96XiIII*Plus* Information

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Standard Features

- Full function front panel and multilingual back-lit LCD display with user programmable password protection
- Flash memory including 2.0MB non-volatile memory storage for downloadable objects
- ZebraLink ™ - the revolutionary real-time connectivity and control solution
    - ZBI ™ (Zebra BASIC Interpreter)
    - WebView (requires optional ZebraNet ® PrintServer II)
    - Alert (requires optional ZebraNet PrintServer II)
- Communications via serial RS-232 and bi-directional parallel port with auto detect
- USB 2.0 (480 Mbits/second) port
- Thin film print head with E 3® Element Energy Control
- Thermal transfer and thermal direct printing of bar codes, text, and graphics
- Dual media sensors, transmissive and reflective, selectable through software or front panel
- ZPL ® or ZPL II ® programming language, selectable through software or front panel
- ZBI ™ - Zebra BASIC interpreter for translation of foreign data streams into ZPL II
- 32 bit 133 Mhz RISC processor
- 16 MB SDRAM memory, 12 MB user-available, 4 MB non-volatile Flash memory
- Type I, II linear memory only up to 32 MB and future availability of Type III Series PC Card Interface
- Simultaneous ATA-style PCMCIA and Compact Flash (CF) memory card support up to 1 GB (current market availability) for additional storage of fonts, graphics, logos, templates, and label formats or preprogrammed with optional and international fonts. PCMCIA is externally accessible and hot swappable. CF is internal.
- Clear media side door - easy monitoring of supplies usage without opening the printer
- Zebra printer driver for Windows ™ 3.X and 95/98/NT/2000 operating systems
- Internal real-time clock
- Advanced label/media counters
- Auto calibration-printer calibrates when printer is turned on or when printhead is closed with approximately two labels
- Early Warning Systems-provide low label, low ribbon, and clean printhead alerts via the front panel and ZebraLink Alerts.

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Optional Features

- ZebraNet PrintServer II - provides Ethernet connectivity and full use of Zebranet Web View and Alert features

- ZebraNet Wireless Card Socket-provides an internally integrated wireless option and supports multiple third party LAN radio cards
- Clear media side bi-fold door - allows shorter media door opening radius
- Full-width rotary knife cutter and catch tray, operates under software control cutting labels individually or in strips
  Cutter Catch Tray Size 90 & 96: 3.54 wide x 10.50 long
  140: 5.51 wide x 10.50 long
  170: 7.10 wide x 10.50 long
  220: 8.80 wide x 10.50 long
- Media rewind spindle - rewinds finished roll internally onto 3" (76mm) core, or enables label peel and liner rewind
- 3" (76mm) core enables label peel and liner rewind
- RS-422/485 with multidrop capability to network to multiple printers from a single host with external adaptor P/N 33114M
- IBM ® Twinax interface - emulates IBM System 3X and AS/400 printers
- IBM Coax interface - emulates IBM System 3270 printers
- Applicator interface - provides status and control signals for applicators and remote control devices
- Media supply spindle for 3" (76mm) core or 40 mm core (in lieu of standard hanger)
- Linear PCMCIA cards are available 8 MB and 32 MB
- ATA-style PCMCIA or Compact Flash memory cards 16, 32, 64, 128, 256 MB
- Additional fonts available
- BAR-ONE® Windows-based WYSIWYG on-screen label design and print application software

96XiIII*Plus* Field Installable Kits	Part Number
External ZebraNet PrintServer II (10Base-T)	G46692
Internal ZebraNet PrintServer II (10Base-T)	G46689
External ZebraNet 10/100 Print Server	G47490
Internal ZebraNet 10/100 Print Server	G47480
ZebraNet Wireless Plus Internal Print Server	29652-002M
ZebraNet Wireless Plus Print Server	29651-002M
ZebraNet Wireless Print Server (replaces standard PC card option board)	G79094
ZebraNet Wireless Card Socket Option Kit -without ZebraNet Printserver II	48631
ZebraNet Wireless Card Socket Option Kit -with Internal ZebraNet Printserver II	48632
ZebraNet Wireless Card Socket Option Kit -with External ZebraNet Printserver II	48633
Cutter	47353
Cutter Catch Tray *Cutter Catch Tray Size* 90 & 96: 3.54 wide x 10.50 long 140: 5.51 wide x 10.50 long 170: 7.10 wide x 10.50 long 220: 8.80 wide x 10.50 long	47459
Cutter/Rewind field install kit	47154
Rewind Option Field Install Kit	47355-6
Internal Fan-Fold Media Supply Bin (Not Compatible with Rewind or Peel Options)	30276
Twinax Interface	G48924
Coax Interface	G48925
Applicator Port	49726M

USB Cable (15 foot long)	33011
Optional RS422/RS485 adapter	33114M
Optional RS232 DB9 to DB25 adapter	33138
RS485 Network w/Stand, DIN Converter Kit	46790
RS485 Network w/Mini-DIN Converter Kit	46890
RS485 Y-Connection Cable for Printer-to-Printer	46485
8 Meg PCMCIA Flash Memory Card	46999-0008
32 Meg PCMCIA Flash Memory Card (ATA Card) Discontinued part	~~33194-032~~
64 Meg PCMCIA Flash Memory Card (ATA Card)	33194-064
128 Meg PCMCIA Flash Memory Card (ATA Card)	33194-128
256 Meg PCMCIA Flash Memory Card (ATA Card)	33194-256
32 Meg CompactFlash Memory Card	33193-032
64 Meg CompactFlash Memory Card	33193-064
128 Meg CompactFlash Memory Card	33193-128
256 Meg CompactFlash Memory Card	33193-256
Media Supply Spindle 3 inch	N/A
Media Supply Spindle 40mm	47044M
Maintenance Packing Kits	47311PM
Preventative Maintenance Kit	47363

Parts List ([Click Here](#))

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Media Specifications

- Media type: continuous, die-cut, or black mark
- Media width (label and liner)
  0.79" (20mm) to 3.54" (90mm)
- Minimum label length: *
  - Rewind mode: 0.25" (6mm)
  - Peel mode: 0.5" (13mm)
  - Tear-off mode: 0.7" (18mm)
  - Cutter mode: 1.5" (38mm)
- Media thickness (label and liner):
  - 0.003" (0.076mm) to 0.012" (0.305mm)
- Maximum full-width media thickness for cutter:
  0.35 mm (0.014")
- Maximum media roll size:
  - 8.0" (203mm) O.D. on a 3" (76mm) I.D. core
- Transmissive (gap) sensing standards:
  - Interlabel gap: 2 - 4mm, preferably 3mm
  - Sensing notch: 0.25"W (6mm) x 0.12"L (3mm)
  - Sensing hole: 0.125" (3mm) diameter
- Reflective (black mark) sensing standards:
  - Black mark length (parallel to inside media edge): 0.12" - 0.43" (3 - 11mm)
  - Black mark width (perpendicular to inside media edge): 0.43" (> 11mm)
  - Black mark location: within 0.040" (1mm) of inside media edge:

- Black mark density: >1.0 Optical Density Units (ODU)
  - Maximum media density: 0.5 ODU

*Media registration and minimum label length are affected by media type and width, ribbon type, and print speed. Performance improves as these factors are optimized. Zebra recommends always qualifying any application with thorough testing.

Ribbon Specifications

- Ribbon width: 0.79" (20mm) to 3.4" (87mm)
- Standard Lengths: 1476' (450m) or 984' (300m)
  - Provides 2:1 and 3:1 media roll to ribbon ratios
- Maximum ribbon roll size:
  - 3.2" (81.3mm) O.D. on a 1.0" (25.4mm) I.D. core
- Ribbon wound coated-side out

Font Specifications

- Bitmap fonts A through H and GS symbols are expandable up to 10 times, height and width independent
- Smooth scalable font � (CG Triumvirate ™ Bold Condensed) is expandable dot-by-dot, height and width independent
- IBM Code Page 850 International Characters

Fonts	Matrix in dots HxW	Type †	Minimum Character Size HxW	Maximum C.P.I.
A	9x5	U-L-D	.015"x.010"	100.0
B	11x7	U	.018"x.015"	66.7
C,D	18x10	U-L-D	.030"x.020"	50.0
E	41x20	OCR-B	.137"x.087"	11.5
F	26x13	U-L-D	.043"x.027"	37.5
G	60x40	U-L-D	.100"x.080"	12.5
H	34x22	OCR-A	.100"x.093"	10.71
GS	24x24	SYMBOL	.040"x.040"	25.0
�	variable	U-L-D	variable	N/A

† U - Uppercase L - Lowercase D - Descenders

Bar Code Symbologies & Specifications

Bar code ratios: 2:1, 7:3, 5:2, and 3:1

Linear bar codes: Code11, Code 39, Code 93, Code 128 with subsets A/B/C and UCC Case Codes, ISBT-128, UPC-A, UPC-E, EAN-8, EAN-13, UPC and EAN 2 or 5 digit extensions, Plessey, Postnet, Standard 2 of 5, Industrial 2 of 5, Interleaved 2 of 5, LOGMARS, MSI, Codabar, Planet Code

2-dimensional bar codes: Codablock, PDF-417, Code 49, DataMatrix, Maxi Code, QR Code, RSS Composite, and TLC 39

Zebra Programming Language ® (ZPL ® and ZPL II ®)

- Communicates in printable ASCII characters
- Compatible with mainframe, mini, and PC hosts
- Downloadable objects include graphics, scalable and bitmap fonts, label templates and formats
- Object copying between memory areas (RAM and PC memory card)
- Adjustable print cache (^COY)
- Data compression
- Automatic memory allocation for format while printing
- Automatic serialization of fields (^SN and ^SF)
- Format inversion (white on black) (^FR and ^LR)
- Mirror-image printing (^PM)
- Four position field rotation (0°, 90°, 180°, 270°) (^FW)
- Slew command (^PF and ^PH)
- Programmable label quantities with print, pause, cut control (^PQ)
- User programmable password (^KP)
- Status messages to host upon request(~HS)
- ZBI™ (Zebra BASIC Interpreter)
  - Interpreting program module that sits between the communication ports and the ZPLII processing engine
  - Can be used to convert non-ZPL printer programming language to ZPL commands
  - Direct interface to peripheral devices such as bar-code scanners, weight scales, and keyboards
  - Based on ANSI BASIC computer language

Communications Specifications

- ZebraNet ® PrintServer II interface Ethernet network (10BASE-T)
- USB 2.0 (480 Mbits/second) port
- High-speed bi-directional parallel interface, IEEE 1284-1994 compatibility, nibble mode. Supports ECP starting at firmware version 42.12.0.
- High-speed serial interfaces:
  - RS-232C with DB9F connector, optional converter for DB25F available
  - Optional RS-422/485 with multidrop capability to network to multiple printers from a single host with external adaptor P/N 33114M
  - Configurable baud rate (110 - 115.2kB), parity, data bits, and stop bits
  - Software (XON/XOFF) or hardware (DTR/DSR) communication handshake protocols
- IBM ® Twinax interface - emulates IBM System 3X and AS/400 printers
- IBM Coax interface - emulates IBM System 3270 printers
- Applicator interface with DB15F connector (Option)

Electrical Specifications

- Universal power supply with power-factor correction 90-264VAC, 48-62 Hz
- Agency approvals: Bi-National UL 60950 3 rd edition/CSA CAN/CSA-C22.2 No. 60950-00 Third Edition; IEC 950/EN60950: 1992 W/amendments 1 thru 4 (CB Scheme); EN55022: 1998 Class B; EN55024: 1998; EN61000-3-2,3 W/amendment A12; Canadian ICES-003, Class B; FCC Class B; Argentina 92/98 Phase 3; Australia AS/NZS 3548; R.O.C. CNS 13438

Electrical

- 90–264 VAC; 48–62 Hz

Table 1 • Initial Power Consumption

	Printing 100% Black at 4 ips		Printing 100% Black at 6 ips			
	90XiIIIPlus	96XiIIIPlus	110XiIIIPlus	140XiIIIPlus	170XiIIIPlus	220XiIIIPlus
Maximum	200W	200W	250W	300W	350W	450W
Standby	25W	25W	25W	25W	25W	25W

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Environmental Specifications

- Operating environment:
    - Thermal transfer = 41° to 104°F (5° to 40°C)
    - Thermal direct = 32° to 104°F (0° to 40°C)
        - 20% to 85% non-condensing R.H
- Storage/Transportation environment:
    - -40° to 140°F (-40° to 60°C)
    - 5% to 85% non-condensing R.H.

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Printing Specifications

- 600 dpi resolution (23.5 dots/mm)
- Dot size (W x L):0.0016" x 0.0016" (0.042mm x 0.042mm)
- First dot location measured from inside media edge:
    - 0.023" +/-0.035" (0.6mm +/-0.9mm)
- Maximum print width: 3.2" (81mm) See Link for details
- Maximum non-continuous media print length:
    - 16MB memory = 39" (991mm)
- Maximum continuous media print length:
    - 16MB memory = 39" (991mm)
- Media registration tolerance:
    - *Vertical = < +/-0.060" (+/-1.5mm) on non-continuous media
    - Horizontal = < +/-0.060" (+/-1.5mm)
- Programmable print speeds:
    - 1.5" (38mm), 2" (50mm) through 4"(102mm) per second in 1" (25mm) increments
- Bar code modulus "X" dimension:
    - Picket fence (non-rotated) orientation = 1.6 mil to 16 mil
    - Ladder (rotated) orientation = 1.6 mil to 16 mil

*Media registration and minimum label length are affected by media type and width, ribbon type, and print speed. Performance improves as these factors are optimized. Zebra recommends always qualifying any application with thorough testing.

General Specifications

- Power consumption:
  - Idle = 20W
  - Printing = 121W (printing pause test label at lowest speed)
  - Standby = 25W
- Height: 15.5" (393.7mm)
- Width: 9.15" (232.4mm)
- Depth: 19.5" (495.3mm)
- Weight: 50lbs. (22.7kg)