

# Product Line Comparison



Model Number	P110z	P120z	P210z / P205	P310z / P310F	P330z	P420z	P520z	P640z
<b>Product Description</b>	Single Sided Color Printer	Dual Sided Color Printer	Single Sided Color / Single Sided Monochrome Printer	Single Sided Color / Single Sided Monochrome Printer	Single Sided Color Printer	Dual Sided Color Printer	Dual Sided Color Printer w/Laminator	Dual Sided Color Printer w/Dual Laminator
<b>Suggested List Price</b>	\$1,995	\$2,895	\$1,995 / \$1,795	\$2,895 / \$2,495	\$2,695	\$3,995	\$6,995	\$7,995
<b>Printhead Warranty</b>	1 yr (unlimited passes)	1 yr (unlimited passes)	2 Years (unlimited passes)	1 year (unlimited passes)	1 Year (unlimited passes)	1 Year (unlimited passes)	1 Year (unlimited passes)	1 Year (unlimited passes)
<b>Features</b>								
<b>Software Drivers</b>	Win 2000, XP	Win 2000, XP	Win 98, Me, NT 4.0, 2000, XP	Win 98, Me, NT 4.0, 2000, XP	Win 2000, XP	Win 98, Me, NT 4.0, 2000, XP	Win 98, Me, NT 4.0, 2000, XP	Win 2000, XP
<b>Communication Interface</b>	USB	USB	Parallel, Serial, USB	Parallel, USB	USB, Ethernet	Parallel, USB, Ethernet	Parallel, USB, Ethernet	USB, Ethernet
<b>Functional Display</b>	LCD	LCD	3 Stage LED	3 LED Lights	LCD	LCD & 2 LEDs	LCD & 2 LEDs	3 LEDs
<b>Printing Specifications</b>								
<b>Print Speed</b>	30 sec per card	35 sec per card	30 sec/card Color 4 sec/card Mono	144 Color / 1000 Mono cards per hour	144 cards per hour	102 cards per hour	100 cards per hour	120 cards per hour
<b>Edge-to-Edge Printing</b>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
<b>Card Specifications</b>								
<b>Card Types (ISO CR-80)</b>	PVC & Composite	PVC & Composite	PVC & Composite	PVC & Composite	PVC & Composite	PVC & Composite	PVC Composite	PVC Composite
<b>Card Input Feeder</b>	100 (30 mil) cards	100 (30 mil) cards	50 (30 mil) cards	75 (30 mil) cards	100/220 (30 mil)	100 (30 mil) cards	100 (30 mil) cards	150 (30 mil) cards
<b>Card Output Hopper</b>	45 (30 mil) cards	45 (30 mil) cards	20 (30 mil) cards	75 (30 mil) cards	100 (30 mil) cards	100 (30 mil) cards	100 (30 mil) cards	80 (30 mil) cards
<b>Ribbon Specifications</b>								
<b>Monochrome (max)</b>	1000 images/cartridge	1000 images/cartridge	500 images/cartridge	1500 images/roll	1500 images/roll	1500 images/roll	1500 images/roll	--
<b>KrO &amp; KdO (max)</b>	N/A	N/A	--	500 images/roll	500 images/roll	500 images/roll	500 images/roll	--
<b>YMCK (max)</b>	N/A	N/A	--	--	--	--	400 images/roll	600 images/roll
<b>YMCKK (max)</b>	N/A	N/A	--	--	--	--	200 images/roll	500 images/roll
<b>YMCKO (max)</b>	200 images/cartridge	200 images/cartridge	100 images/cartridge	330 images/roll	330 images/roll	330 images/roll	330 images/roll	--
<b>YMCKOK (max)</b>	N/A	165 images/cartridge	--	--	--	170 images/roll	170 images/roll	--
<b>Laminator Specifications</b>								
<b>Built-In Laminator</b>	No	No	No	No	No	No	Yes - Single System	Yes - Dual System
<b>Physical Characteristics</b>								
<b>Size (H x W x D)</b>	216 x 201 x 328mm	216 x 201 x 328mm	180 x 182 x 303mm	220 x 315 x 198mm	256 x 462 x 239mm	269 x 523 x 253mm	265 x 805 x 235mm	292 x 699 x 246mm
<b>Weight</b>	9.5 lbs (4.3kg)	9.5 lbs (4.3kg)	6.4 lbs (2.9kg)	13.4 lbs (6.1kg)	15.5 lbs (7.0kg)	27.5 lbs (12.5kg)	47 lbs (21.45kg)	35 lbs (15.9kg)



## *P110i Competitive Comparison*

Manufacturer Model Number	Zebra P110i	Fargo C30/DTC400	Datacard SP35	Evolis Peb3le	Magicard Avalon
<b>Suggested List Price</b>	\$1,995	\$2,295 / \$2,895	\$2,195	\$1,990	\$2,400
<b>Printhead Warranty</b>	1 yr (unlimited passes)	1 yr (unlimited passes)	18 mo. (unlimited passes)	2 yrs (unlimited passes)	1yr limited
<b>Standard Features</b>					
Software Drivers	Win 2000, XP	Win 98, Me, 2000, XP	Win 98, Me, 2000, XP	Win NT 4.0, 2000, XP; Mac OS X	Win 98, Me, 2000, XP
Communication Interface	USB	USB	USB	Parallel, USB	USB
Functional Display	LCD	LCD	LED	LED	LED
<b>Printing Specifications</b>					
Print Speed (YMCKO) (seconds per card)	30 sec per card	27 sec per card	30 sec per card	24 sec per card	35 sec per card
Edge-to-Edge Printing	Yes	Yes	Yes	Yes	Yes
<b>Card Specifications</b>					
Card Types (ISO CR-80)	PVC & Composite	PVC & Composite	PVC & Composite	PVC & Composite	PVC & Composite
Card Input Feeder	100 (30 mil) cards	100 (30 mil) cards	100 (30 mil) cards	100 (30 mil) cards	100 (30 mil) cards
<b>Ribbon Specifications</b>					
Ribbon Detection	Yes	No	Yes	No	Yes
Ribbon low notification	Yes	No	Yes	No	Yes
Monochrome (max)	1000 images/cartridge	1000 images/cartridge	1500 images/roll	1000 images/roll	1000 images/roll
KrO & KdO (max)	N/A	500 images/cartridge	1000 images/roll	500 images/roll	600 images/roll
YMCKO (max)	200 images/cartridge	250 images/cartridge	500 images/roll	200 images/roll	350 images/roll
<b>Physical Characteristics</b>					
Size (H x W x D)	216 x 201 x 328mm	201 x 346 x 207mm	419 x 198 x 229mm	192 x 235 x 396mm	220 x 200 x 445mm
Weight	9.5 lbs (4.3kg)	11.5 lbs (5.3kg)	9 lbs (4.1kg)	13 lbs (5.9kg)	15.8 lbs (7.2kg)





## P120i Competitive Comparison

Manufacturer Model Number	Zebra P120i	Fargo C30 Dual/ DTC400 Dual	Datacard SP55 (Duplex)	Evolis Dualys	Magocard Tango 2
Suggested List Price	\$2,895	\$3,995 / \$4,595	\$3,895	\$3,400	\$5,000
Printhead Warranty	1 yr (unlimited passes)	1 yr (unlimited passes)	18 mo. (unlimited passes)	2 yrs (unlimited passes)	1yr limited / 2 yrs (unlimited passes)
<b>Standard Features</b>					
Software Drivers	Win 2000, XP	Win 98, Me, 2000, XP	Win Me, 2000, XP	Win NT 4.0, 2000, XP	Win 98, Me, NT 4.0, 2000, XP
Communication Interface	USB	USB	USB, Ethernet	Parallel, USB	Parallel, USB, Ethernet
Functional Display	LCD	LCD	LED LCD with Ethernet Option	LED	LCD and LED
<b>Printing Specifications</b>					
Print Speed (YMCKOK) (seconds per card)	35 sec per card	35 sec per card	32 sec per card	33 sec per card	40 sec per card
Edge-to-Edge Printing	Yes	Yes	Yes	Yes	Yes
<b>Card Specifications</b>					
Card Types (ISO CR-80)	PVC & Composite	PVC & Composite	PVC & Composite	PVC & Composite	PVC & Composite
Card Input Feeder	100 (30 mil) cards	100 (30 mil) cards	100/200 (30 mil) cards	100 (30 mil) cards	100 (30 mil) cards
<b>Ribbon Specifications</b>					
Ribbon Detection	Yes	No	Yes	No	Yes
Ribbon low notification	Yes	No	Yes	No	Yes
Monochrome (max)	1000 images/cartridge	1000 images/cartridge	1500 images/roll	1000 images/roll	1000 images/roll
KrO & KdO (max)	N/A	500 images/cartridge	1000 images/roll	500 images/roll	600 images/roll
YMCKO (max)	200 images/cartridge	250 images/cartridge	500 images/roll	200 images/roll	350 images/roll
YMCKOK (max)	165 images/cartridge	200 images/cartridge	300 images/roll	200 images/roll	300 images/roll
<b>Physical Characteristics</b>					
Size (H x W x D)	216 x 201 x 328mm	201 x 346 x 207mm	241 x 198 x 546mm	240 x 525 x 263mm	233 x 194 x 471mm
Weight	9.5 lbs (4.3kg)	11.5 lbs (5.3kg)	11.5 lbs (5.3kg)	29.8 lbs (13.5kg)	18.3 lbs (8.3kg)

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## P205 Competitive Comparison

Manufacturer Model Number	Zebra P205	Fargo C30 Single Mono	Datacard UltraGrafix M	Datacard SP35 Mono	Evolis Tattoo	Magocard Opera/Alto	Magocard Tempo
Suggested List Price	\$1,795	\$1,795	\$3,695	\$1,995	\$1,440	\$1,399 / \$1,599	\$1,495
Printhead Warranty	2 yrs (unlimited passes)	1 yr (unlimited passes)	18 mo. (unlimited passes)	18 mo. (unlimited passes)	1 yr (unlimited passes)	1 yr limited / 2 yrs (unlimited passes)	1 yr limited
<b>Features</b>							
Software Drivers	Win 98, Me, NT 4.0, 2000, XP	Win 98, Me, 2000, XP	Win 98, Me, NT 4.0, 2000, XP	Win 98, Me, 2000, XP	Win 95/98, Me, NT 4.0, 2000, XP	Win 98, Me, 2000, XP	Win 2000, XP
Communication Interface	Parallel, USB, Serial	USB	Parallel, USB	USB	Parallel, USB, Serial	USB	USB
Functional Display	3 State LED	LCD	No	LED	4 LED's	LED	LED
<b>Printing Specifications</b>							
Mono Print Speed (seconds per card)	4 seconds per card	7 seconds per card	5.5 seconds per card	7 seconds per card	7 seconds per card	6 seconds per card (manual feed)	6 seconds per card (manual feed)
Edge-to-Edge Printing	Yes	Yes	Yes	Yes	No	Yes	Yes
<b>Card Specifications</b>							
Card Types (ISO CR-80)	PVC & Composite	PVC & Composite	PVC & Composite	PVC & Composite	PVC & Composite	PVC & Composite	PVC & Composite
Card Input Feeder	50 (30 mil) cards	100 (30 mil) cards	100 (30 mil) cards	100 (30 mil) cards	100 (30 mil) cards	Manual feed	Manual feed
<b>Ribbon Specifications</b>							
Monochrome (max)	500 images/cartridge	1000 images/roll	1000 images/roll	1500 images/roll	500 images/roll	500 images/roll	500 images/roll
<b>Optional Items</b>							
Magnetic Encoder	\$400	\$599	\$649	\$500	€350	\$450	\$400
<b>Physical Characteristics</b>							
Size (H x W x D)	180 x 182 x 303mm	178 x 267 x 190mm	330 x 279 x 686mm	419 x 198 x 229mm	166 x 290 x 187mm	200 x 175 x 211mm	200 x 175 x 211mm
Weight	6.4 lbs (2.9kg)	8 lbs (3.63kg)	36 lbs (16.3kg)	8 to 9 lbs (3.6kg to 4.1kg)	5.5 lbs (2.5kg)	7 lbs (3.2kg)	7 lbs (3.2kg)

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## *P210i Competitive Comparison*

Manufacturer Model Number	Zebra P210i	Fargo C30 Single	Fargo Cardjet 410	Datacard SP35	Evolis Peb3le	Magicard Opera/Alto	Magicard Tempo
Suggested List Price	\$1,995	\$2,295	\$1,495	\$2,195	\$1,990	\$1,399 / \$1,599	\$1,495
Printhead Warranty	2 yrs (unlimited passes)	1 yr (unlimited passes)	N/A	18 mo. (unlimited passes)	2 yrs (unlimited passes)	1 yr limited / 2 yrs (unlimited passes)	1 yr limited
<b>Features</b>							
Software Drivers	Win 98, Me, NT 4.0, 2000, XP	Win 98, Me, 2000, XP	Win 98, Me, 2000, XP	Win 98, Me, 2000, XP	Win NT 4.0, 2000, XP, Macintosh	Win 98, Me, 2000, XP	Win 2000, XP
Communication Interface	Parallel, USB, Serial	USB	USB	USB	Parallel, USB	USB	USB
Functional Display	3 State LED	LCD	LED	LED	LEDs	LED	LED
<b>Printing Specifications</b>							
Print Speed (seconds per card)	30 seconds per card	27 seconds per card	42 seconds per card	30 seconds per card	24 seconds per card	30 seconds per card (manual feed)	6 seconds per card (manual feed)
Edge-to-Edge Printing	Yes	Yes	Over-the-edge	Yes	Yes	Yes	Yes
<b>Card Specifications</b>							
Card Types (ISO CR-80)	PVC & Composite	PVC & Composite	CardJet Cards Only	PVC & Composite	PVC & Composite	PVC & Composite	PVC & Composite
Card Input Feeder	50 (30 mil) cards	100 (30 mil) cards	100 (30 mil) cards	100 (30 mil) cards	100 (30 mil) cards	Manual feed	Manual feed
<b>Ribbon Specifications</b>							
Ribbon detection	Yes	No	No	Yes (AIT)	No	Yes	Yes
Ribbon low notification	Yes	No	Yes	Yes (AIT)	No	No	No
Monochrome (max) YMCKO (max)	500 images/cartridge 100 images/cartridge	1000 images/roll 250 images/roll	900 images/cartridge 300 images/cartridge	1500 images/roll 500 images/roll	1000 images/roll 200 images/roll	500 images/roll 50/100/250 images/roll	500 images/roll 250 images/roll
<b>Optional Items</b>							
Magnetic Encoder	\$400	\$599	N/A	\$500	€410	\$450	\$400
<b>Physical Characteristics</b>							
Size (H x W x D)	180 x 182 x 303mm	178 x 267 x 190mm	203x 457x 356mm	419 x 198 x 229mm	192 x 235 x 396mm	200 x 175 x 211mm	200 x 175 x 211mm
Weight	6.4 lbs (2.9kg)	8 lbs (3.63kg)	19.4 lbs (8.8kg)	8 to 9 lbs (3.6kg to 4.1kg)	13 lbs (5.9kg)	7 lbs (3.2kg)	7 lbs (3.2kg)

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## P310i Competitive Comparison

Manufacturer Model Number	Zebra P310i	Fargo DTC515 / DTC550 Single	Fargo DTC400 Single	Datacard SP55 (Simplex)	Datacard ImageCard M Magna Class	Evolis Peb3le	Magocard Rio 2	Magocard Avalon
<b>Suggested List Price</b>	\$2,895	\$3,095	\$2,895	\$2,895	\$3,895	\$1,990	\$3,450	\$2,400
<b>Printhead Warranty</b>	1 yr (unlimited passes)	1 yr (unlimited passes)	1 yr (unlimited passes)	18 mo. (unlimited passes)	18 mo. (unlimited passes)	2 yrs (unlimited passes)	1yr limited / 2 yrs (unlimited passes)	1yr limited
<b>Features</b>								
<b>Software Drivers</b>	Win 98, Me, NT 4.0, 2000, XP	Win 95/98, Me, NT 4.0, 2000, XP / Win 2000, XP, Server 2003	Win 98, Me, 2000, XP	Win Me, 2000, XP	Win 98, Me, NT 4.0, 2000, XP	Win NT 4.0, 2000, XP, Macintosh	Win 98, Me, NT 4.0, 2000, XP	Win 98, Me, 2000, XP
<b>Communication Interface</b>	Parallel, USB	Parallel, Serial, USB converter / USB, Ethernet	USB	USB, Ethernet	Parallel, USB	Parallel, USB	Parallel, USB, Ethernet	USB
<b>Functional Display</b>	3 LED lights	LCD	LCD	LED	LED	LEDs	LCD and LED	LED
<b>Printing Specifications</b>								
<b>Print Speed (cards per hour)</b>	144 cards per hour	133 / 144 cards per hour	133 cards per hour	180 cards per hour	180 cards per hour	150 cards per hour	180 cards per hour	103 cards per hour
<b>Edge-to-Edge Printing</b>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>Card Specifications</b>								
<b>Card Types (ISO CR-80)</b>	PVC & Composite	PVC & Composite	PVC & Composite	PVC & Composite	PVC & Composite	PVC & Composite	PVC & Composite	PVC & Composite
<b>Card Input Feeder</b>	75 (30 mil) cards	200 (30 mil) cards dual hopper	100 (30 mil) cards	100/200 (30 mil) cards	100 (30 mil) cards	100 (30 mil) cards	100 (30 mil) cards	100 (30 mil) cards
<b>Ribbon Specifications</b>								
<b>Ribbon Detection</b>	Yes	Yes	No	Yes	No	No	Yes	Yes
<b>Ribbon Low Notification</b>	Yes	Yes	No	Yes	No	No	Yes	Yes
<b>Monochrome (max)</b>	1500 images/roll	3000 images/roll	1000 images/roll	1500 images/roll	900 images/roll	1000 images/roll	1000 images/roll	1000 images/roll
<b>KrO &amp; KdO (max)</b>	500 images/roll	500 images/roll	500 images/roll	1000 images/roll	300 images/roll	500 images/roll	600 images/roll	600 images/roll
<b>YMCKO (max)</b>	330 images/roll	400 images/roll	250 images/roll	500 images/roll	135 images/roll	200 images/roll	350 images/roll	350 images/roll
<b>Physical Characteristics</b>								
<b>Size (H x W x D)</b>	220 x 315 x 198mm	273 x 470 x 279mm	201 x 346 x 207mm	241 x 198 x 546mm	330 x 279 x 686mm	192 x 235 x 396mm	233 x 194 x 370mm	220 x 200 x 445mm
<b>Weight</b>	13.4 lbs (6.1kg)	24 lbs (10.8kg) / 20 lbs (9.1kg)	8 lbs (3.63kg)	11.5 lbs (5.3kg)	36 lbs (16.3kg)	13 lbs (5.9kg)	15.8 lbs (7.2kg)	15.8 lbs (7.2kg)

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## P330i Competitive Comparison

Manufacturer Model Number	Zebra P330i	Fargo DTC515 / DTC550 Single	Fargo DTC400 Single	Datacard SP55 (Simplex)	Datacard ImageCard M Magna Class	Evolis Peb3le	Magocard Rio 2	Magocard Avalon
<b>Suggested List Price</b>	\$2,695	\$3,095 / \$3,095	\$2,895	\$2,895	\$3,895	\$1,990	\$3,450	\$2,400
<b>Printhead Warranty</b>	1 yr (unlimited passes)	1 yr (unlimited passes)	1 yr (unlimited passes)	18 mo. (unlimited passes)	18 mo. (unlimited passes)	2 yrs (unlimited passes)	1yr limited / 2 yrs (unlimited passes)	1yr limited
<b>Features</b>								
<b>Software Drivers</b>	Win 2000, XP	Win 95/98, Me, NT 4.0, 2000, XP / Win 2000, XP, Server 2003	Win 98, Me, 2000, XP	Win Me, 2000, XP	Win 98, Me, NT 4.0, 2000, XP	Win NT 4.0, 2000, XP, Macintosh	Win 98, Me, NT 4.0, 2000, XP	Win 98, Me, 2000, XP
<b>Communication Interface</b>	USB, Ethernet	Parallel, Serial, USB converter / USB, Ethernet	USB	USB, Ethernet	Parallel, USB	Parallel, USB	Parallel, USB, Ethernet	USB
<b>Functional Display</b>	LCD	LCD	LCD	LED	LED	LEDs	LCD and LED	LED
<b>Printing Specifications</b>								
<b>Print Speed (cards per hour)</b>	144 cards per hour	133 / 144 cards per hour	133 cards per hour	180 cards per hour	180 cards per hour	150 cards per hour	180 cards per hour	103 cards per hour
<b>Edge-to-Edge Printing</b>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>Card Specifications</b>								
<b>Card Types (ISO CR-80)</b>	PVC & Composite	PVC & Composite	PVC & Composite	PVC & Composite	PVC & Composite	PVC & Composite	PVC & Composite	PVC & Composite
<b>Card Input Feeder</b>	100/220 (30 mil) cards	200 (30 mil) cards dual hopper	100 (30 mil) cards	100/200 (30 mil) cards	100 (30 mil) cards	100 (30 mil) cards	100 (30 mil) cards	100 (30 mil) cards
<b>Ribbon Specifications</b>								
<b>Ribbon Detection</b>	Yes	Yes	No	Yes	No	No	Yes	Yes
<b>Ribbon Low Notification</b>	Yes	Yes	No	Yes	No	No	Yes	Yes
<b>Monochrome (max)</b>	1500 images/roll	3000 images/roll	1000 images/roll	1500 images/roll	900 images/roll	1000 images/roll	1000 images/roll	1000 images/roll
<b>KrO &amp; KdO (max)</b>	500 images/roll	500 images/roll	500 images/roll	1000 images/roll	300 images/roll	500 images/roll	600 images/roll	600 images/roll
<b>YMCKO (max)</b>	330 images/roll	400 images/roll	250 images/roll	500 images/roll	135 images/roll	200 images/roll	350 images/roll	350 images/roll
<b>Physical Characteristics</b>								
<b>Size (H x W x D)</b>	256 x 462 x 239mm	273 x 470 x 279mm	201 x 346 x 207mm	241 x 198 x 546mm	330 x 279 x 686mm	192 x 235 x 396mm	233 x 194 x 370mm	220 x 200 x 445mm
<b>Weight</b>	15.5 lbs (7.0kg)	24 lbs (10.8kg) / 20 lbs (9.1kg)	8 lbs (3.63kg)	11.5 lbs (5.3kg)	36 lbs (16.3kg)	13 lbs (5.9kg)	15.8 lbs (7.2kg)	15.8 lbs (7.2kg)

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## P420i Competitive Comparison

Manufacturer Model Number	Zebra P420i	Fargo DTC525 / DTC550 Dual	Fargo DTC400 Dual	Datacard ImageCard IV	Datacard SP55 (Duplex)	Datacard ImageCard M2	Evolls Dualys	Magocard Tango 2	Nisca PR5300, PR5310, PR5200
<b>Suggested List Price</b>	\$3,995	\$5,095 / \$5,095	\$4,595	\$7,995	\$3,895	\$4,995	\$3,400	\$5,000	\$4,245 / \$6,995 / \$7,995
<b>Printhead Warranty</b>	1 yr (unlimited passes)	1 yr (unlimited passes)	1 yr (unlimited passes)	1 Year (unlimited passes)	18 mo. (unlimited passes)	18 mo. (unlimited passes)	2 yrs (unlimited passes)	1yr limited / 2 yrs (unlimited passes)	2 yr / 1 yr unlimited printhead
<b>Features</b>									
<b>Software Drivers</b>	Win 98, Me, NT 4.0, 2000, XP	Win 95/98, Me, NT 4.0, 2000, XP / Win 2000, XP, Server 2003	Win 98, Me, 2000, XP	Win 95/98, Me, NT 4.0, 2000, XP	Win Me, 2000, XP	Win 95/98, Me, NT 4.0, 2000, XP	Win NT 4.0, 2000, XP	Win 98, Me, NT 4.0, 2000, XP	Win 98, Me, 2000, XP
<b>Communication Interface</b>	Parallel, USB, Ethernet	Parallel, Serial, USB converter / USB, Ethernet	USB	Parallel	USB, Ethernet	Parallel, USB	Parallel, USB	Parallel, USB, Ethernet	Parallel, USB, SCSI
<b>Functional Display</b>	LCD & 2 LEDs	LCD	LCD	LED	LED	LEDs	LEDs	LCD and LED	LCD & LEDs
<b>Printing Specifications</b>									
<b>Print Speed (cards per hour)</b>	102 cards per hour	102 / 109 cards per hour	133 cards per hour	210 cards per hour	115 cards per hour	110 cards per hour	110 cards per hour	90 cards per hour	66 / 66 / 116 cards per hour
<b>Edge-to-Edge Printing</b>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>Card Specifications</b>									
<b>Card Types (ISO CR-80)</b>	PVC & Composite	PVC & Composite	PVC & Composite	PVC & Composite	PVC & Composite	PVC & Composite	PVC & Composite	PVC & Composite	PVC & Composite
<b>Card Input Feeder</b>	100 (30 mil) cards	200 (30 mil) cards dual hopper	100 (30 mil) cards	100 (30 mil) cards	100/200 (30 mil) cards	100 (30 mil) cards	100 (30 mil) cards	100 (30 mil) cards	100 (30 mil) cards
<b>Ribbon Specifications</b>									
<b>Ribbon Detection</b>	Yes	Yes	No	No	Yes	Yes	No	Yes	No
<b>Ribbon low notification</b>	Yes	No	No	No	Yes	No	No	Yes	No
<b>Monochrome (max)</b>	1500 images/roll	3000 images/roll	1000 images/roll	1800/900 images/roll	1500 images/roll	900 images/roll	1000 images/roll	1000 images/roll	1250 images/roll
<b>KrO &amp; KdO (max)</b>	500 images/roll	500 images/roll	500 images/roll	350 images/roll	1000 images/roll	300 images/roll	500 images/roll	600 images/roll	250 images/roll
<b>YMCKO (max)</b>	330 images/roll	400 images/roll	250 images/roll	500/135 images/roll	500 images/roll	165 images/roll	200 images/roll	350 images/roll	250 images/roll
<b>YMCKOK (max)</b>	170 images/roll	350 images/roll	200 images/roll	95 images/roll	300 images/roll	95 images/roll	200 images/roll	300 images/roll	210 images/roll
<b>Physical Characteristics</b>									
<b>Size (H x W x D)</b>	269 x 523 x 253mm	273 x 470 x 292mm	201 x 346 x 207mm	552 x 498 x 253mm	241 x 198 x 546mm	330 x 279 x 686mm	240 x 525 x 263mm	233 x 194 x 471mm	421 x 271 x 331mm
<b>Weight</b>	27.5 lbs (12.5kg)	24 lbs (10.8kg) / 20 lbs (9.1kg)	11.5 lbs (5.3kg)	60 lbs (27.3kg)	11.5 lbs (5.3kg)	36 lbs (16.3kg)	29.8 lbs (13.5kg)	18.3 lbs (8.3kg)	26.6 lbs (13kg)

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## P520i Competitive Comparison

Manufacturer Model Number	Zebra P520i	Datacard SP75 w/Single Laminator	Fargo DTC525-LC / DTC550-LC	Datacard ImageCard M2L Ultragrafix M2L	Datacard Imagecard IV w/Laminator	Nisca P5300 w/PR5302 Lam
Suggested List Price	\$6,995	\$6,395	\$8,095 / \$8,095	\$6,995	\$9,990	\$10,050
Printhead Warranty	1 Year (unlimited passes)	18-month (unlimited passes)	1 Year (unlimited passes)	18 mo. (unlimited passes)	1 Year (unlimited passes)	1 Year
<b>Features</b>						
Software Drivers	Win 98, Me, NT 4.0, 2000, XP	Win 98, NT 4.0, 2000, XP	Win 98SE, Me, 2000, XP / Win 2000, XP, Server 2003	Win 98, Me, 2000, XP	Win 98, Me, 2000, XP	Win 98SE, Me, 2000, XP
Communication Interface	Parallel, USB, Ethernet (10/100Base-T)	USB, Ethernet (10Base-T)	Parallel / USB, Ethernet	Parallel	Parallel	Parallel, USB, SCSI
Functional Display	LCD & 2 LEDs	LCD	LCD	2 LEDs	2 LEDs	LCD & LEDs
<b>Printing Specifications</b>						
Print Speed (cards per hour)	100 cards per hour	148 cards per hour	99 cards per hour	116 cards per hour	116 cards per hour	84 cards per hour
Edge-to-Edge Printing	Yes	Yes	Yes	Yes	Yes	Yes
<b>Card Specifications</b>						
Card Types (ISO CR-80)	PVC & Composite	PVC & Composite	PVC & Composite	PVC & Composite	PVC & Composite	PVC & Composite
Card Input Feeder	100 (30 mil) cards	100 (30 mil) cards	100 (30 mil) cards	100 (30 mil) cards	250 (30 mil) cards	100 (30 mil) cards
<b>Ribbon Specifications</b>						
YMCK (max)	400 images/roll	500 images/roll	500 images/roll	500 images/roll	500 images/roll	250 images/roll
YMCKK (max)	200 images/roll	500 images/roll	500 images/roll	500 images/roll	500 images/roll	210 images/roll
<b>Laminator Specifications</b>						
Built-In Laminator	Yes	Yes	Yes	Yes	Yes	No Separate Module
Single or Dual System	Single	Single	Single	Single	Single	Single
Laminates Single & Dual Sided Cards	Single – One pass Dual – Two passes	Single – One pass Dual – Two passes	Single – One pass Dual – Two passes	Single – One pass Dual – Two passes	Single – One pass Dual – Two passes	Single – One Pass Dual – Two passes
Type of Laminate	0.6 mil & 1.0 mil Carrier Based	0.6 mil & 1.0 mil Carrier Based	0.6 mil & 1.0 mil Carrier Based	1.0 mil Carrier Based	1.0 mil Carrier Based	1.0 mil Carrier-Based
<b>Physical Characteristics</b>						
Size (H x W x D)	265 x 805 x 235mm	478 x 587 x 252 mm	273 x 775 x 279mm	330 x 787 x 254mm	253 x 552 x 498mm	821 x 451 x 631mm
Weight	47 lbs (21.45kg)	27 lbs (12.3 kg)	39 lbs (17.7kg)	42 lbs (19kg)	75 lbs (34kg)	70 lbs (23kg)

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## P640i Competitive Comparison

Manufacturer Model Number	Zebra P640i	Datacard SP75 with 2 <sup>nd</sup> Laminator	Fargo DTC525-LC	Datacard ImageCard IV w/Laminator	Nisca P5300 w/P5302 Laminator	Fargo HDP600-LC Retransfer w/Laminator	Fargo HDP820-LC Retransfer w/Laminator
Suggested List Price	\$7,995	\$7,995	\$8,095	\$9,990	\$10,050	\$11,995	\$13,495
Printhead Warranty	1 Year (unlimited passes)	18-month (Unlimited passes)	1 Year (unlimited passes)	1 Year (unlimited passes)	1 Year	1 Year	1 Year
<b>Features</b>							
Software Drivers	Win 2000, XP	Win 98, NT 4.0, 2000, XP	Win 98, NT 4.0, 2000	Win 98, Me, 2000, XP	Win 98SE, Me, 2000, XP	Win 2000, XP	Win 98, Me, NT, 2000, XP
Communication Interface	USB, Ethernet (10/100Base-T)	USB, Ethernet (10Base-T)	Parallel	Parallel	Parallel, USB, SCSI	Parallel, USB	Parallel
Functional Display	3 LEDs	LCD	LCD	2 LEDs	LCD & LEDs	LCD & 1 LED	LCD & 1 LED
<b>Printing Specifications</b>							
Print Speed (cards per hour)	120 cards per hour	109 cards per hour	99 cards per hour	116 cards per hour	84 cards per hour	65 cards per hour	90 cards per hour
<b>Card Specifications</b>							
Card Types (ISO CR-80)	PVC Composite	PVC & PVC Composite	PVC Composite	PVC Composite	PVC Composite	PVC, PVC Comp, ABS, PET & PETG	PVC, PVC Comp, ABS, PET & PETG
Card Input Feeder	150 (30 mil) cards	100 (30 mil) cards	200 (30 mil) cards	250 (30 mil) cards	100 (30 mil) cards	200 (30 mil) cards	200 (30 mil) cards
<b>Ribbon Specifications</b>							
YMCK (max)	600 images/roll	500 images/roll	500 images/roll	500 images/roll	250 images/roll	500 images/roll	500 images/roll
YMCKK (max)	500 images/roll	500 images/roll	500 images/roll	500 images/roll	210 images/roll	400 images/roll	400 images/roll
YMCUVK (max)	500 images/roll	--	--	500 images/roll	--	--	--
<b>Laminator Specifications</b>							
Built-In Laminator	Yes	Yes	Yes	Yes	No 2 Separate Modules	No Separate Module	No Separate Module
Laminates Single & Dual Sided Cards	Single – One Pass Dual – One Pass	Single – One pass Dual – Additional 2 <sup>nd</sup> Station Pass	Single – One pass Dual – Two passes	Single – One Pass Dual – Two passes	Single – One Pass Dual – Two passes	Single – One Pass Dual – Two passes	Single – One Pass Dual – Two passes
Type of Laminate	1.0 mil Carrierless Continuous Roll	0.6 mil & 1.0 mil Carrier Based	1.0 mil Carrier Based	1.0 mil Carrier Based	1.0 mil Carrier Based	1.0 mil & 0.6 mil Carrier Based	1.0 mil & 0.6 mil Carrier Based
# of Cards Per Roll	600 cards per roll	300 cards per roll	75 cards per roll	250 cards per roll	125 cards per roll	125 cards per roll	125 cards per roll
<b>Physical Characteristics</b>							
Size (H x W x D)	292 x 699 x 246mm	478 x 587 x 252 mm	265 x 630 x 278mm	253 x 552 x 498mm	378 x 714 x 368mm	275 x 890 x 330mm	381 x 883 x 356mm
Weight	35 lbs (15.9kg)	27 lbs (12.3 kg)	41 lbs (18.6kg)	75 lbs (34kg)	70 lbs (23kg)	58 lbs (26.4kg)	87 lbs (39.5kg)

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## Zebra Card Printers vs. Re-Transfer Technology Printers

All Zebra plastic card printers feature the same basic printing operations; dye sublimation and/or thermal transfer printing. Both techniques involve a ribbon being heated as it passes under a thermal print head. The difference is that thermal transfer ribbons heat up and transfer ink onto the plastic card, and dye sublimation ribbons heat up and undergo a chemical change process that turns the ink into a gaseous state which then permeates the plastic card. Retransfer technology type printers do not print directly on to the plastic card. Re-transfer process prints the color images and text onto a specially designed film that is then bonded to the surface of the card. The images and text are printed on the underside on the transfer film.

All printed cards need a protective layer of material over the printed image and text for it to last. There are four types of protective materials currently available with dye sublimation and re-transfer printers:

- 1) Overlay Panel or O-Panel - protective layer is applied to card during printing operation. O-panel is part of dye sublimation ribbon (YMCKO or YMCKT).
- 2) Varnish Overlay – protective layer is applied by a separate varnish ribbon. Varnish or top coat is applied over printed images by the printhead.
- 3) Re-transfer Film – the printhead prints the image and text directly on the underside of the protective layer or re-transfer film. The protective layer is then bonded to the plastic card during the retransfer process.
- 4) Laminate Patch – protective layer is a separate polyester film that is applied by hot rollers over printed images and text.

Each protective material of the four listed above offers a different level of protection to image printed on a plastic card. The chart below is designed to show you a comparison for each type of protective material for card durability, level of protection, and overall rating of cost per card.

Manufacturer Model Number	Zebra P330i	Zebra P520i	Zebra P640i	Fargo HDP600-LC Series
Protective Material Applied	O-Panel or Varnish Overlay	Laminate Single Sided	Laminate Dual Sided	Re-transfer Film With Dual Sided Laminate
Thickness of Protective Material	2.5 micron (O-Panel) 4 micron (Varnish)	1.0 mil (25 micron)	1.0 mil (25 micron)	Less than 1.0 mil – Ret-film 1.0 mil & 0.6 mil Laminate
Abrasion Resistance (Taber CS10-500g) measures number of cycles to destroy card protective material	250 cycles (O-Panel) 450 cycles (Varnish)	4500 cycles	4500 cycles	2000 cycles (Ret-film only) 4500 cycles (Ret-film & laminate)
Image Fading (% of color image faded after 72 hours of UV exposure)	50% fading	30% fading	30% fading	45% fading
Suggested List Price of Protective Material per Card	7.4¢ O Panel 17¢ Varnish	32¢ Laminate	32¢ Laminate (16¢ per side)	86¢ Ret-Film & laminate (16¢ Rt film & 27¢ laminate per side)
Suggested List Price of Printer	\$2,695	\$6,995	\$7,995	\$11,995 w/Lam
Overall Rating for Protection	Low level of protection	Highest level of protection	Highest level of protection	Highest level of protection
Overall Rating for Cost Per Card	Low printer price w/ Low cost per card	Low printer price w/ Medium cost per card	Medium printer price w/ Medium cost per card	Highest printer price w/ Highest cost per card

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