Stripe® Series
Desktop Printers

Product Guide

*DA*402™ */ T*402™
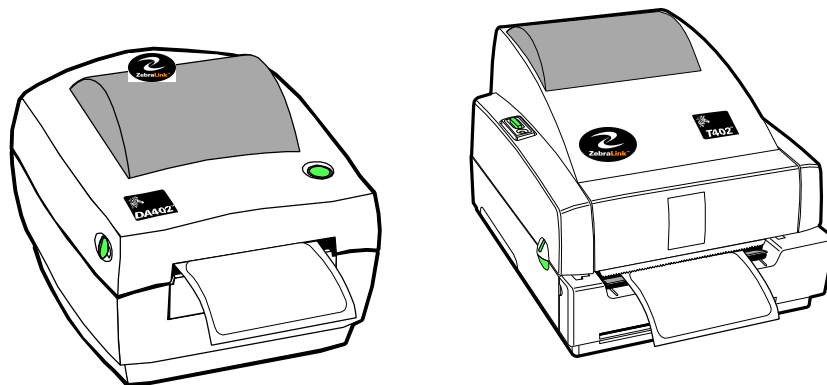
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February 2001

I. INTRODUCTION – PRODUCT POSITIONING

Zebra Technologies broadens its *Stripe*® family of thermal bar code printers to encompass two new desktop printers, the Zebra Stripe *DA*402 (direct thermal) and *T*402 (thermal transfer).

Zebra Stripe *DA*402
Direct Thermal Printer

Zebra Stripe *T*402
Thermal Transfer Printer

With many functional attributes patterned after the Zebra *Stripe S*400 and *S*600, the *DA*402 and *T*402 are economical desktop printers that utilize ZPL II® (*Zebra Programming Language*). These desktop models provide 4-inch print width and a print speed of 2 inches-per-second. In addition, we've added numerous *Stripe* inspired standard feature enhancements like ZebraLink™ *real-time connectivity & control solution*, *flash memory, increased DRAM, standard bi-directional parallel ports*, *scalable fonts* and a *4MB & 8MB flash memory upgrade option* to meet the increased demands and competitive challenges posed by the sub-$1000 entry-level barcode printer market.

From a product positioning standpoint, the Zebra *DA*402 and *T*402 models continue the *user-friendly, reliable* and *economical* tradition of the Stripe. Their mechanical designs incorporate the strengths of the well proven Eltron desktop printers coupled with Zebra's electronics architecture for advanced functions, upgrades and ZPL II processing capability. The *DA402* and *T*402 models will seamlessly integrate with, and eventually replace Zebra's existing *A*300 and *T*300 desktop printer series. For existing *A*300 or *T*300 applications, or for customers requiring a ZPL-compatible desktop printing solution, the *DA*402 and *T*402 are an excellent choice. Typical applications for these desktop printer models include parcel tracking, product and document identification, healthcare patient admissions and specimen identification, ticketing, date coding and expiration date labeling. Choose from the *DA*402 (direct thermal) or the *T*402 (thermal transfer) model printers with their varied customizable, add-on options to create the perfect ZPL desktop printer solution for your low-volume labeling needs.

The enhanced features and print capabilities of the Zebra *DA*402 and the *T*402 provide true **flexibility** to novice or experienced users alike seeking a **compact, easy, quick** and **affordable** way to create bar code labels.

…FLEXIBILITY

- Equipped with revolutionary ZebraLink™ real–time connectivity & control capabilities, including:

⇒ *WebView* - for remote monitoring and configuration capability of Zebra printers in real-time using web-based tools.

⇒ *Alert* - enables a Zebra printer to send or receive Alert condition messages via the Internet.

⇒ *ZBI*™ - programming language that works with ZPLII to control and interpret (non-Zebra) incoming text and data streams.

- State-of-the-art technology features (e.g. *flash memory, increased DRAM, standard scalable fonts*) provide users with a new standard of print capability to handle more complex labeling requirements.

- Capable of printing on a variety of media – including fanfold, perforated, tag-stock and notch – depending on your application.

- Flexible user options (such as *peel, reflective sensor*, etc) enable both the *DA*402 and *T*402 to be customized and adapt to your personalized work habits.

…COMPACT SIZE

- Compact size facilitates integration into work environments with space constraints.
- Lightweight (weighing under 3 lbs) and transportable for easy transport from one location to another.

…QUICK / EASY INSTALLATION

- Ready-to-use, right out-of-the-box.
- Intuitive to operate, install and reload ribbons and labels.
- Simple to maintain, no specialized training required.
- ZPL II® compatibility provides universal programming and communication interface capability amongst the Zebra printers.
- Equipped with BAR-ONE® Lite software - whose Windows™ "WYSIWYG" ("What You See Is What You Get") format enables you to quickly and easily create diverse label formats.

… AFFORDABLE

- Outstanding combination of value and performance - these reliable printers are ideal for a variety of applications, from the front office to an industrial shop floor.
- For $795 and $645, respectively - Zebra's *DA*402 and *T*402 on-demand thermal print capability is extremely affordable.
- Included - BAR-ONE Lite, Zebra's Windows-based label creation software program - the speed and ease with which new applications can be created and implemented will be greatly appreciated.

… LOW-VOLUME

- Specifically designed for labeling applications requiring small quantities (approx. 2-3 label rolls/day).
- Print custom labels individually or in small batches – as needed.

… ZEBRA RELIABLE

- Part of a comprehensive Zebra product line backed by 20+ years of barcode industry experience
- Quality and reliable print performance is designed into every Zebra Stripe printer with competitive warranty and after market service programs.

II.   UNIQUE SELLING POINTS

Though the exterior of the Zebra *DA*402 and *T*402 printers have a similar look to the Eltron desktop printers, they are fully functional Zebra-brand products on the inside. These printers run ZPL II, and feature a Zebra-engineered electronic architecture and ZebraLink.

Zebra Technologies leveraged the mechanical strengths from several well-proven desktop models of the popular Eltron product family, then added several capabilities unique to the Zebra *DA*402 and *T*402. Some of the most notable features of the *DA*402 and *T*402 are:

- **Zebralink Real-Time Connectivity & Control Solution**

  ZebraLink is standard equipment on Stripe *DA/T402* printers. ZebraLink networking accessories such as *Alert* and *Webview* let you control and monitor your printer remotely from *anywhere, anytime, anyplace,* - using common web browser interface tools. ZebraLink, *ZBI*, gives you the freedom to create stand-alone print applications (without a PC) using a scanner, keyboard or weight scale. ZBI further enables you to replace any brand of old barcode printer with the superior performance and reliability of Zebra printers.

- **ZPL II Compatibility**

  Zebra Programming Language provides a universal communication code for all Zebra printers. Existing Zebra customers can easily configure the *DA*402 and *T*402 into an existing ZPL environment without complication for seamless integration.

- **Standard Memory & Memory Upgrade Options Among the Highest in the Industry**

  Inspired by the Stripe *S*400 and *S*600, the 1MB DRAM and 1MB Flash memory options available on the *DA*402 and *T*402 are among the highest in the industry for comparable, competitive printers. A 4MB and 8MB flash memory upgrade option is also available for these printers. This enables them to handle larger, more complex label formats and graphics such as scalable Asian fonts for users with international application requirements.

- **User-Friendly, Intuitive Operating Features**

  The *DA402* and *T*402 come equipped with many user-friendly, convenient standard features that make the printers highly intuitive to operate. These include:

  1. *Color-Coded Operator Cues* for easy identification of user-adjustable parts.
  2. *Scalable Fonts* and *Increased Font and 2D Symbologies* for improved print quality and expanded user application options.
  3. An *Auto-Calibration* feature for quick printer set up regardless of the size label loaded utilized within the printer.
  4. A *Center-Justified Media Alignment* system for simplified media loading
  5. A *Clam-shell Housing Design* for full printhead access, easy cleaning and printhead maintenance.
  6. An *Automatic darkness setting* or one button controllable darkness setting.

- **Variety of Communication Interface Options**
  RS232 serial and bi-directional IEEE parallel communication interfaces standard. The serial port's auto-synchronization capability further makes system integration of the *DA*402 and *T*402 printers a breeze!

- **Flexible User Options**
  Choose from a variety of flexible user options (*real time clock, rewind, and Ethernet* to name a few) to customize the *DA*402 or *T*402 printer to fit your customer's individualized needs.

III.   TARGET MARKET & APPLICATIONS

| Industry Market Segment	Application Description
Transport	
Air Express Shippers Postal Offices Airline / Baggage Ticketing	Parcel Tracking Change of Address Labels Baggage Handling / Destination Tracking
Professional / Business Office	
Small to Mid-Size Medical Practices Law Firms Accounting Firms Insurance Agencies Satellite Offices	Document Identification Labor / Parcel Tracking Archive Requirements Lead Fulfillment / Mailroom
Healthcare	
Healthcare Providers: Hospitals / Clinics / Research & Development Labs Suppliers: Instruments & Services	Patient Admissions / Patient ID Bracelet Tagging Patient Record History Record & Chart Tracking Specimen Identification Time & Date Stamping Drug Dispensing / Prescription Medication Labeling Blood & Lab Identification
Grocery/Point of Sale	
Hotel / Bar / Restaurant Concerts / Sports Events Grocery Store	Retail Outlet Management Promotions Tracking Price Reduction/Receipt Generation Ticketing Expiration Date Labeling
Manufacturing/Distribution	
Electronics Automotive Machinery & Components Goods & Services	Inventory/Sorting Control Shipping/Mailing Labels Quality Control/ Quality Assurance Asset Tracking Order Entry Document Identification Labor Tracking Security

IV.   DIFFERENTIATING FACTORS

A.   *ZEBRA PRODUCT DIFFERENTIATION - A*300 *compared to Zebra Stripe DA*402

*A*300 vs. *DA*402 STANDARD FEATURES	*Zebra* *A*300	<u>NEW</u> *Zebra* *Stripe DA402*
Print Method	Direct Thermal	Direct Thermal
Print Speed (ips)	2ips (51mm)	**1.5, 2 and 2.5ips (38-64mm)**
Resolution (dots/mm)	203 (8dots/mm)	203 (8dots/mm)
Print Width (max. in.) * with tag stock	4.125" (105mm)	4.09" (104mm) / 2.25" (57mm)*
Max. Print Length (Std In.)	18" (457mm)	**22" (559mm)**
Transmissive Sensor	YES	YES
Dot History Control	NO	YES
Bitmapped Fonts	7 Standard / 1 Smooth	16 Standard / + Optional
Scalable Fonts	YES - CG Triumvirate Bold Standard	CG Triumvirate Bold Standard / **Font Pack Option**
Frame Construction	Plastic	Plastic
LCD Display	NO (Single Feed Key Button)	NO (Single Feed Key Button)
Firmware	512K EPROM	**Flash**
Standard DRAM	512K	**1MB**
Std. Flash Memory	NO	**YES – 1MB**
2D Symbologies	Maxicode, PDF417, Code49, Codablock	Maxicode, PDF417, **MicroPDF**, Code49, Codablock, **Datamatrix, QR**
Calibration	Auto-calibration	Auto-calibration
Connectivity	Serial & Parallel	**Auto-SyncSerial & Bi-directional Parallel** ZebraLink
Power Supply	External Brick 110 / 230V	External Brick Auto-switching 110/230V
OPTIONS		
DRAM Upgradeable to:	NO	NO (1MB Standard)
Optional Asian Fonts:	NO	**YES – flash & Font Pack Option**
Flash Memory Upgrade:	NO	**8MB Option**
Peel	YES - Std	NO
Rewind	NO	**NO**
Reflective Sensor	NO	**Standard**
Cutter	NO	**NO**
Ethernet	YES	YES – Option
Keyboard Display Unit (KDU)	NO	NO
Linerless	NO	NO
Real Time Clock	NO	YES – Option

Zebra's commitment to providing quality printer products is evident in the Stripe desktop series *DA*402 and *T*402. The *DA*402's enhanced printer capabilities offer exceptional performance value for under $650.   Below are some of the feature improvements that the *DA*402 offers over the *A*300.
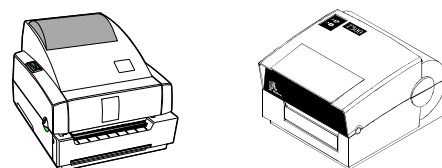
*DA*402 and *A*300
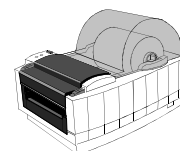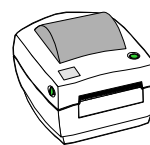
- The *DA* 402 comes equipped with ZebraLink rela-time connectivity & control. A feature not available on the *A*300.

- The increased DRAM memory (1MB) on the *DA*402 enables longer label formats to be printed – up to 22" (559mm) compared to 18" (457mm) on the *A*300.

- New electronics and 1MB flash firmware on the *DA*402 enables ZPLII and optional fonts to be upgraded and enhanced without modifying printer electronics. A feature capability not available on the *A*300 with its EPROM memory configuration.

- <u>MORE</u> 2D symbologies available on the *DA*402 versus the *A*300.

- E^3 dot history control available on the *DA*402 for reliable print quality and improved printhead life.   This feature is not available on the *A*300.

- The *DA402* contains more user options than the *A*300, including flash memory upgrade module of 8MB and real time clock capability.

- The auto-switching power supply feature on the *DA*402 enables the printer to gravitate and lock into the exact voltage being used in a given application for safe, smooth printer operation without power surges.

- More print speeds and options on the *DA*402.

B.   ZEBRA PRODUCT DIFFERENTIATION – *T*300 compared to the Stripe *T*402

T300 vs. T402 *STANDARD FEATURES*	*Zebra* *T300*	**NEW** *Zebra* *Stripe T402*
Print Method	Thermal Transfer	Thermal Transfer
Print Speed (ips)	2ips (51mm)	**1.5, 2 and 2.5ips (38-64mm)**
Resolution (dots/mm)	203 (8dots/mm)	203 (8dots/mm)
Print Width (max. in.)	4.125" (105mm)	4.09" (104mm)
Max. Print Length (Std In.)	18" (457mm)	**22" (559mm)**
Transmissive Sensor	YES	YES
Dot History Control	NO	YES
Bitmapped Fonts	7 Standard / 1 Smooth	16 Standard / + Optional
Scalable Fonts	YES - CG Triumvirate Bold Standard	CG Triumvirate Bold Standard / **Font Pack Option**
Frame Construction	Plastic	Plastic
LCD Display	NO (Single Feed Key Button)	NO (Single Feed Key Button)
Firmware	512K EPROM	**Flash**
Standard DRAM	512K	**1MB**
Std. Flash Memory	NO	**YES – 1MB**
2D Symbologies	Maxicode, PDF417, Code49, Codablock	Maxicode, PDF417, **MicroPDF**, Code49, Codablock, **Datamatrix, QR**
Calibration	Auto-calibration -Std	Auto-calibration - Std
Connectivity	Serial & Parallel	**Auto-SyncSerial & Bi-directional Parallel** ZebraLink
Power Supply	External Brick 110 / 230V	**External Brick Auto-switching 110/230V**
OPTIONS		
DRAM Upgradeable to:	NO	NO (1MB Standard)
Optional Asian Fonts:	NO	**YES – w/ fkash & Font Pack Option**
Flash Memory Upgrade:	NO	**8MB Option**
Peel	Standard	YES - Std
Rewind	NO	**NO**
Cutter	YES	YES – Option
Ethernet	YES	YES – Option
Keyboard Display Unit (KDU)	NO	NO
Linerless	NO	NO
Real Time Clock	NO	YES - Option

The *T*402 contains numerous expanded standard features that make it more flexible and adaptable to user expectations and market demand for thermal transfer printing. For under $800, the *T*402 offers an exceptional performance and value. Consider the following strengths of the new generation *T*402 versus the *T*300.
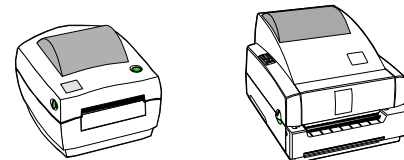
*T*402 and *T*300

- The *T*402 comes equipped with ZebraLink rela-time connectivity & control. A feature not available on the *T*300.

- The increased DRAM memory (1MB) on the *T*402 enables longer label formats to be printed – up to 22" (559mm) compared to 18" (457mm) on the *T*300.

- Enhanced max print speed of 2.5 ips compared to 2ips on *T*300.

- New electronics and 1MB flash firmware on the *T*402 enable ZPLII and optional fonts to be upgraded and enhanced without modifying printer electronics. This feature is not available on the *T*300 with its EPROM memory configuration.

- MORE 2D symbologies available on the *T*402 versus the *T*300.

- E^3 dot history control available on the *T*402 for reliable print quality and improved printhead life.   This feature is not available on the *T*300.

- The *T*402 contains more user options than the *T*300, including a flash memory upgrade, real time clock to name a few.

- The auto-switching power supply feature on the *T*402 enables the printer to gravitate and lock into the exact voltage being used in a given application for safe, smooth printer operation without power surges.

(**NOTE:** Product data based on manufacturers' published spec sheets, which are subject to change without notice.)

C.   ZEBRA PRODUCT DIFFERENTIATION – *DA*402 compared to *T*402

*DA*402 vs. *T*402 *STANDARD FEATURES*	*Zebra* ***Stripe*** ***DA*402**	**NEW** *Zebra* *Stripe* ***T*402**
Print Method	Direct Thermal	Thermal Transfer
Print Speed (ips)	**1.5, 2 and 2.5ips (38-64mm)**	**1.5, 2 and 2.5ips (38-64mm)**
Resolution (dots/mm)	203 (8dots/mm)	203 (8dots/mm)
Print Width (max. in.) * with tag stock	4.09" (104mm) / 2.25" (57mm)*	4.09" (104mm)
Max. Print Length (Std In.)	**22" (559mm)**	**22" (559mm)**
Transmissive Sensor	YES	YES
Dot History Control	YES	YES
Bitmapped Fonts	**16 Standard / + Optional**	**16 Standard / + Optional**
Scalable Fonts	**CG Triumvirate Bold Standard / Font Pack Option**	**CG Triumvirate Bold Standard / Font Pack Option**
Frame Construction	Plastic	Plastic
LCD Display	NO (Single Feed Key Button)	NO (Single Feed Key Button)
Firmware	**Flash**	**Flash**
Standard DRAM	**1MB**	**1MB**
Std. Flash Memory	**YES – 1MB**	**YES – 1MB**
2D Symbologies	Maxicode, PDF417, MicroPDF, Code49, Codablock, Datamatrix, QR	Maxicode, PDF417, MicroPDF, Code49, Codablock, Datamatrix, QR
Calibration	Auto-calibration - Std	Auto-calibration - Std
Connectivity	**Auto-Sync Serial & Bi-directional Parallel ZebraLink**	**Auto-Sync Serial & Bi-directional Parallel ZebraLink**
Power Supply	**External Brick Auto-switching 110/230V**	**External Brick Auto-switching 110/230V**
OPTIONS		
DRAM Upgradeable to:	**NO (1MB Standard)**	**NO (1MB Standard)**
Optional Asian Fonts:	**YES – w/ flash & Font Pack Option**	**YES – w/ flash & Font Pack Option**
Flash Memory Upgrade:	**8MB Option**	**8MB Option**
Peel	YES – Option	YES - Std
Rewind	**YES – External**	**NO**
Cutter	NO	YES – Option
Ethernet	YES – Option	YES – Option
Keyboard Display Unit (KDU)	NO	NO
Linerless	**YES**	NO
Reflective Sensor	YES - Std	YES – Option
Real Time Clock	YES – Option	YES – Option

When comparing the *DA*402 and *T*402 directly, similarities between the two models are quite evident in the new standard of technology - characteristic of a Stripe- that they represent . Subtle differences are, however, also apparent, as evidenced below:

Stripe *DA*402 and *T*402

- The single largest difference between the *DA*402 and *T*402 are their respective print methods, direct thermal versus thermal transfer.

- The *DA*402 comes standard with both a transmissive and reflective sensor compared to the *T*402 which comes equipped with a transmissive sensor and a reflective sensor option.

- The *T*402 further offers a cutter option which the *DA*402 does not.

(**NOTE:** Product data based on manufacturers' published spec sheets, which are subject to change without notice.)

D.   ZEBRA PRODUCT DIFFERENTIATION – Zebra *DA*402 compared to the Eltron Orion 2443

Orion 2443 vs. *T*402 *STANDARD FEATURES*	*Zebra* ***Stripe*** ***DA*402**	*Eltron* ***Orion*** **2443**
Print Method	Direct Thermal	Direct Thermal
Print Speed (ips)	1.5, 2 and 2.5ips (38-64mm)	1-2.5ips (25-64mm)
Resolution (dots/mm)	203 (8dots/mm)	203 (8dots/mm)
Print Width (max. in.) * Tag Stock	4.09" (104mm) / 2.25" (57mm)*	4.09" (104mm) / 2.25" (57mm)*
Max. Print Length (Std In.)	22" (559mm) - Std	11" (279mm) Std / 22" (559mm) w/ exp mem option
Transmissive Sensor	YES	YES
Dot History Control	YES	NO
Bitmapped Fonts	16 Standard / + Optional	5 Standard
Scalable Fonts	CG Triumvirate Bold Standard / Font Pack Option	NO
Frame Construction	Plastic	Plastic
LCD Display	NO (Single Feed Key Button)	NO (Single Feed Key Button)
Firmware	Flash	Flash
Standard DRAM	1MB	256K SRAM
Std. Flash Memory	YES – 1MB	YES –252K
2D Symbologies	Maxicode, PDF417, MicroPDF, Code49, Codablock, Datamatrix, QR	Maxicode, PDF417
Calibration	Auto-calibration - Std	NO
Connectivity	Auto-syncSerial & Bi-directional Parallel ZebraLink	Serial & Centronics Parallel
Power Supply	External Brick Auto-switching 110/230V	External Brick 120 or 240V
OPTIONS		
DRAM Upgradeable to:	NO (1MB Standard)	512K SRAM
Optional Asian Fonts:	YES – w/ flash & Font Pack Option	YES
Flash Memory Upgrade:	**8MB Option**	Up to 2.5MB Option
Peel	NO	YES – Option
Rewind	YES – External	YES – External
Cutter	NO	YES – Option
Ethernet	YES – Option	YES
Keyboard Display Unit (KDU)	NO	YES
Linerless	NO	YES
Reflective Sensor	YES - Std	YES - Std
Real Time Clock	YES – Option	YES - Option

When comparing the Zebra *DA*402 with the Eltron Orion 2443, notable differences become apparent to differentiate the capabilities of each respective printer brand. Depending on the user and their specific application requirements, either the Eltron or the Zebra brand of thermal printer may be deemed more appropriate for the task.

Eltron Orion 2443 and Zebra *DA*402

- The biggest difference between the *DA*402 and the Orion 2443 is the fact that the *DA*402 operates using ZPLII programming language while the Orion operates using EPL2 (Eltron Programming Language). Customers may prefer to stay with a designated programming language, especially if they have existing label formats configured in a specific programming language.

- The 1MB DRAM memory enables the *DA*402 to achieve a maximum standard print length of 22″ (559mm) compared to265K 11″ (279mm) on Orion without the memory upgrade.

- Scalable fonts and auto-calibration available on the *DA*402 with more bitmapped fonts to choose from than on the Orion 2443.

- No ZebraLink connectivity available on Eltron Orion 2443.

- Higher standard Flash memory (1MB) on the *DA*402.

- Larger selection of 2D symbologies on the *DA*402 compared to the Orion 2443.

- Stronger brick power supply on *DA*402.

(**NOTE:** Product data based on manufacturers' published spec sheets, which are subject to change without notice.)

E.   ZEBRA PRODUCT DIFFERENTIATION – Zebra Stripe *T*402 compared to the Eltron TLP 2742

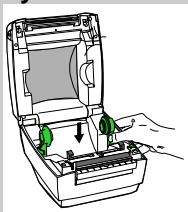| TLP 2742 vs. *T*402	*Zebra Stripe* **T402**	*Eltron* **TLP 2742**
STANDARD FEATURES		
Print Method	**Thermal Transfer**	**Direct Thermal / Thermal Transfer**
Print Speed (ips)	**1.5, 2 and 2.5ips (38-64mm)**	**2ips (51mm)**
Resolution (dots/mm)	203 (8dots/mm)	203 (8dots/mm)
Print Width (max. in.)	4.09" (104mm)	4.09" (104mm)
Max. Print Length (Std In.)	22" (559mm)	**11" (147mm) Std / 22" (559mm) w/ exp mem option**
Transmissive Sensor	YES	YES
Dot History Control	YES	**NO**
Bitmapped Fonts	16 Standard / + Optional	**5 Standard**
Scalable Fonts	CG Triumvirate Bold Standard / Font Pack Option	**NO**
Frame Construction	Plastic	Plastic
LCD Display	NO (Single Feed Key Button)	NO (Single Feed Key Button)
Firmware	Flash	Flash
Standard DRAM	**1MB**	**256K SRAM**
Std. Flash Memory	**YES – 1MB**	**160K**
2D Symbologies	Maxicode, PDF417, MicroPDF, Code49, Codablock, Datamatrix, QR	**Maxicode, PDF417**
Calibration	Auto-calibration - Std	**NO**
Connectivity	Auto-Sync serial and Bi-directional Parallel ZebraLink	Serial & Centronics Parallel
Power Supply	External Brick Auto-switching 110/230V	**External Brick 100 or 240V**
OPTIONS		
DRAM Upgradeable to:	**NO (1MB Standard)**	**512K SRAM**
Optional Asian Fonts:	YES – w/ flash & Font Pack Option	YES
Flash Memory Upgrade:	**8MB Option**	**1MB**
Peel	YES - Std	YES – Option
Rewind	YES – External	YES – External
Cutter	YES – Option	YES – Option
Ethernet	YES – Option	YES
Keyboard Display Unit (KDU)	NO	YES
Linerless	NO	NO
Reflective Sensor	YES – Option	YES – Option
Real Time Clock	YES – Option	YES – Option

Eltron TLP 2742 and *T*402

- The biggest difference between the *T*402 and the TLP 2742 is the fact that the *T*402 operates using ZPLII programming language while the TLP2742 operates using EPL2 (Eltron Programming Language). Customers may prefer to stay with a designated programming language, especially if they have previously purchased a particular brand type with existing label formats configured to that specific programming language.

- The 1MB DRAM memory enables the *T*402 to achieve a maximum standard print length of 22″ (559mm) compared to 11″ (279mm) on TLP2742 without the memory upgrade.

- Scalable fonts and auto-calibration are available on the *T*402 with more bitmapped fonts to choose from than on the TLP 2742.

- No ZebraLink connectivity available on Eltron TLP 2742.

- The *T*402 contains a larger selection of 2D symbologies than the TLP 2742.

- The *T*402 has a flash memory upgrade.

- The *T*402 has more adjustable print speed options.

(NOTE: Product data based on manufacturers' published spec sheets, which are subject to change without notice.)

V.   KEY FEATURE / FUNCTION / BENEFIT

| FEATURE	FUNCTION	END-USER BENEFIT	CHANNEL ADVANTAGE
***NEW Standard* ZebraLink™ Connectivity & Control**	Three core features (ZBI, WebView and Alert) enable users to control and monitor the printer remotely Particularly appealing to IS personnel in large organizations where maintenance of multiple printers/production lines is their job	**Receive printer error notifications in real-time via pager, email or cell phone using Alert feature** **Change and manage printer settings and configuration with easy-to-use web interface using WebView** **Create stand-alone applications or interpret non-zebra data streams using ZBI**	Replace any brand of old bar code printer with the superior performance and reliability of Zebra, without costly re-formatting. Freedom to program and monitor your bar code printers from anywhere Standard feature on Zebra printers with ZebraLink logo versus payable option on competitive printers.
ZPL II Compatibility	The *DA*402 and *T*402 desktop printers come equipped with ZPL II programming language providing a built-in communication language with every printer.	**ZPL II programming language translates to universal code compatibility among all Zebra printers and optimized printer performance.**	Universal Zebra programming code promotes Zebra "up-selling" capability for channels as user's labeling needs grow and change.
Increased DRAM	Zebra's *DA*402 and *T*402 desktop printers come equipped with 1MB DRAM to support longer label formats up to 22" (559mm).	**Increased DRAM memory improves formatting performance with the ability to print longer labels.**	One of the highest memory options available over comparable, competitive label printers.
Flash Memory	1MB Flash for increased download capacity of numerous custom fonts and large graphic images.	**The flash option promotes permanent label storage in the advent of power loss and the use of international fonts in support of global labeling applications.**	Flash memory option increases competitive advantage and reduces printer and parts inventory for sales channels as label formats and fonts can be downloaded in the field to suit virtually any end-user requirement, as needed.

FEATURE	FUNCTION	END-USER BENEFIT	CHANNEL ADVANTAGE
Enhanced 32 bit RISC Microprocessor	The *DA*402 and *T*402 printers come equipped with an enhanced 32 bit microprocessor which provides fast throughput (processing).	**Users will realize enhanced productivity as less time is spent waiting for labels to format and print – enabling the user to be more productive.**	Competitive printer product performance features enable Zebra printers to satisfy and conform with varied user requirements.
Auto-Calibration	The *DA*402 and *T*402 desktop printers calibrate automatically at power up or when the printer recovers from an error condition, such as ribbon or media out.	**The printer automatically adjusts to the label size with little or no operator modification required resulting in faster printer set-up. Utilizes approx. two labels for calibration within typical applications results in less label waste.**	Easy to sell to customers using various sized labels. Reduces training and support requirements.
Scalable Fonts **scalable** (Unlimited Point Sizes versus bitmapped font varieties)	All *DA*402 and *T*402 printers support scalable fonts, including any TrueType® font.	**Scalable fonts promote improved print quality and added support for corporate image standards.**	Superior print quality for increased customer satisfaction and increased sales opportunities due to the ability to reproduce specific label designs required by global accounts.
Auto-Switching Power Supply	The *DA*402 and *T*402 desktop printers come equipped with the same auto-switching power supply units.	**The printer automatically senses and alternates between 110 or 230 volt operation as required by the application – with no user modification required.**	Easy to sell to customers whether they are of U.S. or International origin. Fewer models or SKU's required by resellers when stocking Stripe printers.
Auto-Baud Synchronizing Serial Port	The *DA*402 and *T*402 desktop printers come equipped with an auto-baud synchronizing serial port for quick printer set-up and communication with the host.	**No need to set baud rates. By sending a label format to the printer, the printer will automatically synchronize itself and set its baud rate to the same rate as that of the host.**	No technical intervention required. Printer set-up and operation are simplified reducing the need for training or support requirements.
Center-Justified Alignment System 	The center justified alignment system on the *DA*402 and *T*402 printers promote intuitive media loading and proper alignment of label media to the media sensors.	**Easy loading with no guesswork for reliable print registration every time.**	Easy to operate, reducing training and support requirements.

FEATURE	FUNCTION	END-USER BENEFIT	CHANNEL ADVANTAGE
Printer equipped with Zebra E³ Heat History Control	Zebra's energy control system provides high quality printing over a range of speeds and materials.	**Satisfies customer print quality requirements for bar codes, text and graphics with dependable scanning results.**	Can confidently sell Zebra's reliable print quality over a range of print applications.
Color-Coded Operator Cues	Color coded operator cues easily identify which components on the *DA*402 and *T*402 printers are user adjustable in order to operate or optimize the printer.	**Easy-to-use. Printer operation is now highly intuitive, less complicated with less training requirements.**	Easy to demonstrate printer operations, reduces training and support requirements.
Flexible User Options	The *DA*402 and *T*402 printers come equipped with an array of flexible user options, including *up to 8MB Flash Memory Upgrade*, *Peel Real Time Clock, and Ethernet - to name a few*.	**Printer's configuration can be customized to specific application needs or personal work style.**	Expansive array of options increases user's productivity and resellers selling options in any given situation.
Multi-Purpose Feed Key Button with LED Indicator	Promotes ease of use and quick identification of printer problems for trouble-shooting.	**The Feed button performs multiple functions from label feed, printer pause and darkness setting adjustment to printer calibration. The feed button's flashing indicator light informs users of printer problems as well as confirms acceptance of designated printer commands .**	Printer operation is reliable and intuitive for customers with limited or extensive barcode labeling experience. Easier trouble-shooting capability means less training and downtime.
See-Through Dust Cover	The semi-transparent dust cover on the *DA*402 and *T*402 printers allows the user to easily view media status and upcoming usage requirements.	**Users can gauge operation and logically determine supply reloading based on specific usage rate and work cycle.**	Printer operation is entirely straightforward resulting in less downtime or excessive training.
Clam Shell Design	The clam-shell design concept of the *DA*402 and *T*402 printers promotes simplified loading of media and easy printhead cleaning capability.	**Flip top design enables quick installation and simple drop in loading of media and ribbon. Printhead mechanism is also fully accessible for easy cleaning.**	Printers are intuitive to load, operate and maintain, translating to less training and downtime.

VI.   PRINTER SPECIFICATIONS

ZEBRA *DA*402**ä** SERIES PRINTER SPECIFICATIONS

Specifications are provided for reference and are based on printer tests using Zebra brand ribbons and labels. Results may vary in actual application settings or when using other than recommended Zebra supplies. Zebra recommends always qualifying any application with thorough testing.
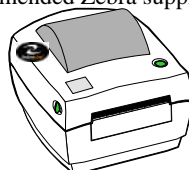
Standard Features
- 203 dpi print resolution (8 dots/mm)
- Direct thermal printing of bar codes, text, and graphics
- Fully enclosed 5.0" (127mm) media compartment
- ZPL® or ZPL II® programming language, software selectable
- 32 bit RISC processor
- 1MB Standard DRAM Memory
- 1MB Standard Flash Memory
- Standard (Level1) E^3 Dot History Control
- Auto-Synchronizing Serial RS-232 (9 Pin) port and NEW bi-directional Centronics® parallel (36 Pin) Communication ports
- Auto-Calibration
- Scalable fonts
- Auto-switching 110V and 230V power supply
- Increased 2D Symbologies
- Transmissive (inter-label gap) and reflective (black-mark) media sensing
- Programmable print speeds of 1.5, 2.0 and 2.5 ips
- Standard Tear-off mode feature
    - Zebra® CD ROM – contains Windows™ printer drivers 3.0 and higher, ZPL manual, BARONE Lite or Barcode Anything Software
- *NEW* ZebraLink™ - the revolutionary real-time connectivity control solution:
    ⇒ *WebView* / *Aler*t – (requires optional ZebraNet™ PrintServer II)
    ⇒ *ZBI*™ - Programming Language Interpreter for translation of foreign data streams

Optional Features
- **8MB Flash Memory w/ Real Time Clock**– for applications requiring additional levels of memory and time and date information for applications that require date or freshness coding.

- **ZebraNet™PrintServerII –**(w/ parallel connection only) – provides Ethernet connectivity and enables the use of the *Webview* and *Alert* features.

- **BAR-ONE® Lite software** - Windows™-based "WYSIWYG" on-screen label design and print application software.

Software
- **ZPL and ZPL II Zebra Programming Language®** – The *DA402* printer comes equipped with ZPLII – the universal language of Zebra printers – ensures easy integration into existing systems that run Zebra printers – without the need for additional software.

- **Flash Upgradeable Firmware** – flash memory can be easily upgraded via serial or parallel port download from a computer.

Printing Specifications
- Barcode modulus "X" dimension: 203 dpi = 5 mil to 50 mil
- 203 dpi resolution (8 dots/mm)
- Dot Size: 0.0049" W x 0.0065" L (0.125mm x 0.167mm)
- Maximum print length: 22.0" (559mm)
- Minimum print length: 0.005" (0.125mm – one dot)
- Maximum print width: 4.09" (104mm)
- Minimum print width: 1.0" (25mm)
- Programmable print speed: 1.5, 2.0 and 2.5 ips (38-64 mm)

Media Specifications

NOTE: For optimum print quality and printer performance, use of Zebra genuine supplies is recommended.

- Media types: roll-fed, continuous fan-fold, notch, die-cut and continuous
- Media width (label and liner):
  Maximum: 4.25" (108mm); 2.25" (57mm) for tag stock
  Minimum: 1.0" (25mm)
- Label length:
  Maximum: 22" (559mm)
  Minimum: 0.5" (13mm); 1.0" (25mm) for peel
- Media thickness (label and liner):
  0.003" (0.08mm) to 0.007" (0.18mm)
- Maximum media roll size:
  5.0" (127mm) O.D. on a 1.0" (25mm) or 1.5" (38mm) I.D. core
- Material: Direct thermal sensitive labels

Calibration Procedure

- The *DA402* is equipped with a standard auto-calibration feature that initiates automatically during start-up of the printer - utilizing two to four labels to calibrate for efficient operation and less waste. The printer will also save the new settings in memory until the next calibration is performed.
- A manual calibration procedure can also be performed, if required. Consult your User's Guide for more details on the specific manual calibration steps.

Font Specifications   203 dpi (8 dots/mm)

Fonts	Matrix (in dots) (H x W)	Type†	Minimum Char. Size (H x W)	Maximum C.P.I.
A	9 x 5	U-L-D	.044" x .030"	33.3
B	11 x 7	U	.054" x .044"	22.7
C,D	18 x 10	U-L-D	.089" x .059"	16.9
E	28 x 15	OCR-B	.138" x .098"	10.2
F	26 x 13	U-L-D	.128" x .079"	12.7
G	60 x 40	U-L-D	.295" x .236"	4.2
H	21 x 13	OCR-A	.103" x .093"	10.8
GS	24 x 24	SYMBOL	.118" x .118"	8.5
P-V		U-L-D	Backward compatible w/ S-300	
Ø	15 x 12	U-L-D	Scalable (Smooth) Font	

- Character Fonts: Standard bitmapped Zebra fonts: A, B, C, D, E (OCR-B), F, G, H, (OCR-A), GS, P, Q, R, S, T, U, V & 1 Smooth font (CG Triumvirate™ Bold Condensed).
- Character Sets: IBM® Code Page 850 International characters & graphic symbols
- Supports user defined fonts and graphics – including custom logos
- Bitmap fonts are expandable up to 10 times, height and width independent. Fonts E and H (OCR-B and OCR-A), however, are not considered in spec when expanded.
- Smooth scalable font Ø (CG Triumvirate™ Bold Condensed) is expandable dot-by-dot, height and width independent, while maintaining edges to a max. 1500 x 1500 dots.
- IBM® Code Page 850 International Characters available in fonts A,B,D,E,F,G and Ø through software control.

Bar Code Symbologies & Specifications

- Bar code ratios: 2:1 (non-rotated) and 3:1
- Linear bar codes: Code 11, Code 39, Code 93, Code 128, UPC-A, UPC-E, EAN-8, EAN-13, EAN-14, UPC-A, UPC-E and EAN 2 or 5 digit extensions, Plessey, POSTNET, Standard 2 of 5, Industrial 2 of 5, Interleaved 2 of 5, LOGMARS, MSI, Codabar, Ultracode,
- 2-dimensional bar codes: PDF417, MicroPDF-417, Code 49, Maxicode, Codablock, Datamatrix, and QR code.

Zebra Programming Language (ZPL/ ZPL II)

- Communicates in printable ASCII characters
- Compatible with mainframe, mini, and PC hosts
- Downloadable objects include graphics and bitmap fonts, label templates and formats
- Automatic memory allocation for format while printing
- Automatic serialization of fields
- Format inversion (white on black)
- Mirror-image printing
- Four position field rotation (0º, 90º, 180º, 270º)
- Slew command
- Programmable label quantities with print, pause, cut control
- Status messages to host upon request
- ZBI™ (Zebra BASIC Interpreter) on *DA*402:
⇒ 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

Communication Specifications

- Serial RS-232 (DB-9) and Centronics® Parallel (36 Pin / IEEE-1284) connector ports
- Configurable baud rate (110 – 38400), standard parity, and 7-8 data bits. Stop bits at 1 or 2.
- Software (XON/XOFF) or hardware (DTR/DSR) communication handshake protocols

Electrical Specifications

- Auto-detectable (PFC Complaint) 110 ±20%, or 230VAC, ±15%, 47-63 Hz
- 110 and 230V auto-switching external power supply – printer auto-detects and alternates between 110 and 230 volt operation as required by the application.
- Agency approvals: UL1950, IEC950/EN60950, EMC, EN 50082-1:1997, CSA 22.2 No. 950-95, FCC Class B, CE compliance, EN55022 Class B, EN61000-3-2,3, Canadian Doc Class A, AS/NZS 3548, NOM

Physical Specifications (*no options installed*)

- Height: 6.60" (167mm)
- Width: 7.60" (193mm)
- Length: 8.50" (216mm)
- Weight: 3lbs. (1.4kg) without media
- Shipping Weight: 9lbs. (4.1kg)

Environmental Specifications

- Operating Temperature: 40º to 105ºF (5º to 41ºC)
  Storage Temperature: -40º to 140ºF (-40º to 60ºC)
- Operating Humidity: 10% to 90% non-condensing R.H.
- Storage Humidity: 5% to 95% non-condensing R.H.

Preventative Maintenance

- Zebra recommends cleaning the printer on a regular basis using standard Zebra printer parts and cleaning supplies. Consult your *User's Guide* for further details.

- **Cleaning:** The exterior is cleaned with a lint-free cloth, and if necessary, a mild detergent solution or desktop cleaner. Interior components (printhead, platen roller, media sensor, peel bar and media paths) are cleaned with alcohol or blown air to remove any particles.

- **Lubrication:**
  All mechanical parts are self-lubricating and do not require additional lubrication.

ZEBRA *T*402 ä SERIES PRINTER SPECIFICATIONS

Specifications are provided for reference and are based on printer tests using Zebra brand ribbons and labels. Results may vary in actual application settings or when using other than recommended Zebra supplies. Zebra recommends always qualifying any application with thorough testing.
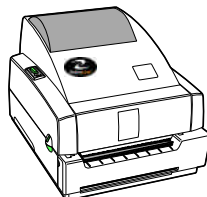
Standard Features

- 203 dpi print resolution (8 dots/mm)
- Thermal transfer printing of bar codes, text, and graphics
- Fully enclosed 5.0" (127mm) media compartment
- ZPL® or ZPL II® programming language, software selectable
- 32 bit RISC processor
- 1MB Standard DRAM Memory
- 1MB Standard Flash Memory
- Standard (Level 1) E^3 Dot History Control
- Auto-synchronizing Serial RS-232 (9 Pin) port and NEW bi-directional Centronics® parallel (36 Pin) Communication ports
- Auto-Calibration
- Scalable fonts
- (Passive) Peel Mode
- Auto-switching 110V and 230V power supply
- Increased 2D Symbologies
- Transmissive (inter-label gap) media sensing
- Programmable print speeds of 1.5, 2.0 and 2.5" ips
- Standard Tear-off mode feature
- Zebra® CD ROM – contains Windows™ printer drivers 3.0 and higher, ZPL manual, BARONE Lite or Barcode Anything Software
- *NEW* ZebraLink™ - the revolutionary real-time connectivity control solution:
  - ⇒ *WebView* / *Aler*t – (requires optional ZebraNet™ PrintServer II)
  - ⇒ *ZBI*™ - Programming Language Interpreter for translation of foreign data streams

Optional Features

- **8MB Flash Memory w/ Real Time Clock**– for applications requiring additional levels of memory and time and date information for applications that require date or freshness coding.
- **Cutter** – facilitates operator performance and productivity based on user preference (will not cut adhesive).
- **ZebraNet™Print Server II – (**w/ parallel connection only) enables network print capability.
- **Reflective Sensor –** permits usage of blackmark media**.**
- **BAR-ONE® Lite software** - Windows™-based "WYSIWYG" on-screen label design and print application software.

Software

- **ZPL and ZPL II Zebra Programming Language®** – The *T402* printer comes equipped with ZPLII – the universal language of Zebra printers – ensures easy integration into existing systems that run Zebra printers – without the need for additional software.
- **Flash Upgradeable Firmware** – flash memory can be easily upgraded via serial or parallel port download from a computer.

Printing Specifications

- Barcode modulus "X" dimension: 203 dpi = 5 mil to 50 mil
- 203 dpi resolution (8 dots/mm)
- Dot Size: 0.0049" W x 0.0065" L (0.125mm x 0.167mm)
- Maximum print length: 22.0" (559mm)
- Minimum print width: 0.005" (0.125mm – one dot)
- Maximum print width: 4.09" (104mm)
- Minimum print width: 1.12" (28mm)
- Programmable print speed: 1.5, 2.0 and 2.5" ips (38-64mm)
  Peel mode: 2.0" ips (51mm)
  Cutter/Tear: 2.5" ips (64mm)

Ribbon Specifications

NOTE: For optimum print quality and printer performance, use of Zebra genuine ribbon is recommended as well as a notched ribbon core.

- Ribbon widths/roll:
  1.3" (33m), 2.5" (64m), 3.3" (84m), 4.3" (109m),
- Min. Ribbon length/roll:
  Maximum: 3600" (91m)
- Ribbon core size:
  1.39" (35mm) O.D. on a 0.5" (13mm) I.D. core

Media Specifications

NOTE: For optimum print quality and printer performance, use of Zebra genuine supplies is recommended.

- Media types: roll-fed, fan-fold, die-cut and notched
- Media width (label and liner):
  Maximum: 4.65" (118mm); 4.25" (108mm) with cutter
  Minimum: 1.12" (28mm)
- Label length:
  Maximum: 22" (559mm)
  Minimum: 0.38" (10mm) tear; 1.0" (25mm) peel & cutter
- Media thickness (label and liner):
  0.003" (0.08mm) to 0.007" (0.18mm)
  0.003" (0.08mm) to 0.0055" (0.095mm) for cutter
- Maximum media roll size:
  5.0" (127mm) O.D. on a 1.0" (25mm) I.D. core

Calibration Procedure

- The *T402* is equipped with a standard auto-calibration feature that initiates automatically during start-up of the printer - utilizing two to four labels to calibrate for efficient operation and less waste. The printer will also save the new settings in memory until the next calibration is performed.
- A manual calibration procedure can also be performed, if required. Consult your User's Guide for more details on the specific manual calibration steps.

Font Specifications 203 dpi (8 dots/mm)

Fonts	Matrix (in dots) (H x W)	Type†	Minimum Char. Size (H x W)	Maximum C.P.I.
A	9 x 5	U-L-D	.044" x .030"	33.3
B	11 x 7	U	.054" x .044"	22.7
C,D	18 x 10	U-L-D	.089" x .059"	16.9
E	28 x 15	OCR-B	.138" x .098"	10.2
F	26 x 13	U-L-D	.128" x .079"	12.7
G	60 x 40	U-L-D	.295" x .236"	4.2
H	21 x 13	OCR-A	.103" x .093"	10.8
GS	24 x 24	SYMBOL	.118" x .118"	8.5
P-V		U-L-D	Backward compatible w/ S-300	
Ø	15 x 12	U-L-D	Scalable (Smooth) Font	

- Character Fonts: Standard bitmapped Zebra fonts: A, B, C, D, E (OCR-B), F, G, H, (OCR-A), GS, P, Q, R, S, T, U, V & 1 Smooth font (CG Triumvirate™ Bold Condensed).
- Character Sets: IBM® Code Page 850 International characters & graphic symbols
- Supports user defined fonts and graphics – including custom logos
- Bitmap fonts are expandable up to 10 times, height and width independent. Fonts E and H (OCR-B and OCR-A), however, are not considered in spec when expanded.
- Smooth scalable font Ø (CG Triumvirate™ Bold Condensed) is expandable dot-by-dot, height and width independent, while maintaining edges to a max. 1500 x 1500 dots.
- IBM® Code Page 850 International Characters available in fonts A,B,D,E,F,G and Ø through software control.

Bar Code Symbologies & Specifications

- Bar code ratios: 2:1 (non-rotated) and 3:1
- Linear bar codes: Code 11, Code 39, Code 93, Code 128, UPC-A, UPC-E, EAN-8, EAN-13, EAN-14, UPC-A, UPC-E and EAN 2 or 5 digit extensions, Plessey, POSTNET, Standard 2 of 5, Industrial 2 of 5, Interleaved 2 of 5, LOGMARS, MSI, Codabar, Ultracode,
- 2-dimensional bar codes: PDF417, MicroPDF-417, Code 49, Maxicode, Codablock, Datamatrix, and QR code.

Zebra Programming Language (ZPL/ ZPL II)

- Communicates in printable ASCII characters
- Compatible with mainframe, mini, and PC hosts
- Downloadable objects include graphics and bitmap fonts, label templates and formats
- Automatic memory allocation for format while printing
- Automatic serialization of fields
- Format inversion (white on black)
- Mirror-image printing
- Four position field rotation (0º, 90º, 180º, 270º)
- Slew command
- Programmable label quantities with print, pause, cut control
- Status messages to host upon request
- ZBI™ (Zebra BASIC Interpreter) on *T*402:
  ⇒ 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

- Serial RS-232 (DB-9) and Centronics® Parallel (36 Pin / IEEE-1284) connector ports
- Configurable baud rate (110 – 38400), standard parity, and 7-8 data bits. Stop bits at 1 or 2.
- Software (XON/XOFF) or hardware (DTR/DSR) communication handshake protocols

Electrical Specifications

- Auto-detectable (PFC Compliant) 110 ±20%, or 230VAC, ±15%, 47-63 Hz
- 110 and 230V auto-switching external power supply – printer auto-detects and alternates between 110 and 230 volt operation as required by the application.
- Agency approvals: UL1950, IEC950/EN60950, EMC, EN 50082-1:1997, CSA 22.2 No. 950-95, FCC Class B, CE compliance, EN55022 Class B, EN61000-3-2,3, Canadian Doc Class A, AS/NZS 3548, NOM

Physical Specifications (*no options installed*)

- Height: 6.75" (171mm)
- Width: 7.90" (200mm)
- Length: 9.80" (249mm)
- Weight: 4lbs. (1.8kg) without media
- Shipping Weight: 7.5lbs. (3.4kg)

Environmental Specifications

- Operating Temperature: 40º to 105ºF (5º to 41ºC)
- Storage Temperature: -40º to 140ºF (-40º to 60ºC)
- Operating Humidity: 10% to 90% non-condensing R.H.
- Storage Humidity: 5% to 95% non-condensing R.H.

Preventative Maintenance

- Zebra recommends cleaning the printer on a regular basis using standard Zebra printer parts and cleaning supplies. Consult your *User's Guide* for further details.

- **Cleaning:**
  The exterior is cleaned with a lint-free cloth, and if necessary, a mild detergent solution or desktop cleaner. Interior components (printhead, platen roller, media sensor, peel bar, ribbon and media paths) are cleaned with alcohol or blown air to remove any particles. *NOTE:* Cutter cleaning is not recommended. Never use solutions or solvents to clean the blades as blade lubrication and sharpness can be affected.

- **Lubrication:**
  All mechanical parts are self-lubricating and do not require additional lubrication.

VII.   THE ZEBRA ADVANTAGE

Zebra's Technologies delivers innovative engineering to create the widest breadth of products in the market – all of which use Zebra's Programming Language (ZPL). Zebra's products are recognized for their quality and reliability. When you sell Zebra products, you can expect value-added services and support, including...

- **Quality Products / World-Wide Dedicated Zebra Technical Support**

  A high-quality product line backed by 26 years of experience in the bar code printer industry coupled with the best service and support available. No other bar code printer company can back your selection with a solid base of manufacturing, sales, service and support.

- **Fast / Friendly Customer Service with Multi-Lingual Capabilities**

  Zebra takes pride in having a highly trained, multilingual customer service department and extensive reseller network to support your customers around the globe. Zebra assigns dedicated associates who are certified product experts, which means they will know which Zebra product combinations are optimal for your application(s). A Zebra associate will also ensure that your orders are shipped on time, will quickly resolve any problems, and will answer your questions as they arise.

- **Global Network of Authorized Service Providers**

  Zebra has a worldwide presence that extends into 70 countries, supporting customers and businesses anywhere it is required. When you make a commitment to Zebra, you know Zebra is making a commitment to you as well.

- **Fast, Affordable Depot Repair**

  If your printer should require maintenance that can't be resolved over the phone or via our fax back website system, Zebra's factory repair services department offers several service options, including two-day rush depot repair. Or, you can work with Zebra's third-party service providers who can provide on-site or depot repair programs.

- **24-Hour Interactive Technical Support via Zebra's Website at: www.zebra.com**

  Zip Support™ is Zebra's *24/7/365* (24hrs/7days a week/365 days a year) technical support via the internet. Access is a breeze! Our knowledgeable technical support staff is available to answer your questions and can be reached via phone or the internet. Information on flat-rate repair prices, training schedules, printer specifications, BAR-ONE software, maintenance parts lists and troubleshooting procedures is also located on our internet website. All information is accessible 24 hours a day, providing an invaluable service developed specifically with our partners and customers in mind.

- **Flexible Training Options**

  Zebra offers a variety of sales and technical training courses that are unparalleled in the industry. Reseller partners and their customers can receive comprehensive certified manufacturer training by participating in Zebra's training programs, which are conducted by our knowledgeable in-house staff. We have a flexible training schedule in which you can choose from individual courses or packaged course groupings that are offered at Zebra's headquarters in Vernon Hills, Illinois, USA. If you'd like, we can even arrange to come to your location with customized courses developed to tackle your specific needs.

- **Traditional 12-Month Warranty on Zebra Printers**

  At Zebra, we have a quality philosophy that goes far beyond ISO 9001 certification procedures and Total Quality Management processes. Our competitive product warranties – 12 month for labor and parts and 3 months (90 days) for printheads on the *DA*402 and *T*402 – are some of the longest in the industry.

- **Software Options to Suit Your Specific Application Needs**

  Zebra's printers, software and wireless connectivity options produce the most integrated printing solution(s) available. Zebra's ZPL, BAR-ONE and JetForm (ERP) software product options compliment our printers to provide maximum printing power and seamless system integration, even for the most complex of labeling applications. Our printers have a number of connectivity options, including Ethernet, wireless and RFID to name a few, that further facilitate painless system integration.

- **Genuine Zebra Supplies**
  Our Genuine Zebra Supplies are researched and made to a higher standard to ensure reliable printer performance. Developed specifically for Zebra printers to optimize our printers' performance, Zebra offers over 200 combinations of labels, tags and ribbons to choose from. Ninety-five labels and 100 of those ribbon varieties are (standard) in stock items, available to ship to your customers within one business day as part of our *Zip Ship*™ Supplies stocking program. Custom media options are also available with a turnaround time of only 6 working days to satisfy customer's specialized application requirements.

STRIPE *DA*402 COMPETITIVE OVERVIEW

FEATURE		Axiohm Solus™	DH Tech Barcode Blaster BD422005	DH Tech Barcode Blaster Advantage	Datamax Ovation2	Microcom Corp 412	SATO CX200	UBI EasyCoder 91™	ZEBRA Stripe *DA*402
List Price (BASE UNIT)		$395	$1095	$695	$795	$995	$395	$895	$645
Print Mode		DT	DT	DT	DT/TT	DT / TT	DT	DT / TT	DT
Dots / Inch		101 or 203 dpi (4 and 8 dots/mm)	101 or 203 dpi (4 and 8 dots/mm)	101 or 203 dpi (4 and 8 dots/mm)	203 dpi (8 dots/mm)	203 dpi (8 dots/mm)	203 dpi (8 dots/mm)	203 dpi (8 dots/mm)	203 dpi (8 dots/mm)
Print Speed(s)		3ips / (75 mm)	5ips / (127 mm)	2-3ips / (51-76mm)	2ips / (51mm)	3ips / (76mm)	3ips / (119mm)	2ips / (51mm)	1.5,2.0, 2.5ips / (38 - 64 mm)
Tear-Off / Peel Options		STD Tear Optional Peel	STD Tear Optional Peel	STD Tear NO Peel	STD Tear Optional Peel	STD Tear Optional Peel	STD Tear Optional Peel	STD Tear Optional Peel	STD Tear NO Peel
Processor		32 bit	32 bit	32 bit	32 bit	32 bit	32 bit	16 bit	32 bit
Standard RAM		512K RAM / 512K Flash	128K DRAM	512K DRAM / 512K Flash	512K DRAM	512K ROM / 512K RAM	512K DRAM /512K Flash	128K DRAM	1MB DRAM / 1MB Flash
Label Creation Software		Unknown	Label Magic® $149	Label Magic® $149	PC Batch™ $395	N/A	Label Wizard™ FREE	LabelShop Lite™ $300	BAR-ONE Lite FREE (CD ROM w/ printer purchase)
Windows Driver		YES (Windows 3.1 & higher)	YES (Windows 3.1 & higher)	YES (Windows 3.1 & higher)	YES (Windows 3.1 & higher)	YES (Windows 3.1 & higher)	YES (Windows 3.1 & higher)	YES (Windows 3.1 & higher)	YES (Windows 3.1 & higher)
Extended Memory Option(s)		Optional 2MB or 4MB Flash upgrade	256K DRAM	Optional 2MB or 4MB Flash upgrade	Optional 512K DRAM or 256K /512K Flash cartridge	NONE	Optional 2MB or 4MB Flash upgrade	512K DRAM	8MB Flash w/ Real Time Clock
Scalable Fonts		YES	YES	YES	YES	NO	NO	NO	YES - STD
Auto-Calibration		NO	NO	NO	NO	NO	NO	NO	YES - STD
Supply Roll Capacity (O.D)		5.0" (127mm)	4.7" (119mm)	4.7" (119mm)	5.0" (127mm)	5.0" (127mm)	5.0" (127mm)	3.8" (97mm)	5.0" (127mm)
Interface Options	Serial	RS-232 - Std	RS-232	RS-232 - Std	RS-232 - Std	RS-232	RS-232	RS-232	RS-232
	Parallel	Centronics - Std	Centronics – Std	Centronics – Opt	Centronics - Std	Centronics – Std	Centronics - Std	Centronics - Std	Centronics- Std
	Ethernet	YES	NO	NO	NO	NO	NO	NO	YES – Option

 (**NOTE:** Product data based on manufacturers' published spec sheets, which are subject to change without notice. N/A denotes data not found or available).

STRIPE *T*402 COMPETITIVE OVERVIEW

FEATURE		Axiohm Solus™	DH Tech Barcode Blaster	DH Tech Barcode Blaster Advantage	Datamax Ovation2	Microcom Corp 412	SATO CX200	UBI EasyCoder 91™	ZEBRA Stripe *T*402
List Price (BASE UNIT)		$495	$1195	$795	$895	$995	$495	$895	$765
Print Mode		TT	TT	TT	DT / TT	DT / TT	TT	DT / TT	TT
Dots / Inch		101 or 203 dpi (4 and 8 dots/mm)	101 or 203 dpi (4 and 8 dots/mm)	101 or 203 dpi (4 and 8 dots/mm)	203 dpi (8 dots/mm)	203 dpi (8 dots/mm)	203 dpi (8 dots/mm)	203 dpi (8 dots/mm)	203 dpi (8 dots/mm)
Print Speed(s)		3ips / (75 mm)	4ips / (102 mm)	2-3ips / (51-76mm)	2ips / (51mm)	3ips / (76mm)	3ips / (75mm)	2ips / (51mm)	1.5,2.0, 2.5ips / (38 - 64 mm)
Tear-Off / Peel Options		STD Tear Optional Peel	STD Tear NO Peel	STD Tear NO Peel	STD Tear Optional Peel	STD Tear Optional Peel	STD Tear Optional Peel	STD Tear Optional Peel	STD Tear STD Peel
Processor		32 bit	32 bit	32 bit	32 bit	32 bit	32 bit	16 bit	32 bit
Standard RAM		512K RAM / 512K Flash	128K DRAM	512K DRAM / 512K Flash	512K DRAM	512K ROM / 512K RAM	512K DRAM / 512K Flash	128K	1MB DRAM/ 1MB Flash
Label Creation Software		Unknown	Label Magic ® $149	Label Magic ® $149	PC Batch™ $395	N/A	Label Wizard™ FREE	LabelShop Lite™ $300	BAR-ONE Lite FREE (CD ROM w/ printer purchase)
Windows Driver		YES (Windows 3.1 & higher)	YES (Windows 3.1 & higher)	YES (Windows 3.1 & higher)	YES (Windows 3.1 & higher)	YES (Windows 3.1 & higher)	YES (Windows 3.1 & higher)	YES (Windows 3.1 & higher)	YES (Windows 3.1 & higher)
Extended Memory Option(s)		Optional 2MB or 4MB Flash upgrade	Unknown	Optional 2MB or 4MB flash upgrade	Optional 512K DRAM or 256K /512K Flash cartridge	NONE	Optional 2MB or 4MB flash upgrade	512K DRAM	8MB Flash w/ Real Time Clock
Scalable Fonts		YES	YES	YES	YES	NO	NO	NO	YES - STD
Auto-Calibration		NO	NO	NO	NO	NO	NO	NO	YES - STD
Supply Roll Capacity (O.D)		5.0" (127mm)	4.7" (119mm)	4.7" (119mm)	5.0" (127mm)	5.0" (127mm)	5.0" (127mm)	3.80" (97mm)	5.0" (127mm)
Interface Options	Serial	RS-232 - Std	RS-232	RS-232 - Std	RS-232	RS-232	RS-232	RS-232	RS-232
	Parallel	YES -Std	Centronics – Opt	Centronics – Opt	Centronics – Std	YES- Selectable	Centronics – Std	Centronics – Std	Centronics-Std
	Ethernet	YES	NO	NO	NO	NO	NO	NO	YES – Option

(**NOTE:** Product data based on manufacturers' published spec sheets, which are subject to change without notice. N/A denotes data not found or available).

VIII.   COMPETITIVE ANALYSIS

A.   *Zebra Stripe DA402/T402 versus Axiohm Solus*

ZEBRA vs. UBI	Zebra Stripe *DA*402/*T*402	Axiohm Solus
PRINT FEATURES		
Direct thermal, Direct Thermal	DT /TT	DT/TT
Print Width, max.	4.09" (104mm)	4.10" (104mm)
Print Length, max. w/std RAM	22" (559mm)	22" (559mm)
Print Length, optional w/add'l RAM	22" (559mm)	N/A
Dots/Inch, std	203 (8 dots/mm)	203 (8 dots/mm)
Max Print Speed	2.5ips / 2.5ips (64mm / 64mm)	3ips (75mm)
Auto-Calibration	Standard	NO
Scalable Fonts Resident	Standard	YES
MEDIA FEATURES		
Label Width, max.	4.25" (108mm) / 4.65" (118mm)	4.65" (118mm)
min.	1.0" (25mm) / 1.12" (28mm)	2.0" (50mm)
Label Length, max. (Tear / Peel-Off)	22" (559mm)	22" (559mm)
min. (Tear)	0.5 (13mm) / 0.38 (9.7mm)	2.0" (50mm)
Roll Size, O.D. & Mounting	5.0" (127mm)	5.0" (127mm)
Ribbon Length (for TT models ONLY)	3600" (91m)	5500" (140m)
Sample Media / Ribbon	YES	NO
OPTIONS		
Tear-Off	Standard	Standard
Peel-Off	NO/STD	Optional
Non-Roman (Asian) Font s	YES /YES	YES
Rewind	NO/NO	NO
Keyboard Display Unit (KDU)	NO/NO	NO
Cutter	NO/YES	NO
Real Time Clock	YES/YES	NO
Additional MEM (up to)	8MB Flash	2MB or 4MB Flash
OTHER		
Standard RAM	1MB DRAM / 1MB Flash	512K DRAM / 512K Flash
Processor / Buffer	32 bit	Unknown
Interface		
Serial	YES – STD	YES
Parallel	YES – STD	YES
Ethernet	YES – Option	YES – Option
Shell & Case Construction	Plastic	Plastic
Weight	3lbs (1.4 kg) / 4lbs (1.81 kg)	3lbs (1.41 kg)
Size (H" x W" x L")	6.6" x 6.7" x 8.5" / 6.75" x 7.9" x 8.9"	6.6" x 6.9" x 10"
BASE UNIT LIST PRICE	**$645/ $765**	**$395 / $495**

The Axoihm Solus is a popular desktop printer among novice users. But, when paired directly against the Zebra Stripe *DA*402/*T*402 distinct performance capability differences become apparent in favor of Zebra. From a memory and options capacity, few desktop printers can compete with the performance value and quality of the Stripe *DA*402/*T*402 Series.

Advantages of Zebra Stripe *DA*402/*T*402 vs. Axiohm Solus

- NO auto-calibration feature on Axiohm Solus vs. standard feature on Stripe *DA*402/*T*402.

- NO equivalent ZebraLink connectivity solution currently available on Axiohm Solus.

- 1MB DRAM standard on Stripe *DA*402/*T*402 vs. 512K DRAM on Axiohm Solus.

- 1MB Flash standard on Stripe *DA*402/*T*402 vs. 512K Flash on Axiohm Solus.

- Higher expandable flash memory on the *DA*402/*T*402 vs. Axiohm Solus.

- Compared to the durable dual wall plastic construction of the *DA*402/*T*402, the Axiohm Solus has a plastic housing that is less durable and more pliable. The Solus' printhead mechanism is particularly flexible which can negatively effect printhead quality.

- NO real time clock feature on Axiohm Solus vs. standard feature on Stripe *DA*402/*T*402.

(**NOTE:** Product data based on manufacturers' published spec sheets, which are subject to change without notice.)

B. *Zebra Stripe DA402/T402 versus DH Tech Barcode Blaster Advantage*

ZEBRA vs. DH Tech Barcode Blaster Advantage	Zebra Stripe *DA*402/*T*402	Barcode Blaster Advantage
PRINT FEATURES		
Direct thermal, Direct Thermal	DT /TT	DT/TT
Print Width, max.	4.09" (104mm)	4.10" (104mm)
Print Length, max. w/std RAM	22" (559mm)	22" (559mm)
Print Length, optional w/add'l RAM	22" (559mm)	22" (559mm)
Dots/Inch, std	203 (8 dots/mm)	203 (8 dots/mm)
Max Print Speed	2.5ips / 2.5ips (64mm / 64mm)	2–3ips (51-76mm)
Auto-Calibration	Standard	NO
Scalable Fonts Resident	Standard	YES
MEDIA FEATURES		
Label Width, max.	4.25" (108mm) / 4.65" (118mm)	4.25" (108mm)
min.	1.0" (25mm) / 1.12" (28mm)	2.0" (51mm)
Label Length, max. (Tear / Peel-Off)	22" (559mm)	22" (559mm)
min. (Tear)	1.0" (25mm)	0.25" (6.35mm)
Roll Size, O.D. & Mounting	5.0" (127mm)	4.7" (119mm)
Ribbon Length (for TT models ONLY)	3600" (91m)	Unknown
Sample Media / Ribbon	YES	NO
OPTIONS		
Tear-Off	Standard	Standard
Peel-Off	NO/STD	Standard
Non-Roman (Asian) Font s	YES /YES	NO
Rewind	NO/NO	NO
Keyboard Display Unit (KDU)	NO/NO	NO
Cutter	NO/YES	NO
Linerless	NO / NO	NO
Real Time Clock	YES / YES	NO
Additional MEM (up to)	8MB Flash	2MB or 4MB Flash
OTHER		
Standard RAM	1MB DRAM / 1MB Flash	512k DRAM / 1MB Flash
Processor / Buffer	32 bit	32 bit
Interface		
Serial	YES – STD	YES
Parallel	YES – STD	YES
Ethernet	YES – Option	YES – Option
Shell & Case Construction	Plastic	Plastic
Weight	3lbs (1.4 kg) / 4lbs (1.81 kg)	3.9lbs (1.77 kg) / 4.5lbs (2.04kg)
Size (H" x W" x L")	6.6" x 6.7" x 8.5" / 6.75" x 7.9" x 8.9"	6.1" x 6.8" x 9.4"
BASE UNIT LIST PRICE	**$645/ $765**	**$695 / $795**

Compared to DH Technology's Barcode Blaster and Blaster Advantage Series, the Zebra *DA*402/*T*402 offer more standard features at a highly competitive price point. Zebra's worldwide presence, broad product range and service capability further enhance and solidify our leadership standing in the printer market.

Advantages of the Zebra Stripe *DA*402/*T*402 vs. DH Tech Barcode Advantage

- Higher standard DRAM and Flash memory on Zebra *DA*402/*T*402 versus that of DH Tech Barcode Advantage.

- NO equivalent ZebraLink connectivity solution currently available on DH Tech Barcode Advantage.

- NO cutter feature on DH Tech Advantage vs. optional on Stripe *T*402.

- Higher upgradeable flash memory (up to 8MB) on Zebra Stripe *DA*402/*T*402 vs. that of DH Tech Advantage (up to 4MB).

- NO ethernet option on DH Tech Barcode Advantage vs. ethernet option available on Stripe *DA*402/*T*402.

(**NOTE:** Product data based on manufacturers' published spec sheets, which are subject to change without notice.)

C.   *Zebra Stripe DA402/T402 versus DH Tech Barcode Blaster*

ZEBRA vs. DH Tech Barcode Blaster	Zebra Stripe *DA*402/*T*402	Barcode Blaster
PRINT FEATURES		
Direct thermal, Direct Thermal	DT /TT	DT / TT
Print Width, max.	4.09" (104mm)	4.10" (104mm)
Print Length, max. w/std RAM	22" (559mm)	6" (152mm)
Print Length, optional w/add'l RAM	22" (559mm)	6" (152mm)
Dots/Inch, std	203 (8 dots/mm)	101 (4 dots/mm)/ 203 (8 dots/mm)
Max Print Speed	2.5ips / 2.5ips (64mm / 64mm)	5-6ips (127-152mm)
Auto-Calibration	Standard	NO
Scalable Fonts Resident	Standard	YES
MEDIA FEATURES		
Label Width, max.	4.25" (108mm) / 4.65" (118mm)	4.25" (108mm)
min.	1.0" (25mm) / 1.12" (28mm)	2.0" (51mm)
Label Length, max. (Tear / Peel-Off)	22" (559mm)	6" (152mm)
min. (Tear)	1.0" (25mm)	.25" (6.35mm)
Roll Size, O.D. & Mounting	5.0" (127mm)	4.7" (119mm)
Ribbon Length (for TT models ONLY)	3600" (91m)	3150" (80mm)
Sample Media / Ribbon	YES	NO
OPTIONS		
Tear-Off	Standard	Standard
Peel-Off	NO/STD	Optional
Non-Roman (Asian) Font s	YES /YES	NO
Rewind	NO/NO	NO
Keyboard Display Unit (KDU)	NO/NO	NO
Cutter	NO/YES	NO
Linerless	NO / NO	NO
Real Time Clock	YES/YES	YES - Option
Additional MEM (up to)	8MB Flash	Unknown
OTHER		
Standard RAM	1MB DRAM / 1MB Flash	128K DRAM
Processor / Buffer	32 bit	32 bit
Interface		
Serial	YES – STD	YES – STD
Parallel	YES – STD	YES – STD
Ethernet	YES – Option	NO
Shell & Case Construction	Plastic	Plastic
Weight	3lbs (1.4 kg) / 4lbs (1.81 kg)	4lbs (1.81 kg) / 4.5lbs (2.04 kg)
Size (H" x W" x L")	6.6" x 6.7" x 8.5" / 6.75" x 7.9" x 8.9"	6.2" x 6.8" x 9.4"
BASE UNIT LIST PRICE	**$645/ $765**	**$1095/$1195**

Advantages of the Zebra Stripe *DA*402/*T*402 vs. DH Tech Barcode Blaster

- Higher list prices on DH Tech Barcode Blaster for respective performance capability versus Zebra Stripe *DA*402/*T*402.

- NO equivalent ZebraLink connectivity solution currently available on DH Tech Barcode Blaster.

- NO auto-calibration feature on DH Tech Barcode Blaster vs. standard on Stripe *DA*402/*T*402.

- 128KB DRAM on DH Tech Barcode Blaster vs. 1MB DRAM/1MB Flash standard on Zebra Stripe *DA*402/*T*402.

- Max. print length 6" on DH Tech Barcode Blaster vs. 22" on Zebra Stripe *DA*402/*T*402.

- NO cutter option on DH Tech Barcode Blaster vs. standard on Zebra Stripe *T*402.

(**NOTE:** Product data based on manufacturers' published spec sheets, which are subject to change without notice.)

D.   *Zebra Stripe DA402/T402 versus Datamax Ovation! 2*

ZEBRA vs. Datamax *PRINT FEATURES*	Zebra Stripe *DA***402/*T*402**	Datamax Ovation! 2
Direct thermal, Direct Thermal	DT /TT	DT / TT
Print Width, max.	4.09" (104mm)	4.10" (104mm)
Print Length, max. w/std RAM	22" (559mm)	12" (305mm)
Print Length, optional w/add'l RAM	22" (559mm)	12" (305mm)
Dots/Inch, std	203 (8 dots/mm)	203 (8 dots/mm)
Max Print Speed	2.5ips / 2.5ips (64mm / 64mm)	2ips (51mm)
Auto-Calibration	Standard	NO
Scalable Fonts Resident	Standard	YES
MEDIA FEATURES		
Label Width, max.	4.25" (108mm) / 4.65" (118mm)	4.65" (118mm)
min.	1.0" (25mm) / 1.12" (28mm)	1.0" (25mm)
Label Length, max. (Tear / Peel-Off)	22" (559mm)	12" (305mm)
min. (Tear)	1.0" (25mm)	.5" (13mm)
Roll Size, O.D. & Mounting	5.0" (127mm)	4.0" (102mm)
Ribbon Length (for TT models ONLY)	3600" (91m)	361' (110m)
Sample Media / Ribbon	YES	NO
OPTIONS		
Tear-Off	Standard	Standard
Peel-Off	NO/STD	Optional
Non-Roman (Asian) Font License	YES /YES	NO
Rewind	NO/NO	NO
Keyboard Display Unit (KDU)	NO/NO	NO
Cutter	NO/YES	YES
Linerless	NO / NO	NO
Real Time Clock	YES / YES	NO
Additional MEM (up to)	8MB Flash	256K or 512K Flash Cartridge
OTHER		
Standard RAM	1MB DRAM / 1MB Flash	512k DRAM
Processor / Buffer	32 bit	32 bit
Interface		
Serial	YES – STD	YES
Parallel	YES – STD	YES
Ethernet	YES – Option	NO
Shell & Case Construction	Plastic	Plastic
Weight	3lbs (1.4 kg) / 4lbs (1.81 kg)	7bs (3.18kg)
Size (H" x W" x L")	6.6" x 6.7" x 8.5" / 6.75" x 7.9" x 8.9"	10.1" x 8.8" x 6.2"
BASE UNIT LIST PRICE	**$645/ $765**	**$795/$895**

The Datamax printer product line consists of several medium to high end products. For hundreds less, the Stripe *DA*402/*T*402 offer more features and flexibility than the Ovation! 2.

Advantages of the Zebra Stripe *DA402/T402* vs. Datamax Ovation! 2

- NO auto-calibration or ethernet option on the Datamax Ovation! 2 .vs. that of the Stripe *DA*402/*T*402.

- NO real time clock option on the Datamax Ovation! 2 .vs. that of the Stripe *DA*402/*T*402.

- NO equivalent ZebraLink connectivity solution currently available on Datamax Ovation.

- Higher standard memory and expandable memory options on Zebra Stripe *DA*402/*T*402 vs. that of Ovation! 2.

- Max. print length of 12" on Datamax Ovation! 2 vs. 22" on Zebra Stripe *DA*402/*T*402.

- Higher list price on Datamax Ovation! 2 compared to the Stripe *DA*402/*T*402's true economical performance value.

- Smaller media holder (4″O.D) on the Datamax Ovation! 2 versus (5″ O.D) on the Stripe *DA*402/*T*402 for longer uninterrupted print capability.

- Faster print speed on *DA/T*402.

(**NOTE:** Product data based on manufacturers' published spec sheets, which are subject to change without notice.)

E. *Zebra Stripe DA402/T402 versus Microcom Corporation 412*

ZEBRA vs. Microm *PRINT FEATURES*	Zebra S t r i p e *D A* **402**/*T***402**	Microcom Corp **412**
Direct thermal, Direct Thermal	DT /TT	DT / TT
Print Width, max.	4.09" (104mm)	4.10" (104mm)
Print Length, max. w/std RAM	22" (559mm)	Unknown
Print Length, optional w/add'l RAM	22" (559mm)	Unknown
Dots/Inch, std	203 (8 dots/mm)	203 (8 dots/mm)
Max Print Speed	2.5ips / 2.5ips (64mm / 64mm)	3ips (76mm)
Auto-Calibration	Standard	NO
Scalable Fonts Resident	Standard	NO
MEDIA FEATURES		
Label Width, max.	4.25" (108mm) / 4.65" (118mm)	4.4" (112mm)
min.	1.0" (25mm) / 1.12" (28mm)	Unknown
Label Length, max. (Tear / Peel-Off)	22" (559mm)	Unknown
min. (Tear)	1.0" (25mm)	Unknown
Roll Size, O.D. & Mounting	5.0" (127mm)	5.0" (127mm)
Ribbon Length (for TT models ONLY)	3600" (91m)	Unknown
Sample Media / Ribbon	YES	NO
OPTIONS		
Tear-Off	Standard	Standard
Peel-Off	NO/STD	Optional
Non-Roman (Asian) Font License	YES /YES	N/A
Rewind	NO/NO	NO
Keyboard Display Unit (KDU)	NO/NO	NO
Cutter	NO/YES	YES
Linerless	NO / NO	NO
Real Time Clock	YES/YES	NO
Additional MEM (up to)	8MB Flash	N/A
OTHER		
Standard RAM	1MB DRAM / 1MB Flash	512K DRAM
Processor / Buffer	32 bit	32 bit
Interface		
Serial	YES – STD	YES – STD
Parallel	YES – STD	YES – STD
Ethernet	YES – Option	NO
Shell & Case Construction	Plastic	Plastic
Weight	3lbs (1.4 kg) / 4lbs (1.81 kg)	7.5lbs (3.4 kg)
Size (H" x W" x L")	6.6" x 6.7" x 8.5" / 6.75" x 7.9" x 8.9"	6.0" x 8.75" x 11"
BASE UNIT LIST PRICE	**$645/ $765**	**$995**

The Stripe *DA*402/*T*402 are not only priced lower then the Microcom 412, they offer a wider range of flexible print options for the value.

Advantages of the Zebra Stripe *DA*402/*T*402 vs. Microcom Corp 412

- 1MB DRAM and 1MB Flash memory on Stripe *DA*402/*T*402 compared to limited 512K DRAM memory on Microcom 412.

- NO equivalent ZebraLink connectivity solution currently available on Microcom Corp 412.

- NO ethernet or auto-calibration capability on Microcom 412 versus standard on Stripe *DA*402/*T*402.

- NO cutter option on Microcom 412 versus that of Stripe *T*402.

- No scalable fonts on Microcom 412 versus that of Stripe *DA*402/*T*402.

(**NOTE:** Product data based on manufacturers' published spec sheets, which are subject to change without notice.)

F.   *Zebra Stripe DA402/T402 versus Sato CX200*

ZEBRA vs. Sato PRINT FEATURES	Zebra Stripe *D A* 402/*T*402	Sato CX200
Direct thermal, Direct Thermal	DT /TT	DT / TT
Print Width, max.	4.09" (104mm)	4.10" (104mm)
Print Length, max. w/std RAM	22" (559mm)	14" (559mm)
Print Length, optional w/add'l RAM	22" (559mm)	Unknown
Dots/Inch, std	203 (8 dots/mm)	203 (8 dots/mm)
Max Print Speed	2.5ips / 2.5ips (64mm / 64mm)	3ips (76mm)
Auto-Calibration	Standard	NO
Scalable Fonts Resident	Standard	NO
MEDIA FEATURES		
Label Width, max.	4.25" (108mm) / 4.65" (118mm)	4.65" (118mm)
min.	1.0" (25mm) / 1.12" (28mm)	2.0" (51mm)
Label Length, max. (Tear / Peel-Off)	22" (559mm)	14" (356mm)
min. (Tear)	1.0" (25mm)	2.0" (51mm)
Roll Size, O.D. & Mounting	5.0" (127mm)	5.0" (127mm)
Ribbon Length (for TT models ONLY)	3600" (91m)	5508" (217mm)
Sample Media / Ribbon	YES	YES
OPTIONS		
Tear-Off	Standard	Standard
Peel-Off	NO/STD	Optional
Non-Roman (Asian) Font s	YES /YES	YES
Rewind	NO/NO	NO
Keyboard Display Unit (KDU)	NO/NO	NO
Cutter	NO/YES	NO
Linerless	NO / NO	NO
Real Time Clock	YES/YES	NO
Additional MEM (up to)	8MB Flash	2MB or 4MB Flash
OTHER		
Standard RAM	1MB DRAM / 1MB Flash	512K DRAM / 512K Flash
Processor / Buffer	32 bit	32 bit
Interface		
Serial	YES – STD	YES – Std
Parallel	YES – STD	YES – Std
Ethernet	YES – Option	NO
Shell & Case Construction	Plastic	Plastic
Weight	3lbs (1.4 kg) / 4lbs (1.81 kg)	3lbs (1.4 kg) / 4lbs (1.81 kg)
Size (H" x W" x L")	6.6" x 6.7" x 8.5" / 6.75" x 7.9" x 8.9"	6.6" x 6.9" x 10"
BASE UNIT LIST PRICE	$645/ $765	$395/ $495

Compared to Sato's CX200, Zebra's Stripe *DA*402/*T*402 provide more performance value and option capabilities for the money.   The flexible print capabilities that the *DA*402/*T*402 yield make it well worth the initial added cost.

Advantages of the Zebra Stripe *DA*402/*T*402 vs. Sato CX200

- 1MB Flash memory available on Zebra Stripe *DA*402/*T*402 vs. 512K flash on Sato CX200.

- 1MB DRAM memory available on Zebra Stripe *DA*402/*T*402 vs. 512K DRAM on Sato CX200.

- Max print length of 22" on Stripe *DA*402/*T*402 vs. the CX 200's 14" capability.

- NO equivalent ZebraLink connectivity solution currently available on Sato CX200.

- NO auto-calibration feature on Sato CX 200 vs. standard on Stripe *DA*402/*T*402

- NO ethernet option on CX 200 vs. Stripe *DA*402/*T*402's flexible connectivity options.

- NO cutter option available on Sato CX200 versus that of the Stripe *T*402.

- More expandable flash memory (up to 8MB) on Stripe *DA*402/*T*402 vs. maximum 4MB on the Sato CX 400.

(**NOTE:** Product data based on manufacturers' published spec sheets, which are subject to change without notice.)

G. *Zebra Stripe DA402/T402 versus Intermec EasyCoder 91*

ZEBRA vs. UBI	Zebra Stripe *DA*402/*T*402	Intermec EasyCoder 91
PRINT FEATURES		
Direct thermal, Direct Thermal	DT /TT	DT / TT
Print Width, max.	4.09" (104mm)	4.10" (104mm)
Print Length, max. w/std RAM	22" (559mm)	5.7" (145mm)
Print Length, optional w/add'l RAM	22" (559mm)	23.9" (610mm)
Dots/Inch, std	203 (8 dots/mm)	203 (8 dots/mm)
Max Print Speed	2.5ips / 2.5ips (64mm / 64mm)	2ips (51mm)
Auto-Calibration	Standard	NO
Scalable Fonts Resident	Standard	NO
MEDIA FEATURES		
Label Width, max.	4.25" (108mm) / 4.65" (118mm)	4.65" (118mm)
min.	1.0" (25mm) / 1.12" (28mm)	1.0" (25mm)
Label Length, max. (Tear / Peel-Off)	22" (559mm)	23.9" (610mm)
min. (Tear)	1.0" (25mm)	.375" (9mm)
Roll Size, O.D. & Mounting	5.0" (127mm)	3.8" (97mm)
Ribbon Length (for TT models ONLY)	3600" (91m)	280' (85m)
Sample Media / Ribbon	YES	NO
OPTIONS		
Tear-Off	Standard	Standard
Peel-Off	NO/STD	Optional
Non-Roman (Asian) Font s	YES /YES	NO
Rewind	NO/NO	NO
Keyboard Display Unit (KDU)	NO/NO	NO
Cutter	NO/YES	NO
Linerless	NO / NO	NO
Real Time Clock	YES / YES	NO
Additional MEM(up to)	8MB Flash	512K DRAM
OTHER		
Standard RAM	1MB DRAM / 1MB Flash	128K
Processor / Buffer	32 bit	16 bit
Interface		
Serial	YES – STD	YES –STD
Parallel	YES – STD	YES – STD
Ethernet	YES – Option	NO
Shell & Case Construction	Plastic	Plastic
Weight	3lbs (1.4 kg) / 4lbs (1.81 kg)	3.42lbs (1.5 kg)
Size (H" x W" x L")	6.6" x 6.7" x 8.5" / 6.75" x 7.9" x 8.9"	5.5" x 8.35" x 10.1"
BASE UNIT LIST PRICE	**$645/ $765**	**$895**

The Intermec printer product line consists of various medium to high end DT and TT products. Here again, the performance capabilities of the *DA*402/*T*402 far outweigh that of the Easycoder, whereby no cost justification is required.

Advantages of the Zebra Stripe *DA*402/*T*402 vs. the Intermec EasyCoder 91

- 1MB Flash and 1MB DRAM memory available on Stripe *DA*402/*T*402 vs. 128K DRAM and NO flash option on EasyCoder 91.

- Max standard print length of 22" on Stripe *DA*402/*T*402 vs. 5.7" capability on the EasyCoder 91.

- NO equivalent ZebraLink connectivity solution currently available on Intermec EasyCoder 91.

- <u>NO</u> auto-calibration feature on UBI91 vs. standard on Stripe *DA*402/*T*402.

- <u>NO</u> ethernet on EasyCoder 91 vs. Stripe *DA*402/*T*402's flexible connectivity options.

- <u>NO</u> cutter option on EasyCoder 91vs. Stripe *T*402's cutter option.

- <u>NO</u> real time clock option on EasyCoder 91vs. Stripe *DA*/*T*402's RTC option.

- <u>NO</u> availability of non-Roman (Asian) fonts on the EasyCoder 91 vs. Zebra Stripe *DA*402/*T*402's non-Roman font capability.

- Expandable flash memory (up to 8MB) on Stripe *DA*402/*T*402's vs limited 512K DRAM expandable memory option on the EasyCoder 91.

- Smaller media capacity (3.8″O.D) on the EasyCoder 91 versus (5″ O.D) on the Stripe *DA*402/*T*402 for longer uninterrupted print capability.

- Faster print speed on *DA/T*402.

NOTE: Product data based on manufacturers' published spec sheets, which are subject to change without notice.)

IX.   PRINTER OVERVIEW

The following sections are designed to quickly familiarize the user with the *General Features, Operating Requirements*, and *Warranty Coverage* of the Stripe *DA*402*/T*402 thermal printers. For more detailed product information, consult the printer *User's Guide*.

A.   GENERAL FEATURES / UNIQUE CHARACTERISTICS

The *Stripe DA*402*/T*402 thermal printers are Zebra engineered products designed for general text or bar-code labeling applications requiring a low-volume, economical, compact desktop printer (under $650 and $800) for dedicated single-purpose use.

Some of the unique characteristics specific to the Zebra Stripe *DA*402*/T*402, include:

1.   Zebralink Real-Time Connectivity & Control Solution

ZebraLink is standard equipment on Stripe *DA/T*402 printers. ZebraLink networking accessories such as *Alert* and *Webview* let you control and monitor your printer remotely from *anywhere, anytime, anyplace,* - using common web browser interface tools. ZebraLink, *ZBI*, gives you the freedom to create stand-alone print applications (without a PC) using a scanner, keyboard or weight scale. ZBI further enables you to replace any brand of old barcode printer with the superior performance and reliability of Zebra printers.

2.   ZPL Programming Language

The Zebra Stripe *DA*402*/T*402 model printers are specifically designed to operate in ZPL II application environments. ZPL is a powerful ASCII text programming language that enables users to design a custom label format with any combination of text, barcode or graphic to be compatible with all PC's, mainframe and computer networks.   More importantly, ZPL provides a universal code and communication platform compatible with all Zebra brand printers, regardless of generation. So, as customers' applications change or grow, they can easily integrate additional Zebra printers into an application with the advent of ZPL.

3.   Durable, Compact & Lightweight Construction

The Stripe *DA*402*/T*402 printers are constructed of a highly durable, yet lightweight plastic with reinforced fibers that enable the printers to provide consistent print quality in many tough industrial environments.

Their compact construction and small footprint enable the Stripe *DA*402*/T*402 to maximize work capacity where space is limited. Weighing between 3 and 4 lbs (1.4 to 1.8kg), users can easily move the Stripe *DA*402*/T*402 desktop models from one workstation to another, placing the printer anywhere they need it.
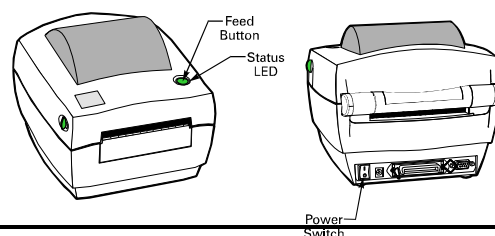
4. **Foolproof Design / Operation**

Color-coded, user-interface components with multi-purpose, single button feed key operation make user operation of the Stripe *DA*402*/T*402 printers highly intuitive and easy to operate, regardless of a user's level of experience or training. In addition, the printer's parallel *and* auto-synchronizing baud rate serial connection ports, auto-switching power supply and auto-calibration features make system configuration and printer set-up a breeze. The printer's can adapt to virtually any system requirement worldwide, and will automatically adjust to fit the size of label loaded.

5. **Advanced Print Technology / Increased 2D Symbologies**

The *Stripe DA*402*/T*402 printers utilize advanced print technology that promotes increased user flexibility. The printer's standard 1MB flash memory, for example, enables complex label formats, fonts and/or graphics to be downloaded quickly to the printer with virtually no print delay. More writeable memory allows for the storage of increased fonts and graphics, including international fonts with the Stripe's 4MB or 8MB expandable flash memory option. Flash memory can also be re-programmed without disassembling the printer by simply downloading a new label format or firmware upgrade from the computer via the serial or parallel port as needed.

In addition, the printer's increased availability of popular 2D symbologies, such as MicroPDF-417, Code 49, Maxicode, Codablock, Datamatrix, and QR code, further enhance the Stripe *DA*402*/T*402 printer's overall competitiveness from a printer specification standpoint as well as from an end-user versatility/ease-of-use standpoint. Increased symbologies allow more applications to be serviced by one printer.

6. **Easy Access to Paper Path / Ease of Loading & Maintenance**

Full access to the media roll and paper path make the Stripe *DA*402*/T*402 printers easier to use and facilitate printhead cleaning / maintenance for prolonged printhead life. The clam-shell design of the Stripe *DA*402*/T*402 opens upward a full 90 degrees for complete access to the printhead and media loading paper path from above or below. Similarly, the printer's printhead assembly pivots 90 degrees upward on the *DA*402 and 30 degrees upward on the *T*402 for full printhead access and easy cleaning.
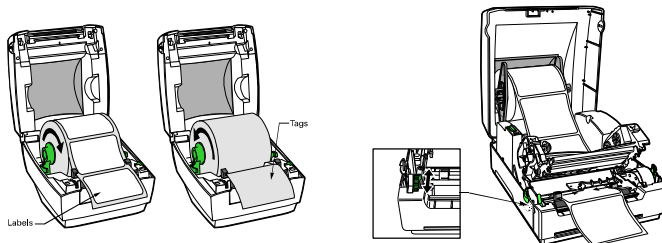
7. **See-Through Media Dust Cover on Stripe *DA*402*/T*402 Printers**

The *Stripe DA*402*/T*402 printers come equipped with a semi-transparent dust cover which allows users to easily view one's current media supply status, while simultaneously, protecting media from dust accumulation.

8. **Many Optional Features on Stripe *DA*402*/T*402 Printers**

The *Stripe DA*402*/T*402 printers offer a variety of features including *expandable Flash Memory, Real Time Clock, Rewind and Reflective Sensor -* to name a few. Such features enable more user flexibility as the printers can easily adapt to user's specific application needs. Competitive products, by comparison, tend to offer more limited print capabilities with fewer options. (Refer to the Competitive Analysis Tables on Pages 19-27 for further details).

B.   *OPERATING REQUIREMENTS*

1.   **FONT SELECTION**

Zebra *Stripe DA*402*/T*402 printers each offer an extensive range of font options for the user to choose from, including:

Character Fonts

The *Stripe DA*402*/T*402 printers contain standard bitmapped Zebra fonts including:
A, B, C, D, E (OCR-B), F, G, H (OCR-A), GS in addition to P,Q,R,S,T,U and V;
and 1 Smooth Font (CG Triumvirate Bold Condensed) scalable up to 10 x 10 point sizes.

Character Sets

The *Stripe DA*402*/T*402 printers contain full ASCII character sets including IBM Code Page 850 (International Characters and Graphics Symbols).

Custom Graphics/Logos & Non-Roman Fonts

The *Stripe DA*402*/T*402 printers support user defined fonts and graphics, including custom logos. A non-Roman font license option is also available with purchase of the 4MB or 8MB flash options which enables various, custom, true-type and non-Roman fonts, including *Kanji, Hangul* and *Chinese,* to be downloaded to the printer for specialized global applications.

For a detailed breakdown of font selections for the *Stripe DA*402*/T*402 printers, refer to the Product Specifications (beginning on Page 13) or the Stripe *DA*402*/T*402 printer *Price List.*

2.   LABEL DISPENSING

The *Stripe DA*402*/T*402 printers have the capability of dispensing printed labels in *tear-off* or *peel-off* modes. In the *tear-off* mode, the label remains attached to its stock backing and is presented outside the printer to be torn off against a "*tear-off*" bar by the user. In the *peel-off ** mode, the label is separated from its stock backing by a peel bar and is presented to the user for easy removal and application.

A cutter option is also available on the *T*402 to facilitate the release of labels by cutting them off the label roll after each individual label is printed. **_NOTE_***:* The cutter feature on the Stripe *T*402 is designed to work with adhesive label varieties and tag stock. However, when using adhesive labels, be sure that the cutter is positioned to cut along the see-through, inter-label gap - not through the adhesive label itself. Cuts performed through the label and adhesive can cause paper jams within the cutter mechanism due to the build-up of adhesive glue on the cutter actuator.
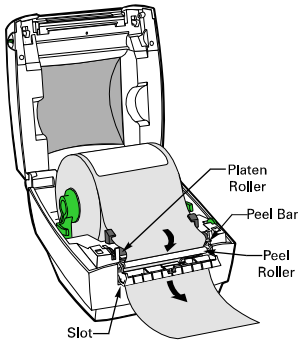
** **_NOTE_**:* The external rewind option available on the Stripe *DA*402/*T*402 model printers is not designed to work in conjunction with the peel mode to coil label backing material around a spindle. The external rewind option is strictly meant to coil printed label media (not liner) around a core for batch printing purposes when the labels are printed in advance and stored.

3.   PRINT SPECIFICATIONS / REGISTRATION REQUIREMENTS

Media Width:	1.0" (25mm) min. to 4.25" (108mm) on *DA*402 / 1.12" (28mm) min. to 4.65" (118mm) on *T*402
Inter-Label Gap (Distance between labels):	0.08" (2mm) to 0.16" (4mm) (0.118" 3mm Recommended)
First Dot Location:	0.148" (4mm) from outer of the media ±1mm
Vertical Registration Drift:	Not to exceed ± 0.0393" (1.0mm)
Horizontal Registration Drift:	Not to exceed ±0.0591" (1.5mm - within a given media roll – *T*402 ONLY)
Media Thickness	0.003" (0.08mm) to 0.007" (0.18mm); die-cut labels
Stripe *DA*402/*T*402 Label Roll Size:	5.0" (127mm) O.D. max. / 1.0" (25mm) I.D. min.
Tear-Off Bar:	Standard
Label Orientation:	Outside Wound Recommended

4.   **USER INTERFACE CONTROLS AND INDICATOR LIGHTS**

The Stripe *DA*402*/T*402 printers are equipped with an A/C ON/OFF switch, and a multi-purpose FEED Button for easy set-up and operation. Each printer contains a single, tactile feel FEED button located on the top, front side of the printer which enable users to control their print settings and quickly trouble-shoot for any print error conditions that may exist. The line drawings of the Zebra Stripe *DA*402*/T*402 printer models (below) depict the positions of the POWER and FEED buttons on each of the respective Stripe *DA*402*/T*402 models.

*DA*402 **Power & Feed Buttons**   *T*402 **Power & Feed Buttons**

Status
LED

Feed
Button
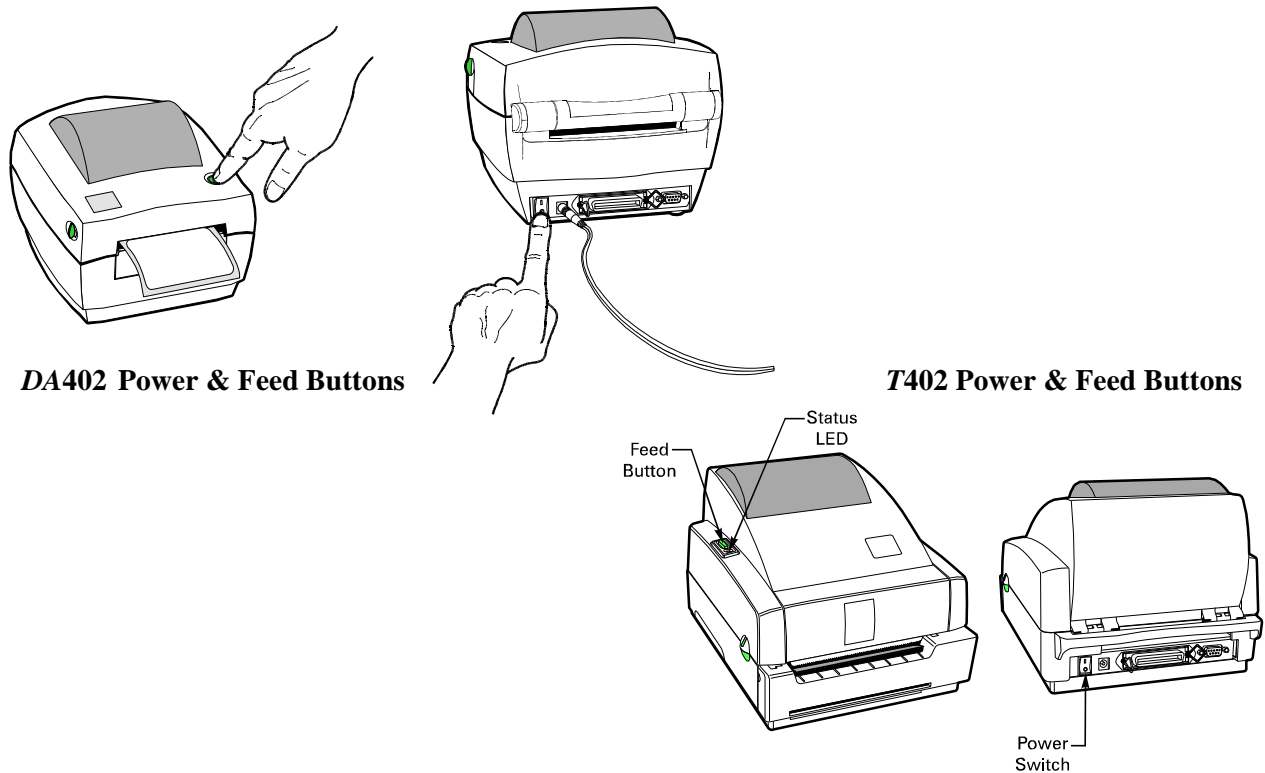
Power
Switch

POWER ON / OFF SWITCH
This switch is located on the backside of the *DA*402 and *T*402 printers for easy access. The printers new auto-switching power supply feature further enables the *DA*402*/T*402 printer to select between 110 or 230V operation, depending on the application requirement.

MULTI-PURPOSE FEED KEY BUTTON WITH LED
The Feed key button on the Stripe *DA*402 and *T*402 printer models is designed to perform multiple functions from label feed, printer pause mode and darkness setting adjustment to printer calibration. The feed button's flashing LED indicator (encircling the feed key button on the *DA*402 and located just underneath the feed key button on the *T*402) assists users in programming their printer and in trouble-shooting in the advent of printer problems. For instructions on how to perform printer calibration or darkness setting adjustment using the FEED key, consult the *DA*402/*T*402 User's Guide for details.

The following table depicts the various FEED Button modes and ERROR indicator sequences:

- **FEED BUTTON MODES**

POWER OFF MODE (COMMUNICATIONS DIAGNOSTICS MODE)
With the printer power off, press and hold the feed button while you turn on the power. The printer prints out a listing of its current configuration. After printing the label, the printer will automatically enter a diagnostic mode in which the printer prints out a literal representation of all data subsequently received. To exit the diagnostic mode and resume printing, turn off and then turn on the printer.
POWER ON MODES
With the printer power on and top cover closed, press and hold the feed button for several seconds. The green status LED will flash a number of times in sequence. The explanation below shows what happens when you release the key after the specific number of flashes.

FLASH SEQUENCE	ACTION
* (1 Flash)	A configuration label prints.
* (2 Flashes) **	The media sensor calibrates and a media sensor profile prints
* (3 Flashes) * * * * *	**To reset the communication parameters:** Press and release the feed button while the LED flashes. The serial communication parameters reset to 9600 baud, 8 bits per character, no parity, 1 stop bit, and XON/XOFF. **For auto-baud synchronization:** Send a ZPLII format to the printer while the LED flashes. When the printer and host are synchronized, the LED changes to a solid green. *NOTE: No labels will print during the auto-baud synchronization process.*
* (4 Flashes) * * * * * * * * *	Resets the factory defaults, auto calibrates, and saves settings into memory.
* (5 Flashes) * * * * * * * * * * * * * *	The print width calibrates. While the status LED alternately flashes green and yellow, a series of stacking rectangles print on the label. When the rectangle prints to the outer edges of the label, press and release the feed button. The label width and current communication parameters will be saved into memory.
* (6 Flashes) *	The print darkness calibrates. A series of nine samples print, starting with the lightest and ending with the darkest image. When the desired print darkness is achieved, press and release the feed button. The print darkness will be saved into memory.
If the feed button remains pressed after a 7-flash sequence, the printer will ignore the button when it is released.	

- **INDICATOR LIGHTS FOR TROUBLE-SHOOTING**

Indicator Light	Printer Condition
Off	Power is off or printer is no receiving power
On-Green	Power is on
Flashing Green	Receiving Data
Double flashing yellow to green	Paused
Flashing Red	Head Open
Flashing Red	Paper Out
Flashing Red	Ribbon Out
Flashing Red	Cutter error (jam or Cutter option is turned on and no cutter is present on printer.)
Flashing Yellow	Head over temperature (printer stops printing)
Flashing Yellow	Head under temperature (printer keeps printing)
Flashing Red to Green	Flash memory is not programmed (not detected, i.e. corrupt) or printer is ready to accept a new flash firmware.
On- Yellow	Data Error: i.e. Memory Shortage
On- Yellow	Printer failed internal diagnostics.

5. SENSORS

The Stripe *DA*402*/T*402 thermal printers both contain transmissive sensors. The *DA*402 also comes equipped with a reflective sensor, standard. A reflective and ribbon out sensor option is available separately on the *T*402. A description of the functionality of the various sensor types follows:

Transmissive / Reflective Media Sensors: *Transmissive sensors* recognize the see-through "gaps" or joints between labels as light is permitted to filter through these joints indicating the label's overall length. Similarly, the *reflective sensor* gauges label length via the black marks found on the media backing which reflect light back to the sensor from the label's joint. Both sensor types enable users to print on diverse label stocks including *continuous, notch, black mark, tag stock* or *perforated* and promote the printer's auto-calibration feature. During auto-calibration, the printer relies on such sensor readings to automatically adjust to varying label lengths promoting worry-free print capability on varying media (label) types.

Tear-Off / Peel-Off (Take Label) Sensors: Tear-Off/Peel-Off sensors enable the user to work at their own pace and preferred mode of operation during the labeling process. *Peel-Off /Take-Label* mode instructs the printer to remove the label from its backing and wait until the label is removed by the user before issuing a new label. *Tear-Off* mode, similarly, allows individual or groups of labels to be torn-off the printer's tear bar by pulling it down and away against the tear bar.

Paper / Ribbon Out Sensor (on *T*402 printer only) :   The paper/ribbon out sensor on the Stripe *T*402 printer immediately detects when ribbon or paper is exhausted before label data loss occurs. Users are warned exactly when to replace ribbon or paper reducing the likelihood of print interruptions.

6.   COMMUNICATION PARAMETERS

Stripe *DA*402*/T*402 printers offer two convenient ways to interface with a host: (1) serial port connection or (2) bi-directional parallel port connection.

The following table highlights the Stripe *DA*402*/T*402's configuration set-up for serial and parallel interface.

Printer Port:
RS-232 - (9 Pin) Serial Printer Port Pinout:

Pin #	Description
1	Not Used
2	RXD (receive data) input to printer
3	TXD (transmit data) output from printer
4	DTR (data terminal ready) output from printer
5	Chassis Ground
6	DSR (data set ready) input to printer
7	RTS (request to send) output from printer
8	Not Used
9	5V fused

Default Setting: 9600 Baud, 8 Data Bits, No Parity and 1 Stop Bit.
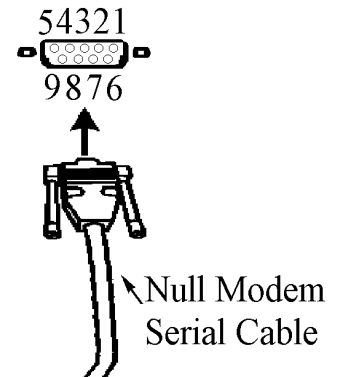
IEEE 1284 Nibble Mode (36 Pin) - Parallel Printer Port Pinout:

36 Pin #	Description
1	nStrobe/Host Clk
2-9	Data Bits 1-8
10	nAck/PtrClk
11	Busy/Per Busy
12	Perror/Ack Data Req
13	Select/Xflag
14	nAuto Fd/Host Busy
15	Not Used
16-17	Ground
18	+5 through a 1.8KΩ Resistor
19-30	Ground
31	NInit
32	nFault/nData Avail.
33-34	Not used
35	+5V through a.2.2Ω Resistor
33-34	Not used
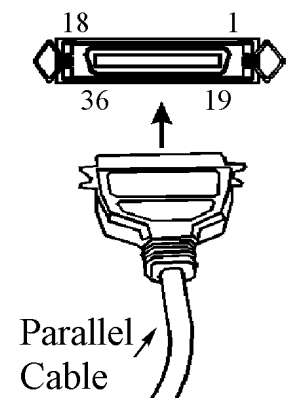
The 8-bit parallel data interface supports IEEE 1284 bi-directional parallel communications in "nibble mode". The parallel interface provides a means of communication that is typically faster than serial interface methods and is recommended for firmware upgrades.

7. PERIODIC MAINTENANCE

For optimum performance of the Stripe *DA*402*/T*402 thermal printers, Zebra recommends cleaning the printer on a regular basis using standard Zebra printer parts and cleaning supplies. Consult the *User's Guide* for specific details.

- **Cleaning:** The exterior is cleaned with a lint-free cloth and if necessary, a mild detergent solution or desktop cleaner. Interior components – including the *printhead, platen roller, media sensor, peel bar* and *media paths* – are cleaned with an alcohol-sealed, specially formulated solution swab (shown below – call Zebra for availability) or blown air to remove any dirt or dust particles that may have accumulated during use. As a general rule of thumb, Zebra recommends cleaning the printhead following media or ribbon replacement.

- **Lubrication:** All mechanical parts of the Stripe *DA*402*/T*402 printers are self-lubricating and do not require additional lubrication. Less time is required to maintain the printer, promoting increased user productivity.

- **Cutter:** To ensure optimum performance of the cutter mechanism on the Stripe *T*402, the printers should be kept cleaned of adhesive, paper dust and chaff at the end of each roll of media. However, never use solutions or solvents to clean the blade as blade lubrication and sharpness could be effected hindering the performance of the cutter mechanism.
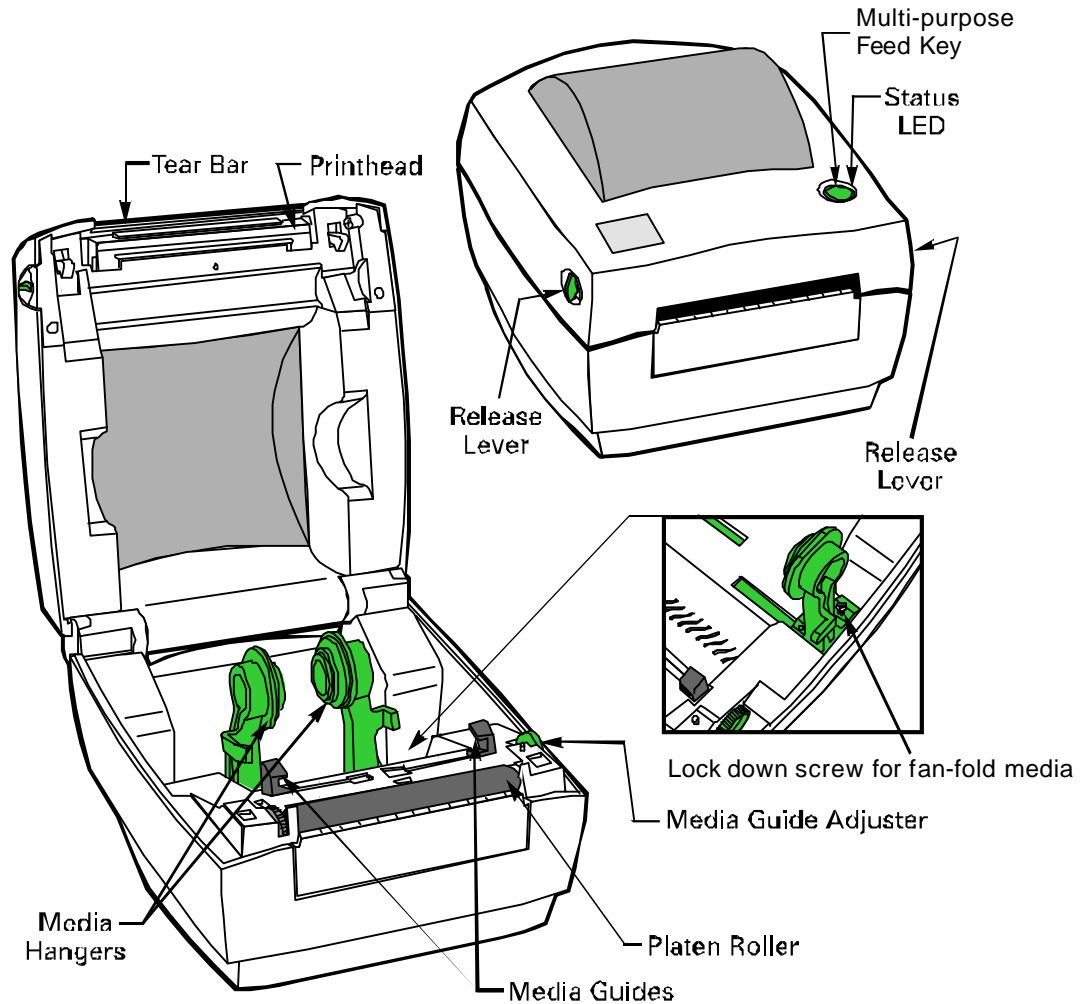
8. PACKAGING SPECIFICATIONS

Zebra is an ecologically conscious company that strives to manufacture quality and "environmentally-friendly" products. Our shipping materials are devoid of chemicals (i.e. bleach) and are composed of biodegradable paper / post consumable and biodegradable glues for easy recycling.

The packaged shipping weight of a Stripe *DA*402 is approx. 9 pounds (4.1 kg) while the shipping weight of the *T*402 is approx. 7.5 pounds (3.4 kg).
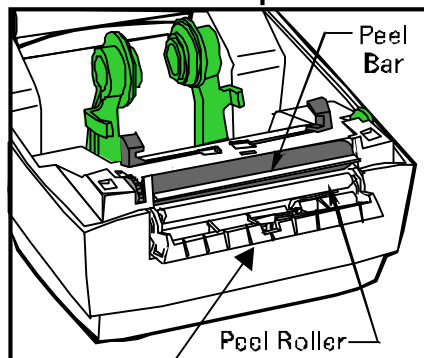
C.   PRINTER TOUR

The *Printer Overview Diagrams* illustrate the location of some of the *Stripe DA402/T402* feature capabilities:
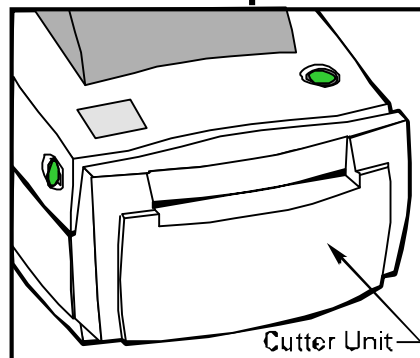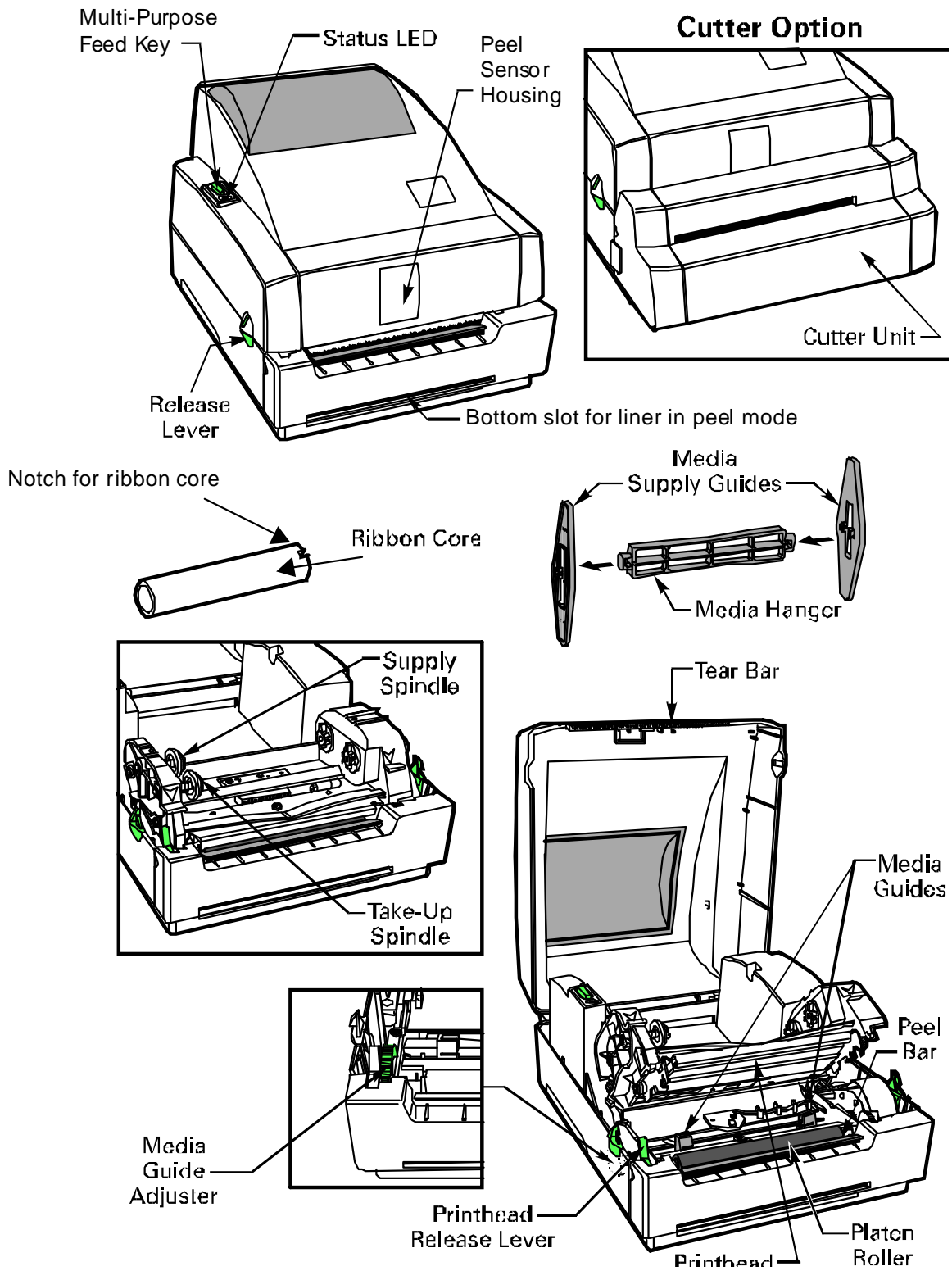
DA402

T402

Multi-Purpose Feed Key

Status LED

Peel Sensor Housing

Release Lever

Bottom slot for liner in peel mode

Cutter Option

Cutter Unit

Notch for ribbon core

Ribbon Core

Media Supply Guides

Media Hanger

Supply Spindle

Take-Up Spindle

Tear Bar

Media Guides

Peel Bar

Media Guide Adjuster

Printhead Release Lever

Printhead

Platen Roller

D.   *WARRANTY INFORMATION*

The Stripe *DA*402/*T*402 printers are covered under the following Zebra general warranties. For complete Warranty Policy Information, refer to the *User's Guide.*

1.   GENERAL COVERAGE

Zebra printers are warranted against defects in material or workmanship for one year from the date of purchase (with the exception of the printhead – see below). This warranty does not cover normal wear and tear and shall be null and void if the equipment is modified, improperly installed or used, damaged by accident or neglect, or in the event any parts are improperly installed or replaced by the user. Proof of purchase or product registration is required. If proof of purchase or product registration cannot be established, shipment date to the original buyer (reseller or distributor) will be used to establish the warranty period.

2.   PRINTHEAD COVERAGE

Zebra has one of the longest printhead warranties available, 90 days from the date of purchase. To promote optimum printer performance and reduce likelihood of wear, Zebra recommends using genuine Zebra Supplies.

3.   RETURNED GOODS UNDER WARRANTY

The standard Zebra policy is in effect for returning in-warranty product. A Zebra *Return Material Authorization (*RMA) must be obtained from our Customer Service prior to returning any product.

4.   SUPPLIES WARRANTY

Zebra ribbon and supplies are warranted to be free of defects in materials or workmanship for a period of either the stated material shelf life or 6 months from the date of shipment, whichever occurs first. Provided that the buyer has complied with Zebra Technologies guidelines for the storage, handling, and usage of Zebra labeling supplies in conjunction with our printers, the warranty coverage will be applicable. Zebra Technologies does not warrant the performance of Zebra labeling supplies on non-Zebra printers.

5.   REPLACEMENT PARTS AVAILABILITY

Printer replacement parts are available for purchase by users for convenient printer servicing. Zebra parts and service kits are tried and tested by our print quality specialists who test and monitor a printer's performance under varying working conditions, structuring service kits accordingly to promote reliable printer performance. Zebra recommends that all necessary printer repairs be performed by a qualified Zebra service provider. For kit information, refer to the parts price list for details.

X. GENUINE ZEBRA SUPPLIES

For maximum performance and reliability of your Stripe *DA*402*/T*402 printer, use of genuine Zebra Supplies is recommended. No other supplies brand is specifically engineered for Zebra printers to provide optimum print quality and reliable performance. Choose from a variety of labels, tags and ribbons to meet the specific demands of virtually any application criteria. Should our *Zip Ship* Supplies Program offerings (for delivery within one business day) not fully meet the requirements of your application, Zebra can create custom size labels in as little as 6 working days, tailor-made to your customer's specific requirements.

Choose from a variety of popular Zebra Zip Ship Supplies outside wound, thermal media (1.0" ID by 5.0" OD), including those listed below which are fully compatible with Stripe *DA*402*/T*402 printers. Refer to *Zebra's Zip Ship* Supplies price list for more details. Zebra can also accommodate alternative materials and sizes by creating custom products made to your specifications.

A. *ZEBRA THERMAL ZIP SHIP SUPPLIES FOR THE STRIPE DA402/T402 PRINTERS*

ZIP SHIP MEDIA	TYPE	DESCRIPTION	APPLICATION
Direct 2000™	Direct Thermal (*DA*402 ONLY)	A smooth, bright white thermal labelstock which produces high contrast, black visible light images	Indoor general purpose labeling and most packaging applications – including food and shipping labeling Excellent for cold temperature applications
Trans Matte 2000™	Thermal Transfer (*T*402 ONLY)	A bright white, ultra smooth coated paper with general purpose adhesive.	Ideal for labeling most packaging materials, cold temperature or indoor applications – including packaging and work-in-process labels.

The Stripe *DA*402*/T*402 printers are capable of sensing *transmissive* (inter-label gap) and *reflective (*black mark) media. Each Stripe *DA*402*/T*402 printer supports perforated, notched, continuous labelstock, fanfold, butt-cut or die-cut papers & synthetics. A variety of other label materials are available from Zebra for use in your Stripe *DA*402*/T*402 printer, including alternative materials / sizes *customized* on an as needed basis. Contact your Zebra reseller or Zebra Supplies Specialist for pricing availability and lead time information on your next Zebra Supplies order.

B.   *LABEL REQUIREMENTS*

1.   LABEL SPECIFICATIONS

Label Usage:	All compatible label widths available from Zebra
Label Width/Roll:	4.09" (104mm) on both *DA*402 and *T*402
Label Core Size:	1.0" (25mm) I.D. on *T*402 /
	1.0" (25mm) and 1.5" (38mm) on *DA*402
Label Roll Capacity:	5.0" (127mm) O.D. on both *DA*402 and *T*402
Label Length/Tear-Off:	0.5" (13mm) to 22" (559mm on *DA*404)
	0.38" (10mm) to 22" (559mm on *T*402)
Label Length	
Cutter/Peel-Off:	1.12" (28mm) to 22" (559mm) - on *T*402
Label Wind:	Outside wound recommended

2.   ZEBRA ZIP SHIP THERMAL MATERIALS FOR STRIPE *DA*402/*T*402 PRINTERS

The Zip Ship product offering consists of a variety of direct thermal and thermal transfer media varieties, all with 1.0" inner and 5.0", outer core roll diameters. The label sizes, below, are just some of our most popular material varieties available. Not all sizes depicted here are applicable across material lines, hence "N/A".

Size Width" x Length"	Roll I.D. x O.D.	Rolls/ Carton	Trans Matte 2000™ Part Number	Direct 2000™ Part Number
1.50" x 1.00" 38mm x 25mm	1.0" x 5.0"	8	**83258**	**N/A**
2.00" x 1.00" 51mm x 25mm	1.0" x 5.0"	8	**83259**	**56001**
2.25" x 0.50" 57mm x 13mm	1.0" x 5.0"	4	**N/A**	**56002**
2.25" x 1.25" mm x 32mm	1.0" x 5.0"	4	**83260**	**N/A**
2.25" x 2.50" 57mm x 64mm	1.0" x 5.0"	4	**N/A**	**56003**
2.25" x 4.00" 57mm x 102mm	1.0" x 5.0"	4	**N/A**	**56004**
3.25" x 5.50" 82mm x 140mm	1.0" x 5.0"	4	**83261**	**N/A**
4.00" x 1.00" mm x mm	1.0" x 5.0"	4	**83340**	**56005**
4.00" x 3.00" 102mm x 76mm	1.0" x 5.0"	4	**83262**	**56006**
4.00" x 4.00" 102mm x 102mm	1.0" x 5.0"	4	**83263**	**56007**
4.00" x 6.00" 102mm x 152mm	1.0" x 5.0"	4	**82868**	**56008**
4.00" x 6.50" 102mm x 165mm	1.0" x 5.0"	4	**83257**	**N/A**

For more information regarding genuine Zebra Supplies, contact your Zebra reseller or explore Zebra's web page at **www.zebra.com**.

RIBBON REQUIREMENTS

1. RIBBON SPECIFICATIONS

Ribbon Usage:	All compatible ribbon widths available from Zebra; It is suitable to use colored ribbon, as ribbon output is sensed through a rotation of the spindle.
Ribbon Length/Roll:	3600" (91m) max.
Ribbon Width/Roll:	1.3" (33mm) to 4.3" (110mm)
Ribbon Core Size:	0.5" (13mm) I.D.
Ribbon Roll Capacity:	1.39" (35mm) O.D.
Ribbon Wind:	Notched Core to Core (an additional ribbon core is shipped with the printer's starter ribbon kit).

2. ZEBRA ZIP SHIP RIBBONS AVAILABLE FOR *T*402 PRINTERS

Size W" x L"	Type	Rolls/ Case	Part Number
2.36" x 360' 64mm x 91M	Wax	6	**5319BK06409**
3.5" x 360' 84mm x 91M	Wax	6	**5319BK08409**
4.33" x 360' 110mm x 91M	Wax	6	**5319BK11009**

All ribbon on the table below are black ink, 91m long, 0.5" inner core diameter, 1.39" outer roll diameter.

Additional Ribbons (Boxed Quantities), include:

Ink	Width	Qty / Box	Part #
5319 (Wax)	2.52" (64mm)	6	**5319BK06409**
5319 (Wax)	3.31" (84mm)	6	**5319BK08409**
5319 (Wax)	4.33" (110mm)	6	**5319BK11009**
5586 (Premium Wax/Resin)	2.52" (64mm)	6	**5586BK06409**
5586 (Premium Wax/Resin)	3.31" (84mm)	6	**5586BK08409**
5586 (Premium Wax/Resin)	4.33" (110mm)	6	**5586BK11009**
5095 (Performance Resin)	2.52" (64mm)	6	**5095BK06409**
5095 (Performance Resin)	3.31" (84mm)	6	**5095BK08409**
5095 (Performance Resin)	4.33" (110mm)	6	**5095BK11009**

XI.   QUESTIONS AND ANSWERS

1.   **How will I know if my printer is ZebraLink enabled?**
All 2001 model Stripe desktop printers come equipped with the ZebraLink real-time connectivity and control solution standard. When in doubt, there are two ways to tell whether your Stripe model printer is equipped with ZebraLink: (1) look for the ZebraLink logo on the front panel of your printer; or (2) check the part number configuration, which now includes a "1" in the model number to indicate ZebraLink (ex – *T*402-1XX-XXXXX).

2.   **How is label calibration accomplished on the Stripe *DA*402/*T*402?**
The Stripe *DA*402*/T*402 is equipped with a standard auto-calibration feature that initiates automatically during start-up of the printer or after an error condition is corrected, utilizing approx. two labels to calibrate for efficient operation and less waste. A manual calibration procedure can also be performed, if required. Consult your User's Guide for more details on the specific manual calibration steps.

3.   **Can I download existing ZPLII label formats from other Zebra printers to the Stripe *DA*402/*T*402?**
<u>**YES**</u>. ZPL (Zebra Programming Language) ensures that pre-existing formats from other Zebra printers (especially the *A*300 & *T*300) can easily be printed by the Stripe *DA*402*/T*402. ZPLII also enables the darkness settings of the printer to be adjusted and set using the (~SD) command, should a user not utilize the six-flash sequence of the multi-purpose feed key to adjust the darkness setting.

4.   **Can the Stripe *DA*402/*T*402 print non-Roman fonts?**
<u>**YES.**</u> The Stripe *DA*402*/T*402's 4MB and 8MB flash memory options enable diverse non-Roman fonts to be downloaded, including but not limited to *Kanji, Hangul,* and *Chinese*.

5.   **How much memory is standard on a Stripe *DA*402/*T*402?**
Stripe Series *DA*402*/T*402 printers have 1MB standard Flash and 1MB DRAM available to the end-user in every unit. An additional 4MB & 8MB flash option is also available to handle more complex applications, such as those with international or global fonts/symbologies, like Chinese or Kanji.

6.   **Can you have both serial and parallel ports on a Stripe printer?**
<u>**YES.**</u> The Stripe *DA*402/*T*402 model printers include BOTH serial and parallel communications. Stripe *DA*402/*T*402 interface options include serial RS-232 and compliant bi-directional parallel, enabling the printer to detect which communications interface is being used.

7.   **What are the factory default serial communication parameter settings for the Stripe *DA*402/*T*402?**
The *Stripe DA*402*/T*402 printers have a built in auto-baud synchronizing serial port that enables the printer to automatically match its communication parameters to that of the host PC. The factory default serial communication setting is 9600 baud, 8 bit word length, no parity, and 1 stop bit (<u>**Helpful Tip**</u>: Simply remember 9600, 8, none, 1).

8.   **Can the Stripe Series *DA*402/*T*402 be connected to a network system?**
     <u>**YES.**</u> The Stripe Series *DA*402/*T*402 printers can be networked using ZebraNet Print Server II, an ethernet micro printer server option through the parallel port. For detailed product information on the ZebraNet Print Server II, consult the ZebraNet Product Guide P/N # 11895L.

9.   **Are the Stripe Series *DA*402/*T*402 printers Windows compatible?**
     <u>**YES.**</u> All Stripe printers include Windows drivers. This driver will allow the printer to be used in conjunction with popular Windows (NT, 3.1 or higher) applications, such as Word™, Excel™ or PowerPoint™. The Windows driver enables the user to design labels in their application of choice for print output directly to the printer. (<u>**NOTE**</u>: *The Windows drivers for the respective A300 and T300 printers can be used for the Stripe DA402/T402 printer models*). In addition to the driver, our Windows based label creation software (absolutely FREE), entitled BAR-ONE Lite, is also available with every unit and can be downloaded from our Internet homepage at www.zebra.com.

10.   **Does the Stripe *T*402 print both direct thermal and thermal transfer?**
     <u>**NO**</u>. The *T*402 printer is designed to excel at printing thermal transfer labels ONLY. Similarly, the *DA*402 is specifically optimized for direct thermal printing.

11.   **Can the *DA/T*402 print real time and date information?**
     <u>**YES**</u>. The *DA/T*402 printers are equipped with a real time clock option enabling time and date information to be printed on the label. This option must be specified at the time of order, but is extremely useful in applications where time and date information are required to indicated expiration or product freshness.