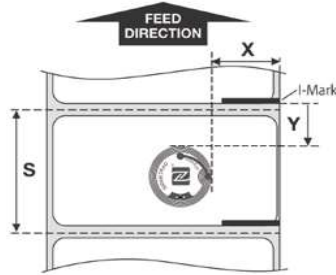


# CL4NX HF Inlay Configuration Guide

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

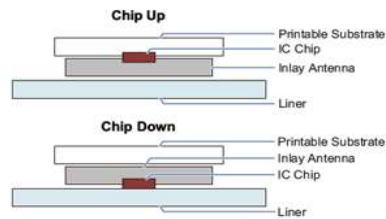
**Feed Direction**



X: Liner edge to inlay antenna edge.  
 Y: Optimum Encoding Position\*  
 S: Minimum Inlay Separation

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

**Chip Orientation**



## How to check the Configuration Table

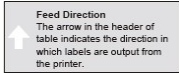
Feed direction affects results, and is signified by the images in the following table.

Manufacturer	Inlay	IC Chip	Feed Orientation	IC Facing	Position(mm)		(Y=) Standard Antenna Position (mm)			(S=) Minimum Inlay Separation		
					X	Y	Blue	Yellow	Green	Blue	Yellow	Green
Smartrac	Block	ICODE SLIX		Up	4 to 23	0 to 30	0-15	16-23	24-30	85	115	125
Smartrac	BullsEye	ICODE SLIX		Below	4 to 23	10 to 30	10-20	21-26	27-30	83	96	108

Antenna Positions determined by the values of "Y" and "S".

## CL4NX HF 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.



# CL4NX HF Inlay Configuration Guide

Manufacturer	Inlay	IC Chip	Feed Orientation	IC Facing	Position(mm)		(Y=) Standard Antenna Position (mm)			(S=) Minimum Inlay Separation (mm)		
					X	Y	Blue	Yellow	Green	Blue	Yellow	Green
Smartrac	Block	ICODE SLIX		Up	4 to 23	0 to 30	0-15	16-23	24-30	85	115	125
Smartrac	BullsEye	ICODE SLIX		Below	4 to 23	10 to 30	10-20	21-26	27-30	83	96	108
Smartrac	BullsEye NFC	NTAG 203		Up	12 to 23	10 to 29	10-19	20-24	25-29	47	68	68
Smartrac	BullsEye NFC	NTAG 213		Up	4 to 23	10 to 30	10-20	21-26	27-30	50	58	78
Smartrac	BullsEye NFC	NTAG 216		Up	4 to 23	10 to 30	10-17	18-24	25-30	52	70	72
Smartrac	BullsEye NFC	FeliCa Lite-S		Up	4 to 8	10 to 22	10-16	17-22	-	45	71	-
Smartrac	Circus NFC	NTAG 203		Up	7 to 23	19 to 32	19-26	19-26	27-32	42	43	58
Smartrac	Circus NFC	NTAG 213		Up	7 to 23	23 to 34	23-26	27-30	31-34	43	56	59
Smartrac	Midas NFC	NTAG 213		Up	12 to 23	23 to 34	22-26	27-30	31-34	39	44	48
Smartrac	Midas NFC	NTAG 203		Up	12 to 23	22 to 33	23-26	27-30	31-33	40	44	48
Smartrac	MiniBlock	ICODE SLIX		Up	7 to 23	23 to 36	23-28	29-32	33-36	43	74	78
Smartrac	MiniTrack	ICODE SLIX		Up	7 to 23	13 to 33	13-22	23-28	29-33	56	91	95
Smartrac	MiniTrack NFC	NTAG 203		Up	12 to 23	12 to 32	12-20	21-27	28-32	43	52	59

Manufacturer	Inlay	IC Chip	Feed Orientation	IC Facing	Position(mm)		(Y=) Standard Antenna Position (mm)			(S=) Minimum Inlay Separation (mm)		
					X	Y	Blue	Yellow	Green	Blue	Yellow	Green
Smartrac	RaceTrack NFC	NTAG 203		Up	4 <sup>t</sup> <sub>o</sub> 13	0 <sup>t</sup> <sub>o</sub> 30	0-15	16-24	25-30	97	101	113
Smartrac	Racetrack	ICODE SLIX		Up	4 <sup>t</sup> <sub>o</sub> 18	0 <sup>t</sup> <sub>o</sub> 28	0-10	11-20	21-28	103	118	127
Smartrac	BullsEye NFC Wet Inlay	FeliCa Lite-S		Up	4 <sup>t</sup> <sub>o</sub> 13	19 <sup>t</sup> <sub>o</sub> 21	19-21	-	44-50	54	-	79
Smartrac	BullsEye NFC Wet Inlay	FeliCa Lite-S		Up	4 <sup>t</sup> <sub>o</sub> 13	44 <sup>t</sup> <sub>o</sub> 50	19-21	-	44-50	54	-	79
Smartrac	MiniTrack NFC	MIFARE Ultralight(50pF)		Up	7 <sup>t</sup> <sub>o</sub> 13	20 <sup>t</sup> <sub>o</sub> 30	-	20-24	25-30	-	51	56
Smartrac	R19 Wet Inlay	ICODE SLI-L		Below	4 <sup>t</sup> <sub>o</sub> 13	25 <sup>t</sup> <sub>o</sub> 28	-	25-28	29-33	-	65	75
Smartrac	R19 Wet Inlay	ICODE SLI-L		Below	4 <sup>t</sup> <sub>o</sub> 13	48 <sup>t</sup> <sub>o</sub> 54	-	25-28	29-33	-	65	75
Smartrac	BullsEye NEC	MIFARE Ultralight(17pF)		Up	4 <sup>t</sup> <sub>o</sub> 13	8 <sup>t</sup> <sub>o</sub> 23	8-15	16-23	46-48	50	55	81
Smartrac	BullsEye NEC	MIFARE Ultralight(17pF)		Up	4 <sup>t</sup> <sub>o</sub> 13	46 <sup>t</sup> <sub>o</sub> 48	8-15	16-23	46-48	50	55	81
SAG	46x77-UL	MIFARE Ultralight		Up	4 <sup>t</sup> <sub>o</sub> 8	0 <sup>t</sup> <sub>o</sub> 26	0-12	13-20	21-26	59	83	95
SAG	38x27-UL	MIFARE Ultralight		Up	4 <sup>t</sup> <sub>o</sub> 18	19 <sup>t</sup> <sub>o</sub> 31	19-23	24-27	28-31	42	47	51
SAG	R29mm FL-S	FeliCa Lite-S		Up	7 <sup>t</sup> <sub>o</sub> 18	17 <sup>t</sup> <sub>o</sub> 19	17-19	-	-	42	-	-
SAG	42x27 FL-S	FeliCa Lite-S		Up	4 <sup>t</sup> <sub>o</sub> 13	19 <sup>t</sup> <sub>o</sub> 31	19-23	24-27	28-31	42	65	69
Arizon	AZ-U-UL	MIFARE Ultralight		Up	7 <sup>t</sup> <sub>o</sub> 13	0 <sup>t</sup> <sub>o</sub> 27	0-10	11-15	16-27	89	110	113
Arizon	AZ-G-UL	MIFARE Ultralight		Up	4 <sup>t</sup> <sub>o</sub> 23	19 <sup>t</sup> <sub>o</sub> 31	-	19-26	27-31	-	47	50
Arizon	AZ-T-UL	MIFARE Ultralight		Up	7 <sup>t</sup> <sub>o</sub> 13	13 <sup>t</sup> <sub>o</sub> 29	13-19	20-25	26-29	58	68	71
Arizon	AZ-G	ICODE SLI		Up	4 <sup>t</sup> <sub>o</sub> 13	17 <sup>t</sup> <sub>o</sub> 29	17-23	24-29	46-63	45	75	80
Arizon	AZ-G	ICODE SLI		Up	4 <sup>t</sup> <sub>o</sub> 13	46 <sup>t</sup> <sub>o</sub> 63	17-23	24-29	46-63	45	75	80
Arizon	AZ-T	ICODE SLI		Below	7 <sup>t</sup> <sub>o</sub> 18	5 <sup>t</sup> <sub>o</sub> 19	5-9	10-14	15-19	76	106	108
Arizon	AZ-T45	ICODE SLIX		Below	7 <sup>t</sup> <sub>o</sub> 18	3 <sup>t</sup> <sub>o</sub> 32	3-25	3-27	3-32	83	113	130
Avery Dennison	AD-730x	ICODE SLIX		Up	4 <sup>t</sup> <sub>o</sub> 13	22 <sup>t</sup> <sub>o</sub> 27	22-27	43-50	51-73	50	85	90
Avery Dennison	AD-730x	ICODE SLIX		Up	4 <sup>t</sup> <sub>o</sub> 13	43 <sup>t</sup> <sub>o</sub> 73	22-27	43-50	51-73	50	85	90
Avery Dennison	AD-714x	ICODE SLIX		Below	4 <sup>t</sup> <sub>o</sub> 13	0 <sup>t</sup> <sub>o</sub> 29	0-11	12-29	45-73	120	155	160
Avery Dennison	AD-714x	ICODE SLIX		Below	4 <sup>t</sup> <sub>o</sub> 13	45 <sup>t</sup> <sub>o</sub> 73	0-11	12-29	45-73	120	155	160
Avery Dennison	AD-709x	ICODE SLIX		Below	4 <sup>t</sup> <sub>o</sub> 13	0 <sup>t</sup> <sub>o</sub> 26	0-11	12-26	44-69	80	125	130
Avery Dennison	AD-709x	ICODE SLIX		Below	4 <sup>t</sup> <sub>o</sub> 13	44 <sup>t</sup> <sub>o</sub> 69	0-11	12-26	44-69	80	125	130
Avery Dennison	AD-740	Mifare Ultralight EV1		Below	7 <sup>t</sup> <sub>o</sub> 18	20 <sup>t</sup> <sub>o</sub> 31	20-23	24-27	28-31	40	59	64
Avery Dennison	AD-721	NTAG 213		Up	7 <sup>t</sup> <sub>o</sub> 18	20 <sup>t</sup> <sub>o</sub> 34	20-24	25-29	30-34	37	45	47
SAG	22.5x38mm Mifare UL EV1	Mifare Ultralight EV1		Up	4 <sup>t</sup> <sub>o</sub> 13	16 <sup>t</sup> <sub>o</sub> 29	16-22	23-29	47-56	45	70	75
SAG	22.5x38mm Mifare UL EV1	Mifare Ultralight EV1		Up	4 <sup>t</sup> <sub>o</sub> 13	47 <sup>t</sup> <sub>o</sub> 56	16-22	23-29	47-56	45	70	75
SAG	22.5x38mm Plus	Tag-it HF-I Plus		Below	7 <sup>t</sup> <sub>o</sub> 18	20 <sup>t</sup> <sub>o</sub> 31	20-23	24-27	28-31	51	83	87
SAG	22.5x38 SLIX	ICODE SLIX		UP	7 <sup>t</sup> <sub>o</sub> 23	20 <sup>t</sup> <sub>o</sub> 34	20-24	25-29	20-24	61	85	135
SAG	31x14 SLIX	ICODE SLIX		UP	7 <sup>t</sup> <sub>o</sub> 23	16 <sup>t</sup> <sub>o</sub> 30	16-20	21-25	26-30	59	74	75
SAG	15x15 SLIX	ICODE SLIX		UP	7 <sup>t</sup> <sub>o</sub> 23	24 <sup>t</sup> <sub>o</sub> 35	24-27	28-31	32-35	58	73	78
SAG	10.5x10.5 SLIX	ICODE SLIX		UP	12 <sup>t</sup> <sub>o</sub> 23	26 <sup>t</sup> <sub>o</sub> 37	26-29	30-33	34-37	31	58	63
SAG	22.5x38 NTAG213	NTAG 213		UP	7 <sup>t</sup> <sub>o</sub> 23	18 <sup>t</sup> <sub>o</sub> 32	18-22	23-27	28-32	44	51	69
SAG	14x31 NTAG213	NTAG 213		UP	7 <sup>t</sup> <sub>o</sub> 23	23 <sup>t</sup> <sub>o</sub> 37	23-27	28-32	33-37	35	55	58
SAG	15x15 NTAG213	NTAG 213		UP	7 <sup>t</sup> <sub>o</sub> 23	24 <sup>t</sup> <sub>o</sub> 34	24-28	26-30	31-34	34	36	39
SAG	45x45 SLIX	ICODE SLIX		UP	7 <sup>t</sup> <sub>o</sub> 23	11 <sup>t</sup> <sub>o</sub> 25	11-15	16-20	21-25	86	126	123
Identiv	NTAG 215 38x28mm	NTAG 215		Up	4 <sup>t</sup> <sub>o</sub> 13	5 <sup>t</sup> <sub>o</sub> 25	5-18	19-25	46-51	55	65	84
Identiv	NTAG 215 38x28mm	NTAG 215		Up	4 <sup>t</sup> <sub>o</sub> 13	46 <sup>t</sup> <sub>o</sub> 51	5-18	19-25	46-51	55	65	84
Junmp	T160324	NTAG 215		Below	7 <sup>t</sup> <sub>o</sub> 18	16 <sup>t</sup> <sub>o</sub> 30	16-20	21-25	26-30	52	62	65
ShangYang	φ 20mm-NTAG213	NTAG 213		Up	7 <sup>t</sup> <sub>o</sub> 12	19 <sup>t</sup> <sub>o</sub> 25	19-22	19-22	22-25	35	40	42

Manufacturer	Inlay	IC Chip	Feed Orientation	IC Facing	Position(mm)		(Y=) Standard Antenna Position (mm)			(S=) Minimum Inlay Separation (mm)		
					X	Y	Blue	Yellow	Green	Blue	Yellow	Green
Confidex	Confidex Links NTAG213	NTAG 213		UP	5 <sup>t</sup> <sub>o</sub> 18	22 <sup>t</sup> <sub>o</sub> 33	22-25	26-29	30-33	38	57	62
Confidex	Confidex Links NTAG203	NTAG 203		UP	7 <sup>t</sup> <sub>o</sub> 18	13 <sup>t</sup> <sub>o</sub> 24	13-16	17-20	21-24	48	70	68
Confidex	Confidex Links NTAG213	NTAG 213		UP	7 <sup>t</sup> <sub>o</sub> 18	17 <sup>t</sup> <sub>o</sub> 28	17-20	21-24	25-28	54	57	59
takling' things	40mm Square	NTAG 213		Below	7 <sup>t</sup> <sub>o</sub> 18	6 <sup>t</sup> <sub>o</sub> 18	6-9	10-13	14-18	59	83	87
takling' things	24mm Round	NTAG 213		Below	7 <sup>t</sup> <sub>o</sub> 18	21 <sup>t</sup> <sub>o</sub> 32	21-24	25-28	29-32	33	53	58
thinfilm	R20mm-NTAG213 [NC-1401-W11-SDx]	NTAG 213		UP	7 <sup>t</sup> <sub>o</sub> 23	21 <sup>t</sup> <sub>o</sub> 35	21-25	26-30	31-35	34	42	44
thinfilm	R20mm-NTAG213 [NC-1401-W11-SDx]	NTAG 213		UP	7 <sup>t</sup> <sub>o</sub> 23	21 <sup>t</sup> <sub>o</sub> 35	21-25	26-30	31-35	34	41	44
Hitachi High-tech Materials	Tag-it HF-I Plus			Below	7 <sup>t</sup> <sub>o</sub> 23	10 <sup>t</sup> <sub>o</sub> 24	10-14	15-19	20-24	112	132	135
Hitachi High-tech Materials	Tag-it HF-I Plus			Below	7 <sup>t</sup> <sub>o</sub> 18	5 <sup>t</sup> <sub>o</sub> 19	5-9	10-14	15-19	88	106	111
NHK Spring Co., Ltd.	Stackable Tag Label Type	ICODE SLI		Up	5 <sup>t</sup> <sub>o</sub> 8	23 <sup>t</sup> <sub>o</sub> 27	-	-	23-27	-	-	103
BOINGTECH	L NTAG213 0418 Φ20 Φ25 O 219-2K1-20K	NTAG 213		UP	7 <sup>t</sup> <sub>o</sub> 23	21 <sup>t</sup> <sub>o</sub> 35	21-25	26-30	31-35	33	52	57
BOINGTECH	L N213 0352 76-45 81-49 V 233-0001	NTAG 213		Below	7 <sup>t</sup> <sub>o</sub> 23	13 <sup>t</sup> <sub>o</sub> 27	13-17	18-22	23-27	97	115	117
BOINGTECH	W NTAG213 0458 17-8 19-11 V 086-5K1-50K	NTAG 213		UP	12 <sup>t</sup> <sub>o</sub> 23	21 <sup>t</sup> <sub>o</sub> 35	21-25	26-30	31-35	22	23	34
BOINGTECH	L N213 0435A Φ35 Φ38 O 224-0002	NTAG 213		UP	7 <sup>t</sup> <sub>o</sub> 23	10 <sup>t</sup> <sub>o</sub> 24	10-14	15-19	20-24	49	55	59
BOINGTECH	L NTAG213 0435 Φ35 Φ40 O 129-4K1-4K	NTAG 213		UP	7 <sup>t</sup> <sub>o</sub> 23	10 <sup>t</sup> <sub>o</sub> 24	10-14	15-19	20-24	50	56	59