-	-	-	-	-	Short	-	-	-
				35.5-60.5	10-33	50	24	16	Standard	10-17	18-25	26-33
F	Avery Dennison	AD-236u7 [NXP UCODE 7]		40-70	0-7	24	24	16	Short	-	-	-
				40-50	8-31	37	18	8	Standard	8-15	16-23	24-31
G	SMARTRAC	DogBone i [NXP UCODE G2iL/iM]		-	-	-	-	-	Short	-	-	-
				44-59	1-30	50	24	9	Standard	1-10	11-20	21-30
G	SMARTRAC	Short Dipole i [NXP UCODE G2iL/iM]		-	-	-	-	-	Short	-	-	-
				46.5-56.5	14-34	45	24	11	Standard	14-20	21-27	28-34
G	SMARTRAC	Short Dipole M4 [Impinj Monza4 (E/D/QT)]		46.5-56.5	0-1	16	24	13	Short	-	-	-
				46.5-56.5	12-36	48	24	15	Standard	12-20	21-28	29-36
G	SMARTRAC	Belt M5 [Impinj Monza5]		35-40	0-3	23	24	16	Short	-	-	-
				40-70	11-35	60	24	13	Standard	11-18	19-26	27-35
G	SMARTRAC	MiniWeb [NXP UCODE G2iL/iM]		-	-	-	-	-	Short	-	-	-
				45-60	18-35	47	24	12	Standard	18-23	24-29	30-35
F	SMARTRAC	Web I [NXP UCODE G2iL]		17.5-22.5	5-8	61	24	12	Short	-	-	-
				12.5-27.5	34-49	93	24	12	Standard	-	34-41	42-49
F	SMARTRAC	WebLite [Impinj Monza5]		23-33	0-5	36	24	23	Short	-	-	-
				33-63	14-37	45	23	18	Standard	14-21	22-29	30-37
G	SMARTRAC	Viper [Impinj Monza4D]		55	0-10	20	24	16	Short	-	-	-
				55	15-35	25	10	7	Standard	15-21	22-28	29-35
G	SMARTRAC	Frog 3D [Impinj Monza4 (E/D/QT)]		25-30	3-6	60	24	19	Short	-	-	-
				25-40	7-36	82	20	17	Standard	7-16	17-26	27-36
G	SMARTRAC	Belt [NXP UCODE G2iL]		-	-	-	-	-	Short	-	-	-
				50-55	16-36	41	24	15	Standard	16-22	23-29	30-36
G	SMARTRAC	Dogbone [Impinj Monza 5]		-	-	-	-	-	Short	-	-	-
				43-58	13-31	36	8	8	Standard	13-19	20-25	26-31
G	SMARTRAC	ShortDipole [Impinj Monza 5]		46-56	0-3	19	20	18	Short	-	-	-
				46-61	20-34	31	10	9	Standard	20-24	25-29	30-34
G	Invengo	Invengo Great Wall [Impinj Monza5]		47-62	0-2	30	24	20	Short	-	-	-
				47-57	11-37	36	18	15	Standard	11-19	20-28	29-37
G	Invengo	Invengo xWing [Impinj Monza5]		34.5-49.5	2-4	25	24	18	Short	-	-	-
				39.5-64.5	7-34	54	20	19	Standard	7-15	16-24	25-34
G	CHECKPOINT	Champion-M5 [Impinj Monza5]		40-45	0-2	27	24	19	Short	-	-	-
				40-70	8-35	58	20	20	Standard	8-16	17-25	26-35
F	CHECKPOINT	WindAparrel-M5 [Impinj Monza5]		30-45	8-11	46	23	20	Short	-	-	-
				30-65	19-41	82	16	13	Standard	20-26	27-34	35-41

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