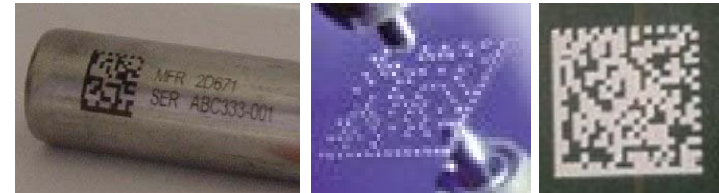




**DIRECT PRODUCT MARKING (DPM)
UID IMPLEMENTATION SPECIALIST**



*Your **SINGLE SOURCE SUPPLIER** for
Department of Defense [DoD], Mil-Std 130L,
ISO/IEC 15434 Compliant:*

- Industrial Ink Jet Printing Systems
- Integrated Mark – Read –Verify Parts Marking Systems
- Mil-Spec Permanent & Aerospace Mfg. Approved Inks
- Dot Peening & Portable Marking Systems
- Label, Tags and Label Generation Software
- 2D Code Verifiers, Fixed Mount & Hand-Held Readers
- Contract Marking Service
- Consulting & Engineering Services



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CORPORATE OFFICE

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WHY JETEC?

- ❑ **JETEC** is knowledgeable of and has integrated direct product marking products from various manufacturers;
- ❑ **JETEC** stays abreast of the constant changes to Mil-Std 130, ISO/IEC 15434 & various military marking permanent requirements;
- ❑ **JETEC** has been providing turnkey parts marking solutions for the aerospace, electronics, DoD and PCB industries since 1990;
- ❑ **JETEC** has been an active contributor of Data Matrix qualification samples with embedded unique identifiers since 1994;
- ❑ **JETEC** has the knowledge, hardware, software, turnkey systems and vendor partner relationships to effectively recommend and implement UID compliant direct product marking solutions;
- ❑ Using **JETEC**'s password protected Customer Specific Page @ www.jetec.com, your company can document your UID implementation strategies and eliminate potential re-inventing of UID process solutions throughout the various facilities within your organization;
- ❑ **JETEC** offers the most comprehensive Online Store for DPM system replacement parts, supplies, inks and fluids, thermal transfer printers and 2D code readers;
- ❑ **JETEC** certifies all UID compliant hardware shipped;

Look for the UID Compliant label on all JETEC offered Direct Product Marking Systems & 2D Verification Products

Denotes: supplier cage code, company name "compliant", date of manufacture (MM/YYYY)



JETEC CONTRACT MARKING SERVICE

JETEC offers a contract parts marking service to assist manufacturers, distributors and R&D operations in the timely marking or labeling of parts. Parts sent to our Irvine, California facility are normally marked and returned within 3-5 business days. Larger quantities may require additional processing time. Services include: Industrial ink jet printing, UV marking and curing, CO₂ or Nd:YAG laser marking, dot peening, labeling and packaging. Ink qualification, marking permanency testing and remarking services also available. For more information on our contract marking services contact sales@jetec.com.

MIL-STD 130L, UID COMPLIANCE ASSESSMENT SERVICE

Upgrading to Mil-Std 130L compliance from your present process varies from company to company. To assist companies in properly assessing their "AS-IS" situation and identifying a "TO-BE" approach, **JETEC** offers a Mil-Std 130L consulting service. The fee for this service is \$2,500.00 per day, plus travel expenses. Services provided include, but are not limited to: on-site training of personnel on Mil-Std 130L, UID requirements; assessing present marking processes and providing upgrade recommendations; demonstrating complaint part marking on customer specific parts; recommending parts marking and 2D code scanning equipment; assisting in development of a corporate-wide Mil-Std 130L implementation plan; and identifying potential cost improvements through Mil-Std-130L implementation. For more information, contact 130LSUPPORT@jetec.com.



2D CODE VERIFICATION

JETEC offers 2D code verification systems capable of reading, evaluating, grading and detecting quality problems associated with direct product marked 2D codes. Incorporating a 2D code verifier will aid in detecting mark quality problems such as: *improper or inconsistent mark dot/cell size, improper or inconsistent mark dot/cell location, improper overall mark geometry, mark or part surface damage or mark contrast problems.*

Webscan TruCheck™ 2D Code Verifier



The **TruCheck 401** DPM Verifier supports IAQG, ISO15415 and AIM verification standards for broad applicability. 2D codes are analyzed and graded against 16 parameters, with a resultant grade of A/B/C/D/F assigned to the code. The TruCheck 401 is ideal as a quality assurance tool. It is available with an *optional* remote scanning head.

HawkEye™ Direct Part Mark Verifier

The RVSI HawkEye DPM Verifier supports IAQG, ISO and AIM verification standards. In addition, the code is analyzed for: *cell size, cell center offset, cell size offset, cell modulation, border match, angle of distortion, symbol contrast, axial non-uniformity, print growth and unused error correction.*



VIS8000™ 2D Code Verification System

The JETEC VIS8000 2D Code Verification System has been designed for 2D code quality assurance. Available in either a desktop or laptop configuration, the



VIS8000 system integrates 2D code verification with an Access database to provide a quantitative approach towards statistical process control of the 2D direct product marking process. Systems are available with Cognex, Microscan, RVSI or Webscan 2D code readers.



For more information, contact a JETEC Sales Representative.

DEPARTMENT of DEFENSE (DoD) UID REQUIREMENT

Per the Office of the Under Secretary of Defense unique identification (UID) is a mandatory Department of Defense (DoD) requirement on all solicitations. Contracts shall require unique item identification, or a DoD recognized unique equivalent, for all property items delivered to the Government if: (1) the acquisition cost is \$5,000 or more, (2) it is either a serially managed, mission essential or controlled inventory piece of equipment or a repairable item, or a consumable item or material where permanent identification is required, (3) it is a component of a delivered item, if the program manager has determined that unique identification is required, or (4) a UID or a DoD recognized UID equivalent is available.

ISO/IEC 15418 and ISO 15434

The DoD has approved the use of ISO/IEC 15418 and ISO/IEC 15434 in its acquisitions. The DoD, along with its industry and international partners, clearly prefers use of ISO/IEC 15434 format codes 05 and 06, however Mil-Std-130 Draft “M” may require DoD Format “DD”.

Format 05 Sample (ECC 200 Size 22 x 22, Construct #2):

${}^R_s05 {}^G_s01000061414199999 {}^G_s211A0B9C3D6 {}^R_sE_T$



Format 06 Sample (ECC 200 Size 26 x 26, Construct #1):

${}^R_s06 {}^G_s25SUN077991289674A364458 {}^G_s12V077991289 {}^G_s1P4202435 {}^G_sS674A36458 {}^R_sE_T$



ISO/IEC 15415

ISO/IEC 15415, Information Technology, Automatic identification and data capture techniques – Bar code symbol print quality test specification – Two dimensional symbols

- Defines methods for evaluating and grading 2D code symbol quality
- Provides information on possible causes of deviation from optimum grades to assist in determining appropriate corrective action.



INDUSTRIAL INK JET PRINTERS

Verifiable 2D Code Capable Industrial Ink Jet Printers



Mil-Std 130L requires the DPM of verifiable 2D codes. Most industrial ink jet printers are capable of printing *readable* 2D codes but not all industrial ink jet printers are capable of printing *verifiable* 2D codes. Two important areas of concern when selecting an industrial ink jet printer for **UID compliance** applications are the printer's achievable verifiable quality grade level per ISO/IEC 15415 and the maximum number of vertical dots that can be printed in a single print stroke. **JETEC** recommends industrial ink jet printers with 32-dot tall or higher vertical print height capability. The higher the vertical dot capability of the printer, the more data that can be encoded within the desired Data Matrix ECC200 code. Using factors as print capability, repeatable dot placement, printer maintainability and ease of use, **JETEC** can specify the right printer for your application. Not sure if your existing printers are UID compliant capable, contract JETEC to evaluate and qualify your existing printers. Look for the UID Compliant label when purchasing industrial ink jet printers or printing systems from **JETEC**.



JETEC 2D CODE SCANNERS

JETEC can provide various 2D code scanners for use within 2D code printing applications. Both fixed mount and hand-held scanners may be required in support of your 2D code system implementation. **JETEC** specializes in product marking solutions. Look to **JETEC** to identify and provide the right 2D code scanners for your application. In most cases, **JETEC** will provide a solution incorporating one or several of the 2D scanners indicated below:

FIXED MOUNT or STATIONARY SCANNERS



Microscan Omnitron RVSI DVT Cognex

HAND HELD 2D CODE SCANNERS



MS-Quadrus



Hawk-Eye Series



MXi Reader



4410-HD



Imager 8000



DataMan 6500

CORPORATE QUANTITY DISCOUNTS AVAILABLE



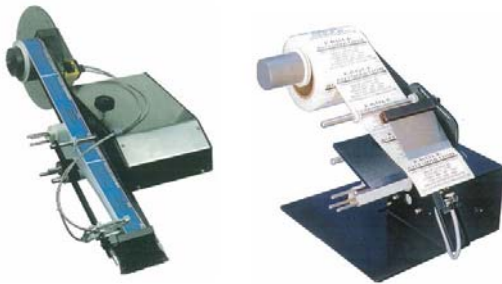
LABEL PRINTING SYSTEMS

From standalone thermal transfer printers, including on-demand RFID label printers, to automatic label applicators JETEC has a solution to meet your Mil-Std-130L requirements.

Thermal Transfer & RFID Printers



Automatic Label Dispensers



Automatic Tamp-On Label Applicators



Mobile Label Applicator System



TURNKEY INTEGRATED INK JET MARKING SYSTEMS

JETEC offers a complete line of standard, computer controlled, ink jet system configurations. Each system is available with **any** recommended UID compliant industrial ink jet printer. *The printer shown with each system is for illustration purposes only.*

PORTABLE MARKING SYSTEM:

FLEX-A-JET™ Marking System

- Mobile workstation configuration, designed for small, medium and large part marking
- Available in three (3) models: Model 3500 (3.0" single stroke); Model 5500 (5.0" single stroke); and Model 8400 (4" x 3" mark envelope)
- Includes hand-held, portable marking head, for remote large part marking
- Features JETEC's **IMS™** Application Software

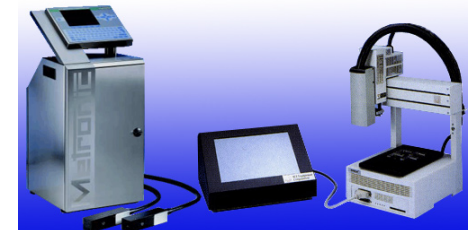


Actual system configuration may vary depending on ink jet printer provided.

TABLE TOP MARKING SYSTEMS:

ORION Low-Cost Marking System

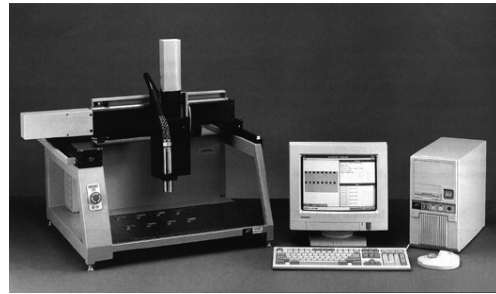
- Ideal for UID tag and small parts marking
- 6.0" x 6.0" work envelope (larger work envelopes available upon request)
- Accommodates multi-part or fixture marking
- *Optional* dual print head
- Features JETEC's **IMS5000™** Application Software



MIL-STD 130L ON-DEMAND THERMAL TRANSFER 2D CODE PRINTING SYSTEMS

LMS™ SERIES SYSTEM

- ❑ Large 12.0" x 10.0" work envelope
- ❑ Standard automated X/YZ motion assemblies
- ❑ Accepts JEDEC trays, Auer boats and most multi-cavity fixtures
- ❑ *Optional* 90-degree theta assembly
- ❑ *Optional* dual print head configuration
- ❑ *Optional* integrated bar code or 2D code verifier
- ❑ Features JETEC's **IMS5000** Application Software



LMS-130™ INTEGRATED MARKING STATION

- ❑ Includes standard **JETEC** LMS System
- ❑ Features Mark-Read-Verify capabilities
- ❑ Features integrated safety light curtain enclosure
- ❑ Integrated vision and lighting hardware
- ❑ Ideal for most electronic applications
- ❑ Available with single or dual ink jet printers
- ❑ Features JETEC's **IMS5000** Application Software
- ❑ Shipped Mil-Std-130 UID Compliant Ready



JETEC offers on-demand thermal transfer label printing systems for those customers desiring to print 2D code labels *as needed* in support of their production requirements.

A simple system comprised of a Zebra 105SL thermal transfer printer and JETEC recommended NiceLabel, an advanced label generation software, is identified below. JETEC offers a wide range of thermal transfer printers from such manufacturers as: *Zebra, Datamax, Printronix, etc.*

P/N 10500-3001-3000 Printer, Zebra 105SL, All-Metal Construction, 300 DPI, Thermal Transfer Label Printer¹

List Price: \$2,995.00 ea.



P/N 10007589 NiceLabel Pro, Professional Labeling Software w/Printer Drivers, UID Label Formats, Installed

List Price: \$495.00



P/N 10007590 Hand-Held 2D Code Scanner, MS-Quadrus

List Price: \$1,895.00



¹ Shipped with P/N 18925 Polypro 1000, 2.00" 1.25" labels, 1720 labels per roll, 8 rolls per case. For alternate label sizes please consult the factory directly.



MIL-STD 130L PREPRINTED LABELS / TAGS / RFID LABELS

JETEC offers a wide selection of preprinted Mil-Std-130L compliant, UID labels and metal tags. Two popular standard labels are:



P/N 10007172

Label, 4.0" x 2.0", Poly, White, AF POMX Part Marking Label w/Perforation, Pre-printed



P/N 10007173

LBL, 4.0" x 2.0", Poly, Yellow, LMU (Line Replaceable Unit) Label w/Perforation, Pre-Printed

CALL FOR ADDITIONAL LABEL REQUIREMENTS

RFID LABELS

JETEC offers RFID Smart Label stock in various sizes for most RFID thermal transfer printers. Choose from Class 0, Class 0+ or Class 1 RFID labels and tags. Look to **JETEC** to assist in upgrading current label generation process to a RFID compliant process for exterior shipping labels and interior unit container labeling. For more information on our RFID label stock visit our Online Store at www.jetec.com or contact the factory directly.



OTHER INTEGRATED SYSTEM CONFIGURATIONS:

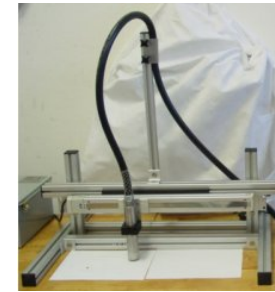
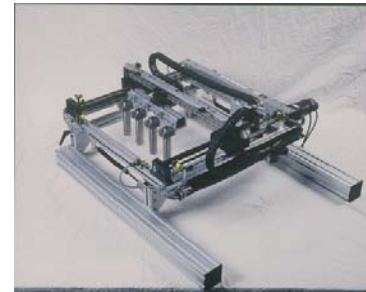
CMS SERIES™ Conveyor Marking System

- ❑ Ideal inline marking of small parts marking
- ❑ Adaptable for top, side or bottom marking
- ❑ Accepts multiple ink jet print heads
- ❑ Features JETEC's **IMS2701** Application Software
- ❑ *Optional* corona pretreatment & UV curing tunnel



Shown with UV Curing Tunnel

TMS SERIES™ Traversing Marking System



- ❑ Available in single or multi-axis system configurations
- ❑ Accommodates multiple ink jet print heads
- ❑ Ideal for mounting over conveyor or existing automated equipment
- ❑ Single axis configuration ideal for low volume, manual operations
- ❑ Ideal for pipe or flat stock marking
- ❑ Features JETEC's **IMS2701** Application Software



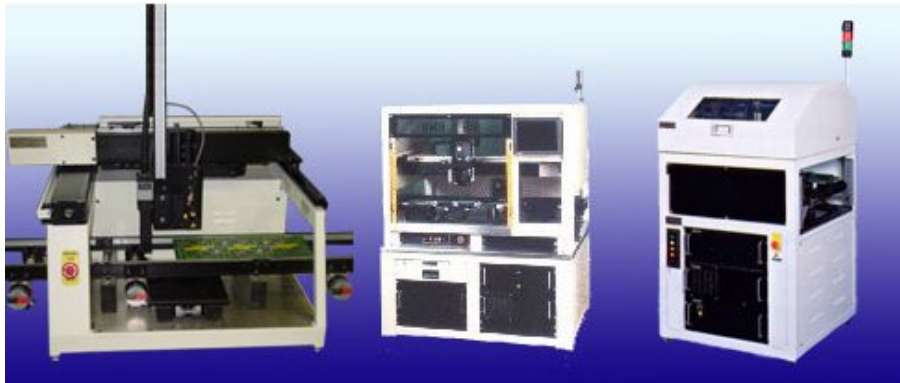
WMS SERIES™ WIRE MARKING SYSTEM

- ❑ Capable of small wire printer, 0.035" text height
- ❑ Air-dry and UV curable wire marking inks available
- ❑ Manual and semi-automatic system configurations available
- ❑ Features JETEC's **IMS2701** Application Software



PCB ↔ **JEDEC TRAY** ↔ **AUER BOAT**
AUTOMATIC INK JET SYSTEMS

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Choose from tabletop systems to complete turnkey, automated system configurations. All systems feature SMEMA compliant, integrated edge belt conveyors. Key system features include:

- ❑ JETEC's **IMS5000** Application Software
- ❑ Integrated UID mark and verification hardware
- ❑ Fast board-to-board cycle times



LASER MARKING SYSTEMS

Customers requiring permanent laser marking can select from CO₂, Nd:YAG or Nd:YVO₄ standalone or integrated laser marking systems from **JETEC**. Our laser marking systems can mark ABS, lexan, titanium, gold or nickel plated electronic surfaces, bare and anodized aluminums, most metals, stainless steels, and more. ...



JETEC provides turnkey, computer-controlled laser marking systems integrated with laser markers from such companies as: *CAB Technologies, Unitek Miyachi, GSI Lumonics, Synrad, Quantronix and Rofin-Sinair*, to name a few. Don't know what laser marker or system configuration is best suitable for your application? Look to **JETEC** to recommend the right solution for your application. Laser marking systems are offered with 10-150 Watt CO₂ or 3-120 Watt Nd:YAG laser engines or the new, 532 nm green laser.

Our **Quantum Series™ Laser Marking Systems** feature Class 1 safety enclosures, integrated laser and *optional* industrial ink jet technology combined to provide dual ink jet and laser marking capabilities. Mil-Std-130L compliant marking is a standard feature on all Quantum Series systems.



From standalone laser markers to full SMEMA compatible PCB laser marking and 2D code verification systems; JETEC has a Quantum configuration suitable for most applications.



JETEC FLUIDS

JETEC offers OEM and low-cost secondary fluids for most industrial ink jet printers (*i.e.*, Domino, Videojet and Imaje) as well as Mil-Spec permanent and customer specific fluids.

Specifically, **JETEC** can provide:

- ❖ Military Marking Permanent & NASA Approved Inks (*Mil-Std 883, Mil-Std 202, etc.*)
- ❖ Customer Approved Inks (*Boeing, Sikorsky, Lockheed, Pratt & Whitney, Bell Helicopter, Rolls Royce, Airbus, etc.*)
- ❖ Alcohol Resistant, Air Dry, White & Black Inks
- ❖ Low Outgassing Inks (*ideal for Space Flight Hardware*)
- ❖ High Temperature Resistant Inks
- ❖ UV Invisible and Covert Marking Inks
- ❖ Industry Specific Inks (*Aerospace, Electronics, PCB and Wire & Cable*)

Can't find the right ink for your application? Seeking to purchase all ink jet fluids from a single source? Need to work with an inkjet supplier to perform Mil-Std 130L UID life testing? Want to know what inks have been pre-approved for use by your customer?

If the answer to any of these questions is **YES**, then look to **JETEC**. Our partnership relationship with various ink jet ink manufacturers allows us to offer a wide range of inks and fluids at competitive pricing. We can help to identify and qualify the right ink for your marking process. Let the Team at **JETEC** help to improve your just-in-time shipment of inkjet inks and fluids while minimizing your fluid costs.



JETEC SOFTWARE

Our **IMS™** Marking Application Software controls all **JETEC** marking systems. IMS extends the capabilities of industrial ink jet printers and laser markers by providing enhanced capabilities to print ANSI grade “C” or better linear bar codes, standard Windows fonts and UID compliant, Data Matrix ECC200 2D Codes.

The two (2) most common IMS Software packages are identified below:

IMS2701™ Fixed Mount Device Interface Software

IMS2701 is a Windows based application software, running on a standard PC, which removes operator dependency for the set-up of marking devices. Set-up and control of specific part marking files and device parameters are performed remotely from one central computer. IMS2701 can be installed on your network for control of unlimited marking devices.



Users of IMS2701 are capable of controlling numerous ink jet printers, 2D code readers, bar code printers and other Mark - Read devices from a single software application. IMS2701 supports most industrial ink jet printers (*Videojet, Domino, Imaje, etc.*); laser markers, bar code readers (*Microscan, AccuSort, etc.*) and 2D code scanners (*RVSI CiMatrix, Microscan, DVT, and Cognex*).

IMS2701 is Mil-Std 130, UID compliant ready. Users can easily select from Format 05, Format 06 or Format “DD” to construct Data Matrix ECC 200 2D Codes. IMS2701 supports 5-time verification averaging with most industrial 2D code verifiers.



IMS5000™ Integrated Marking Application Software



IMS5000 is JETEC’s newest multi-axis integrated marking application software, recommended for Windows 2000 or XP operating environments. It supports X/Y/Z and theta based motion assemblies, industrial bar code or 2D code scanners and verifiers, SMEMA conveyors, laser markers and industrial ink jet printers.

READ-MARK-VERIFY-REPORT is a standard feature.

READ: Read bar code on production traveler, automatically select part marking program or read bar code and obtain marking information from host computer.

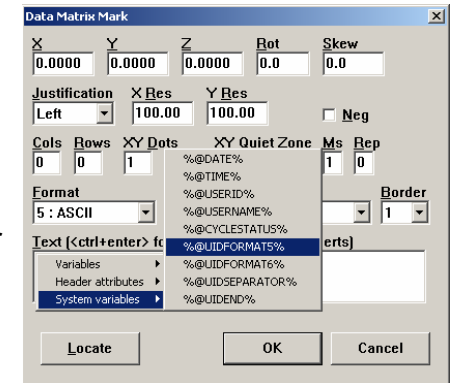
MARK: Mark part using part marking program parameters. Manually input variable information or automatically download from host computer.

VERIFY: Inspect quality of mark or readability and match code of bar code/2D code. Automatically perform 5-time read and averaging of Mil-Std 130 UID data matrix codes.

REPORT: Send mark history information up to host computer.

IMS5000 is **UID Compliant** Ready, providing user selectable UID variables for Formats 05, 06 and “DD”.

IMS5000 supports multi-cavity part fixtures (*JEDEC trays, Auer Boats, custom tooling, etc.*) whereby multiple parts can be marked and serialized during a single mark cycle.



A mark preview window has been provided to allow operators the capability to visually see the mark information prior to printing. Like IMS2701, IMS5000 supports interfacing with a wide range of devices from various manufacturers.

