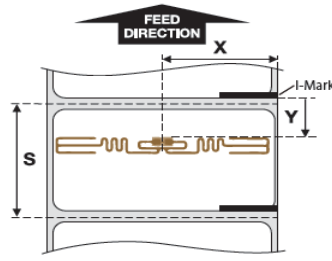


CL4NX UHF Inlay Configuration Guide

SATO recommends print speeds of 4 IPS or less for best results with RFID. The following recommendations have 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.

- G** Placement and Configurations globally valid with minor variation.
- E** Placement and Configurations valid for European (ETSI) frequency range, 865-868MHz
- F** Valid for Frequencies that fall within the FCC range, 902-928MHz







Inlay Measurements:
 X: Liner Edge to Center of Chip
 Y: Rear of Imark (Imark sensor) or front of label (gap sensor) to front of inlay.
 S: Minimum Inlay Separation

Region	Inlay Manufacturer	Inlay [IC Chip]	Feed Orientation	Position(mm)			Power (dBm)		Antenna Selection	(Y=) Standard Antenna Position (mm)		
				X	Y	S	Write	Read		Blue	Yellow	Green
G	Alien Technology	ALN-9640 "Squiggle" [Alien Higgs3]		47.5-57	3-5	21	24	14	Short Pitch	-	-	-
				47.5-57	18-36	33	16	7	Standard	18-23	24-29	30-36
E	Alien Technology	ALN-9740 "Squiggle" [Alien Higgs4]		-	-	-	-	-	Short Pitch	-	-	-
				101.5-105	20-34	31	24	15	Standard	20-24	25-29	30-34
G	Alien Technology	ALN-9662 "Short" [Alien Higgs3]		35-45	0-5	23	24	18	Short Pitch	-	-	-
				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 Pitch	-	-	-
				50-60	15-22	43	24	10	Standard	15-18	19-22	-
E	Alien Technology	ALN-9762 "Short" [Alien Higgs4]		-	-	-	-	-	Short Pitch	-	-	-
				42-58	16-32	35	24	17	Standard	16-21	22-27	28-32
F	Alien Technology	ALN-9610 "Squig" [Alien Higgs3]		22.5-42	2-5	21	24	13	Short Pitch	-	-	-
				22.5-62	15-24	85	24	15	Standard	15-18	19-24	-
E	Alien Technology	ALN-9610 "Squig" [Alien Higgs3]		26-45	1-4	33	24	24	Short Pitch	-	-	-
				39-45	18-30	41	24	18	Standard	18-22	23-26	27-30
F	Alien Technology	ALN-9710 "Squig" [Alien Higgs4]		22.5-62	3-6	21	24	15	Short Pitch	-	-	-
				22.5-37	14-28	80	23	20	Standard	14-18	19-24	25-28
E	Alien Technology	ALN-9710 "Squig" [Alien Higgs4]		26-45	2-5	33	24	23	Short Pitch	-	-	-
				39-45	18-30	43	24	24	Standard	18-21	22-25	26-30
F	Alien Technology	ALN-9720 "HiScan" [Alien Higgs4]		19.5-59	0-3	31	24	18	Short Pitch	-	-	-
				34.5-59	14-32	80	24	17	Standard	14-17	18-24	25-32
E	Alien Technology	ALN-9720 "HiScan" [Alien Higgs4]		23-42	0-2	29	24	24	Short Pitch	-	-	-
				31-42	14-32	45	24	23	Standard	14-20	21-26	27-32
G	Alien Technology	ALN-9654 "G Tag" [Alien Higgs3]		46.5-56.5	1-10	25	20	17	Short Pitch	-	-	-
				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 Pitch	-	-	-
				22.5-62.5	6-19	105	24	18	Standard	6-9	10-14	15-19
E	Alien Technology	ALN-9728 "Garment Tag" [Alien Higgs4]		26.5-35.5	0-5	35	24	17	Short Pitch	-	-	-
				39.5-45.5	18-36	43	24	15	Standard	18-24	25-30	31-36
F	Alien Technology	ALN-9728-90 "Garment Tag" [Alien Higgs4]		-	-	-	-	-	Short Pitch	-	-	-
				15-35	24-37	85	18	10	Standard	-	24-30	31-37
E	Alien Technology	ALN-9728-90 "Garment Tag" [Alien Higgs4]		19-28	7-10	61	20	15	Short Pitch	-	-	-
				19-33	22-45	75	20	13	Standard	22-30	31-38	39-45
F	Alien Technology	ALN-9730 "Squiglette" [Alien Higgs4]		-	-	-	-	-	Short Pitch	-	-	-
				55	17-24	26	24	11	Standard	17-20	21-24	-
E	Alien Technology	ALN-9730 "Squiglette" [Alien Higgs4]		-	-	-	-	-	Short Pitch	-	-	-
				52-58	21-26	27	24	13	Standard	21-23	24-26	-
G	Alien Technology	ALN-9630 "Squiglette" [Alien Higgs3]		40-55	0-4	22	24	16	Short Pitch	-	-	-
				40-70	15-33	59	24	17	Standard	15-23	24-28	29-33
G	Alien Technology	ALN-9768 WRW [Alien Higgs4]		-	-	-	-	-	Short Pitch	-	-	-
				47-61	17-33	46	6	6	Standard	17-22	23-28	29-33
F	Alien Technology	ALN-9715-WRW [Alien Higgs4]		36.5	3-5	25	24	24	Short Pitch	-	-	-
				36.5	20-21	40	24	23	Standard	20-21	-	-

Region	Inlay Manufacturer	Inlay [IC Chip]	Feed Orientation	Position(mm)			Power (dBm)		Antenna Selection	(Y=) Standard Antenna Position (mm)		
				X	Y	S	Write	Read		Blue	Yellow	Green
E	Alien Technology	ALN-9715-WRW [Alien Higgs4]		-	-	-	-	-	Short Pitch	-	-	-
				36.5	17-31	30	24	23	Standard	17-22	23-26	27-31
E	Alien Technology	ALN-9726-WRW [Alien Higgs4]		29-48	7-11	44	24	24	Short Pitch	-	-	-
				29-48	28-32	45	24	20	Standard	28-32	-	-
G	Avery Dennison	AD-110m5 [Impinj Monza5]		21.5-46.5	4-11	22	24	16	Short Pitch	-	-	-
				36.5-46.5	11-32	65	24	20	Standard	11-17	18-25	26-32
F	Avery Dennison	AD-171m5 [Impinj Monza5]		13.5-53.5	7-10	18	24	16	Short Pitch	-	-	-
				13.5-23.5	11-35	60	24	19	Standard	11-18	19-27	28-35
E	Avery Dennison	AD-171m5 [Impinj Monza5]		20.5-36.5	11-14	37	24	24	Short Pitch	-	-	-
				17.5-21.5	10-35	50	24	24	Standard	10-21	22-28	29-35
G	Avery Dennison	AD-227m5 [Impinj Monza5]		47.5-57.5	0-10	31	24	19	Short Pitch	-	-	-
				47.5-57.5	13-36	38	16	11	Standard	13-20	21-28	29-36
F	Avery Dennison	AD-226iL [NXP UCODE G2iL]		47.5-57.5	0-10	24	24	19	Short Pitch	-	-	-
				47.5-62.5	16-37	41	24	15	Standard	16-22	23-29	30-37
E	Avery Dennison	AD-226iL [NXP UCODE G2iL]		51.5-55.5	5-14	23	23	17	Short Pitch	-	-	-
				51.5-55.5	17-32	39	20	17	Standard	17-24	25-32	-
G	Avery Dennison	AD-232iL [NXP UCODE G2iL]		-	-	-	-	-	Short Pitch	-	-	-
				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 Pitch	-	-	-
				40-70	15-37	63	23	17	Standard	15-21	22-29	30-37
E	Avery Dennison	AD-233m5 [Impinj Monza5]		42-58	6-8	38	24	24	Short Pitch	-	-	-
				42-58	17-39	40	24	24	Standard	17-24	25-31	32-39
G	Avery Dennison	AD-235u7 [NXP UCODE 7]		35-50	0-5	20	24	12	Short Pitch	-	-	-
				35-65	10-40	59	19	12	Standard	10-20	21-30	31-40
F	Avery Dennison	AD-236u7 [NXP UCODE 7]		40-70	0-7	24	24	16	Short Pitch	-	-	-
				40-50	8-31	37	18	8	Standard	8-15	16-23	24-31
E	Avery Dennison	AD-236u7 [NXP UCODE 7]		39-48	8-10	45	24	24	Short Pitch	-	-	-
				39-48	12-40	47	24	20	Standard	12-21	22-30	31-40
F	Avery Dennison	AD-318m5 [Impinj Monza5]		21-46	0-3	31	24	19	Short Pitch	-	-	-
				31-61	11-31	52	23	19	Standard	11-17	18-24	25-31
E	Avery Dennison	AD-318m5 [Impinj Monza5]		25-44	13-16	45	24	24	Short Pitch	-	-	-
				28-44	16-34	63	24	20	Standard	16-22	23-29	30-34
F	Avery Dennison	AD-370u7 [NXP UCODE 7]		-	-	-	-	-	Short Pitch	-	-	-
				18.5-48.5	67-90	86	17	14	Standard	67-79	80-90	-
E	Avery Dennison	AD-370u7 [NXP UCODE 7]		12.5-21.5	9-11	41	20	10	Short Pitch	-	-	-
				12.5-26.5	0-13	60	20	9	Standard	0-3	4-9	10-13
G	Avery Dennison	AD-317iL [NXP UCODE G2iL]		-	-	-	-	-	Short Pitch	-	-	-
				35.5-60.5	10-33	50	24	16	Standard	10-17	18-25	26-33
E	Avery Dennison	AD-380iL [NXP UCODE G2iL]		-	-	-	-	-	Short Pitch	-	-	-
				42-48	16-26	55	24	15	Standard	16-19	20-23	24-26
G	SMARTRAC	DogBone i [NXP UCODE G2iL/iM]		-	-	-	-	-	Short Pitch	-	-	-
				44-59	1-30	50	24	9	Standard	1-10	11-20	21-30
G	SMARTRAC	Dogbone [Impinj Monza4QT]		-	-	-	-	-	Short Pitch	-	-	-
				43-58	13-31	36	8	8	Standard	13-19	20-25	26-31
G	SMARTRAC	Short Dipole i [NXP UCODE G2iL/iM]		-	-	-	-	-	Short Pitch	-	-	-
				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 Pitch	-	-	-
				46.5-56.5	12-36	48	24	15	Standard	12-20	21-28	29-36
G	SMARTRAC	ShortDipole [Impinj Monza5]		46-56	0-3	19	20	18	Short Pitch	-	-	-
				46-61	20-34	31	10	9	Standard	20-24	25-29	30-34
G	SMARTRAC	Belt M5 [Impinj Monza5]		35-40	0-3	23	24	16	Short Pitch	-	-	-
				40-70	11-35	60	24	13	Standard	11-18	19-26	27-35

Region	Inlay Manufacturer	Inlay [IC Chip]	Feed Orientation	Position(mm)			Power (dBm)		Antenna Selection	(Y=) Standard Antenna Position (mm)		
				X	Y	S	Write	Read		Blue	Yellow	Green
G	SMARTRAC	Belt-M5 [Impinj Monza5]		48.5	4.5	39	24	16	Short Pitch	-	-	-
				-	-	-	-	-	Standard	-	-	-
G	SMARTRAC	Belt-R6 [Impinj Monza R6]		39.5	2-3	20	18	18	Short Pitch	-	-	-
				39.5	16-30	45	17	15	Standard	16-20	21-25	26-30
E	SMARTRAC	Belt-U7 [NXP UCODE 7]		40.5-54.5	1-4	26	24	23	Short Pitch	-	-	-
				40.5-59.5	15-37	50	23	20	Standard	15-22	23-30	31-37
G	SMARTRAC	Belt-U7 [NXP UCODE 7]		48.5	3	39	20	17	Short Pitch	-	-	-
				-	-	-	-	-	Standard	-	-	-
G	SMARTRAC	Belt [NXP UCODE G2iL]		-	-	-	-	-	Short Pitch	-	-	-
				50-55	16-36	41	24	15	Standard	16-22	23-29	30-36
G	SMARTRAC	MiniWeb [NXP UCODE G2iL/iM]		-	-	-	-	-	Short Pitch	-	-	-
				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 Pitch	-	-	-
				12.5-27.5	34-49	93	24	12	Standard	-	34-41	42-49
E	SMARTRAC	Web I [NXP UCODE G2iL]		16.5-35.5	10-15	67	24	16	Short Pitch	-	-	-
				16.5-25.5	18-47	86	24	15	Standard	18-28	29-38	39-47
E	SMARTRAC	Web-iM [NXP G2iM]		-	-	-	-	-	Short Pitch	-	-	-
				24.5-30.5	26-37	71	24	16	Standard	-	26-31	32-37
E	SMARTRAC	Web-U7 [NXP UCODE 7]		29-48	0-3	30	24	19	Short Pitch	-	-	-
				32-48	1-30	55	23	20	Standard	1-11	12-21	22-30
F	SMARTRAC	Web-U7 [NXP UCODE 7]		29-45	2-8	35	17	17	Short Pitch	-	-	-
				29-38	0-5	42	16	10	Standard	0-5	-	-
E	SMARTRAC	Web-U7 [NXP UCODE 7]		29-48	4-7	43	24	24	Short Pitch	-	-	-
				29-48	2-17	53	20	19	Standard	2-6	7-12	13-17
G	SMARTRAC	Viper [Impinj Monza4D]		55	0-10	20	24	16	Short Pitch	-	-	-
				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 Pitch	-	-	-
				25-40	7-36	82	20	17	Standard	7-16	17-26	27-36
F	SMARTRAC	Trap NF [Impinj Monza5]		15-20	4-6	30	24	19	Short Pitch	-	-	-
				14-19	16-19	33	24	20	Standard	16-19	-	-
E	SMARTRAC	Trap NF [Impinj Monza5]		-	-	-	-	-	Short Pitch	-	-	-
				16-27	20-27	41	24	23	Standard	20-22	23-27	-
F	SMARTRAC	WebLite [Impinj Monza5]		23-33	0-5	36	24	23	Short Pitch	-	-	-
				33-63	14-37	45	23	18	Standard	14-21	22-29	30-37
E	SMARTRAC	WebLite [Impinj Monza5]		26-27	0-2	20	23	23	Short Pitch	-	-	-
				26-27	10-17	30	24	24	Standard	10-13	14-17	-
G	SMARTRAC	WebLite-M5 P39xW93 Tag [Impinj Monza5]		36.5	6.5	39	24	23	Short Pitch	-	-	-
				-	-	-	-	-	Standard	-	-	-
G	SMARTRAC	MiniWeb-U7 [NXP U-CODE 7]		27-46	9-12	45	24	24	Short Pitch	-	-	-
				35-46	14-37	65	17	17	Standard	14-21	22-29	30-37
G	Invengo	Invengo Great Wall [Impinj Monza5]		47-62	0-2	30	24	20	Short Pitch	-	-	-
				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 Pitch	-	-	-
				39.5-64.5	7-34	54	20	19	Standard	7-15	16-24	25-34
F	Invengo	xWing-U7 [NXP U-CODE 7]		38.5-42.5	0-8	35	24	24	Short Pitch	-	-	-
				38.5-42.5	17-37	45	24	13	Standard	17-23	24-30	31-37
E	Invengo	xWing-U7 [NXP U-CODE 7]		38.5-42.5	8-13	40	24	24	Short Pitch	-	-	-
				38.5-42.5	17-37	45	24	13	Standard	17-23	24-30	31-37
G	CHECKPOINT	Champion-M5 [Impinj Monza5]		40-45	0-2	27	24	19	Short Pitch	-	-	-
				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 Pitch	-	-	-
				30-65	20-41	82	16	13	Standard	20-26	27-34	35-41

Region	Inlay Manufacturer	Inlay [IC Chip]	 Feed Orientation	Position(mm)			Power (dBm)		Antenna Selection	(Y=) Standard Antenna Position (mm)		
				X	Y	S	Write	Read		Blue	Yellow	Green
E	CHECKPOINT	WindAparrel-M5 [Impinj Monza5]		37-38	10-13	53	24	23	Short Pitch	-	-	-
				29-38	0-13	75	23	18	Standard	0-4	5-8	9-13
E	SML	GB2U-M5 [Impinj Monza5]		-	-	-	-	-	Short Pitch	-	-	-
				32-43	16-32	60	23	23	Standard	16-21	22-27	29-32
G	Arizon	AZ-9762 [Alien Higgs4]		35-50	0-3	25	24	19	Short Pitch	-	-	-
				40-65	11-36	48	24	17	Standard	11-19	20-28	29-36

For inlays not included on this list, please contact your local SATO dealer or sales office.

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