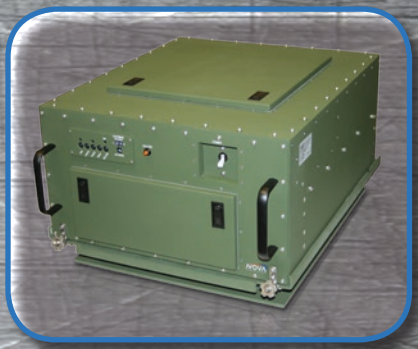
NOVA
INTEGRATION SOLUTIONS

RUGGED & MIL-SPEC PRINTERS

RUGGED COLOR LASER

MIL-SPEC
WIDE FORMAT



SHOCK ISOLATED
COLOR INKJET

WE INVITE YOU TO LEARN MORE ABOUT OUR ROBUST FAMILY OF RUGGED AND MIL-SPEC PRINTERS.

ABOUT US

NOVA Integration Solutions (NIS) is an innovative engineering-based "Advanced Packaging Supplier" specializing in the design, manufacture and testing of electronic enclosures. These enclosures support complex mission critical embedded computers and often contain sophisticated electronic devices to include our family of highly-specialized rugged and MIL-grade printers. A focus is placed on standard products to include the use of reference designs.

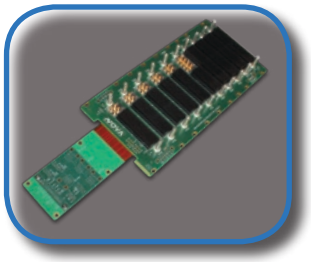
These enclosure products support a wide variety of convection and conduction cooled computing platforms to include VME/VME64x, cPCI, VPX, VXS, PC104 and PICMG passive backplane configurations. ATX and server-class motherboards are also supported to include a variety of Small Form Factor (SFF) enclosures. They are ideally used in military shelters, ground mobile vehicles (Line Replacement Units - LRUs) and on aircraft (Air Transport Racks - ATRs) to include servers on maritime ships.

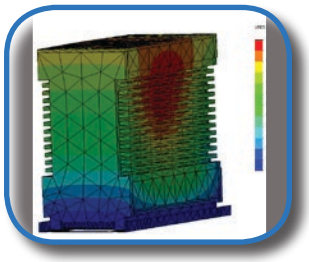
The products developed by NIS provide high reliability and must operate in harsh environments. They are subjected to extreme conditions such as shock/vibration, altitude, wide temperature ranges, EMI/RFI, HEMP, nuclear/chemical survivability, salt, fog, humidity, water, sand/dust, and explosive atmosphere. Whether customers need prototypes or a full production run, NIS's staff of electrical, mechanical, and production engineers can quickly and cost-effectively produce a turn-key custom solution.

ENGINEERING BASED SMALL BUSINESS

In-house expertise and the extensive use of analysis tools provide critical proof-of-concept models that are available to the customer prior to assembly and integration. We design for manufacturing with the objective to minimize Size, Weight and Power (SWaP). Mitigating risk is the key to a successful program.

NIS's broad range of capabilities include backplane, power supply and enclosure design services in support of MIL-SPEC manufacturing, system integration, functional testing and environmental certification. To ensure success, we function in a cooperative manner with our Customers and become a strategic resource on new product designs. We employ Program Managers who provide a single point of contact before, during and after their product is delivered. The complex products produced by NIS and our relationship with our Customers are the heart of our company.





ADAPTIVE CHANGES AND CUSTOMIZATION

Over the years NIS has developed a large variety of product options. The products are designed to accommodate changes of all kinds such as color, connector locations and mounting options. They can be routinely implemented and are tracked by customer part number. When necessary, significant changes can be made to our reference designs to include the use of specialized devices.

QUALIFICATION TESTING AND CERTIFICATION

Our products are highly rugged and are considered MIL-grade devices. In some cases the product has either been tested to military specifications by NIS or by our customer. Where test data is available, the printer will be certified to that standard. In other cases, the product is a "designed-to-meet" device and certified by similarity. Please see our data sheets for details.

PRINTER PRODUCT FAMILY

Our standard product family of MIL-grade and industrial inkjet and laser printers are designed and manufactured at NIS. They are used in military applications such as ground mobile vehicles, portable shelters or various aircraft and are also used in rugged commercial and industrial applications such as construction sites, mines, paper mills and on first responder emergency vehicles. These applications often must overcome challenging environmental conditions such as freezing temperatures, sand/dust, vibration/shock, high-altitudes and unusual power input sources.

In collaboration with our parent company and power division, Technology Dynamics, NIS provides specialized power input filters, circuit breakers, and a variety of power input sources to include 110VAC and 220VAC, aircraft power at 47-440 Hz, as well as VDC power inputs. Industrial and MIL circular connectors of all types are offered. Equally important is the operator's panel which must be robust and consider human factors such as the rough touch of a gloved hand.

Easy access to the printer is provided through "EMI tight" hinged-doors to facilitate paper handling, maintenance, ink/toner cartridge changes and prints with all doors closed. All fasteners and hinges are captive so there is not a concern for misplaced parts. Standard mounting configurations include tabletop, rackmount and the use of external shock trays.

The printers contain COTS-based print engines supplied by HP or Brother. The print engines are subjected to a proprietary ruggedization process including engineering changes necessary to survive harsh environments. The ruggedized print engine is integrated into the enclosure which uses common hardware facilitating print engine changes for future development.

Special attention is placed on the power cord and the data cables (USB and Ethernet). The printers use MS3472 series connectors for power and Amphenol RJField and USBField connectors for ethernet and USB as a standard. The mating power cord and cables are considered optional due to site specific installation requirements. NIS offers a variety of power cords and data cables in an effort to accommodate most installations and can supply any site-specific power cord or data cables that may be needed.

	MODEL 1101	MODEL 1151	MODEL 1250	MODEL 1301	MODEL 1351	MODEL 1401	MODEL 1500
							
Print Engine	Inkjet, Color	Inkjet, Color	Inkjet, Color	Laser, B&W	Laser, B&W	Laser, Color	Inkjet, Color or Laser, B&W
Paper Size (up to)	Letter / A4	Letter / A4	Tabloid / A3	Letter / A4	Letter / A4	Letter / A4	Letter / A4
Print Speed (up to)	18 ppm	18 ppm	33 ppm	32 ppm	32 ppm	23 ppm	36 or 30 ppm
Mounting Options	Tabletop	Tabletop Shock Tray	Tabletop Shock Tray	Tabletop Rackmount	Tabletop Rackmount Shock Tray	Tabletop Rackmount Shock Tray	Tabletop Rackmount Shock Tray
Power Input	110-220VAC 18-36VDC	110-220VAC 110VAC / 47-440Hz 18-36VDC	110-220VAC 110VAC / 47-440Hz 18-36VDC	110VAC / 60Hz 220VAC / 50Hz 18-32VDC (w/ inverter)	110VAC / 60Hz 220VAC / 50Hz 18-32VDC (w/ inverter)	110VAC / 60Hz 220VAC / 50Hz 18-32VDC (w/ inverter)	110-220VAC (inkjet) 110VAC / 60Hz (laser) 220VAC / 50Hz (laser) 18-32VDC (w/ inverter)
Power Draw (Max)	25W	25W	30W	468W	468W	660W	50W or 480W
Dimensions (H x W x D)	8" x 19.2" x 24.3"	8.8" x 19.2" x 24.3"	10.46" x 24.04" x 23.6"	10.8" x 17.5" x 22.6"	10.8" x 17.5" x 22.6"	13.78" x 17.16" x 23.9"	8.6" x 17.4" x 21.5"
Weight	36 lbs	40 lbs	48 lbs	38 lbs	40 lbs	65 lbs	24 - 48 lbs
Temperature (op.)	5°C to +50°C	0°C to +50°C	0°C to +50°C	5°C to +50°C	5°C to +50°C	0°C to +40°C	5°C to +40°C
Heater (optional)	N/A	-40°C	-40°C	N/A	-40°C	-20°C	-10°C
Shock*	Good	Best	Best	Better	Best	Better	Fair
Vibration*	Good	Best	Best	Better	Best	Better	None
EMI/EMC*	Better	Best	Best	Better	Best	Better	Good
I/O	USB / Ethernet	USB / Ethernet	USB / Ethernet	USB / Ethernet	USB / Ethernet	USB / Ethernet	USB / Ethernet WiFi (optional)
Notes	*See data sheets for more detailed information.		Default paint color for all printers is black unless otherwise requested at no charge.				Model 1500 available in additional sizes.

MODEL 1101

Rugged / Low Cost Full Color Inkjet Printer

- **Ideal for rugged applications requiring a compact, lightweight and low power consumption printer**
- **1200 x 600 dpi optimized photo-quality color printing**
- **Up to 18ppm black / 10ppm color (ISO)**
- **Automatic Duplex Printing**
- **Ethernet and USB interfaces standard**
- **Very low power consumption (<25W)**
- **MIL-Grade and Designed-to-meet:**
  MIL-STD-810G Shock
  MIL-STD-810G Vibration
  MIL-STD-461E EMC/EMI
- **Tabletop mounting configuration**
- **Optional "short" model for space challenged applications**
- **Standard 110/220 VAC or 18-32 VDC power input**
- **256MB installed memory**

Environmental Characteristics

Temperature, operating	5°C to +50°C
Temperature, non-operating	-20°C to +70°C
Humidity	10% to 95% non-condensing
Altitude, operating	-1,500 ft. to 15,000 ft.
Altitude, non-operating	-1,500 ft. to 40,000 ft.
Vibration, operating	Designed to meet MIL-STD-810G, Method 514.6, Proc I
Vibration, non-operating	Designed to meet MIL-STD-810G, Method 514.6, Proc I, Secured Cargo, Basic Transportation
Shock, operating	Designed to meet MIL-STD-810G, Method 516.6, Proc I
Shock, non-operating (Bench handling)	Designed to meet MIL-STD-810G, Method 516.6, Proc V & VI
Transportation	MIL-STD-810F, Method 516.5, Procedure IV, Transit Drop
Inclination	0° to 30° in any axis
EMI/EMC	Designed to meet MIL-STD-461E
ESD	MIL-STD-1686A
Sand and Dust	Highly resilient

Physical Characteristics

Dimensions	8.8" H x 19.21" W x 24.35" D
Weight	38 lbs.
Mounting	Tabletop

Electrical Characteristics

Input Power (standard)	90-264 VAC @ 47-63 Hz
Input Power (optional)	18-36 VDC
Power Consumption	Printing 25W Standby 4W Deep Sleep <1W
Data Interface	Ethernet via RJFTV D38999 USB 2.0 via USBFTV D38999

Performance Characteristics

Resolution	1200 x 600 dpi
Print Speed	10 ppm color / 18 ppm black
Duplex Printing	Automatic
Memory	256MB (non-expandable)
Languages and Fonts	HP PCL 6 GUI PCL 3 Enhanced
Paper Sizes	Letter (8.5 x 11") A4
Paper Input	225-sheet input tray
Processor	500 MHz
Operating System	Windows 7, VIsta, XP Mac OS X, Linux

Ordering Table

95-1101-MPHD0-00X

MOUNTING	POWER	HEATER	DEPTH	CONFIG
0 Tabletop	5 110-220VAC	0 None	0 Long 24"	1 Standard
	8 18-32 VDC		1 Short 17"	x Customer Specific

Contact factory for additional configurations and options

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An Engineering-Based small business with a focus on meeting your mission critical packaging needs

MODEL 1151

Military Grade Full Color Inkjet Printer

- **Ideal for very rugged military applications requiring a compact, lightweight and low power printer**
- **Heater for -40°C operation**
- **1200 x 600 dpi optimized photo-quality color printing**
- **Up to 18 ppm black / 10 ppm color**
- **256MB installed memory**
- **Ethernet and USB interfaces standard**
- **Very low power consumption (<25W without heater)**
- **Full military test suite including:**
  MIL-STD-810F Shock, Method 516.5
  MIL-STD-810G Vibration, Method 514.5
  MIL-STD-461E EMC/EMI
  MIL-STD-704E Transients
  RTCA/DO-160F Humidity, Section 6.3.1, Category A
- **Print engine is internally shock/vibration isolated**
- **Tabletop or shock tray mounting configurations**
- **90-264 VAC @ 47-440Hz or 18-32 VDC power input**

Environmental Characteristics

Temperature, operating	0°C to +50°C, or -40°C to +50°C w/ Heater (Optional)
Temperature, non-operating	-40°C to +85°C
Humidity	RTCA/DO-160F, Section 6.3.1, Category A, 6% to 95% RH, non-condensing
Low pressure	MIL-STD-810F, Method 500.4, Procedures I and II, (atmospheric pressure corresponding with -1,500 ft.)
Rapid decompression	MIL-STD-810F, Method 500.4, Procedure III from 8,000 ft. up to 41,000 ft. in 15 sec.
Altitude, operating	-1,500 ft. to 15,000 ft.
Altitude, non-operating	-1,500 ft. to 45,000 ft. w/ ink cartridges removed
Vibration, operating	MIL-STD-810F, Method 514.5, Procedure I, Cat 8 Wheeled Vehicle, US Army CHS-3 profile
Vibration, non-operating	MIL-STD-810G, Method 514.6, Proc I, secured cargo, basic transportation
Shock, operating	MIL-STD-810F, Method 516.5 Procedure I (functional shock for wheeled vehicles)
Shock, non-operating (Bench handling)	MIL-STD-810F, Method 516.5 Procedure VI
Transportation	MIL-STD-810F, Method 516.5, Procedure IV, Transit Drop
Crash acceleration	MIL-STD-810F, Method 516.5 Procedure V (16g limit)
Explosive Atmosphere	MIL-STD-810F, Method 511.4, Procedure I (up to 11,000 ft.)
Inclination	0° to 30° in any axis
EMI/EMC	MIL-STD-461E, Method CE101, CE102, CS101, CS102, CS114, CS115, CS116, RE101, RE102, RS101, RS103
ESD	DO-160E Section 25 (20 contact points)
Sand and dust	MIL-STD-810F, Method 510.4, Proc. I, II & III
Rain	MIL-STD-810F, Method 506.4, Procedure III
Grounding & bonding	MIL-STD-464 & BAC5117-1

Physical Characteristics

Dimensions	8.8" H x 19.21" W x 24.3" D
Weight	40 lbs. (tabletop)
Mounting	Tabletop or ARINC shock tray

Electrical Characteristics

Input Power (standard)	90-264 VAC @ 47-440 Hz
Input Power (optional)	18-32 VDC
Power Consumption	Printing 25W / Standby 4W 172W max with heater
Power Transients	MIL-STD-704E (704 is for aircraft; use MIL-STD-1275D for vehicles)
EMI Filtering	MIL-STD-461 compliant, military grade input power EMI Filter standard
Data Interface	Ethernet via RJFTV D38999 USB 2.0 via USBFTV D38999

Performance Characteristics

Resolution	Up to 1200 x 600 dpi color
Print Speed	10 ppm color / 18 ppm black
Memory	256MB installed
Languages and Fonts	HP PCL 6 GUI, PCL 3 Enhanced
Paper Sizes	Letter (8.5 x 11") & A4
Paper Input	225-sheet input tray
Processor	500 MHz

Ordering Table

95-1151-MPHD0-00X

MOUNTING	POWER	HEATER	DEPTH	CONFIG
0 Tabletop	6 110-220VAC 47-440 Hz	0 None	0 Long 24"	1 Standard
4 Shock Tray	8 18-32 VDC	1 Installed	1 Short 17"	x Customer Specific

Contact factory for additional configurations and options

MODEL 1250

Military Grade Wide Format Inkjet Printer

- **"Long" (30.1") and "short" (23.6") configurations to support space challenged applications**
- **Wide format printing up to 11" x 17"**
- **4800 x 1200 dpi optimized photo-quality color printing**
- **Up to 33ppm black / 29ppm color**
- **Ethernet and USB interfaces standard**
- **Very low power consumption**
- **Qualified by similarity to meet:**
  MIL-STD-810G Shock
  MIL-STD-810G Vibration
  MIL-STD-461F EMC/EMI
  MIL-STD-1686A ESD
- **Print engine is internally shock/vibration isolated**
- **Tabletop or shock tray mounting**
- **Standard 90-264 VAC, 18-32 VDC or custom power input options available**

Environmental Characteristics

Temperature, operating	0°C to +50°C -40°C to +50°C w/ optional heater
Temperature, non-operating	-40°C to +85°C w/ ink cartridges removed
Humidity	RTCA/DO-160F, Section 6.3.1, Category A 6% to 95% RH non-condensing
Low pressure	MIL-STD-810F, Method 500.4, Procedures I and II (atmospheric pressure corresponding with -1,500 ft.)
Rapid Decompression	MIL-STD-810F, Method 500.4, Procedure III from 8,000 ft. up to 41,000 ft. in 15 seconds
Altitude, operating	-1,500 ft. to 15,000 ft.
Altitude, non-operating	-1,500 ft. to 40,000 ft. w/ ink cartridges removed
Vibration, operating	MIL-STD-810F, Method 514.5, Procedure I, Cat 8 Wheeled Vehicle, US Army CHS-3 profile
Vibration, non-operating	MIL-STD-810G, Method 514.6, Procedure I, secured cargo, basic transportation
Shock, operating	MIL-STD-810F, Method 516.5, Procedure I (functional shock for wheeled vehicles)
Shock, non-operating (Bench handling)	MIL-STD-810F, Method 516.5, Procedures VI
Transportation	MIL-STD-810F, Method 516.5, Procedure IV, Transit Drop
Explosive Atmosphere	MIL-STD-810F, Method 511.4, Procedure I (up to 11,000 ft.)
Crash Acceleration	MIL-STD-810F, Method 516.5, Procedure V (16G limit)
Inclination	0° to 30° in any axis
EMI/EMC	MIL-STD-461E, CE101, CE102, CS101, CS102, CS114, CS115, CS116, RE101, RE102, RS101 & RS103
ESD	DO-160E, Section 25 (20 contact points)
Sand and Dust	MIL-STD-810F, Method 510.4, Procedure I, II & III
Grounding & Bonding	MIL-STD-464 & BAC5117-1

Physical Characteristics

Dimensions, "Short"	10.46" H x 24.04" W x 23.6" D
Dimensions, "Long"	10.46" H x 24.04" W x 30.1" D
Weight	48 lbs. ("Short" configuration) 52 lbs. ("Long" configuration)
Mounting	Tabletop or ARINC shock tray

Electrical Characteristics

Input Power (standard)	90-264 VAC @ 47-63 Hz
Input Power (optional)	100-127 VAC @ 47-440 Hz 10-36 VDC
Power Consumption	Printing 30W / Standby 2W
Power Transients	MIL-STD-704E & MIL-STD-1275D
Data Interface	10/100 Ethernet via RJFTV D38999 USB 2.0 via USBFTV D38999

Performance Characteristics

Resolution	Up to 4800 x 1200 dpi color 600 x 1200 dpi black
Print Speed	29 ppm color / 33 ppm black
Memory	128MB (non-expandable)
Languages and Fonts	HP PCL 3 GUI, HP PCL 3 Enhanced
Paper Sizes	Letter, legal, executive, tabloid, envelopes Up to A3, A4, A5, A6, B5
Paper Input	250-sheet input tray
Operating System	Windows 8, 7, VIsta, XP Mac OS X, Linux

Ordering Table

95-1250-MPHL0-00X

MOUNTING	POWER	HEATER	LENGTH	CONFIG
0 Tabletop	5 110-220VAC 47-440 Hz	0 None	0 Short 23"	1 Standard
4 Shock Tray	6 110-220VAC 47-440 Hz	1 Installed	1 Long 31"	x Customer Specific
	8 10-36 VDC			

Contact factory for additional configurations and options

MODEL 1301

Rugged Black & White Laser Printer

- **32 ppm print speed**
- **2400 X 600 dpi print resolution**
- **Fast Ethernet and USB 2.0 ports (both standard)**
- **MIL-Grade and Designed-to-Meet:**
  - **MIL-STD-810G Shock**
  - **MIL-STD-810G Vibration**
  - **MIL-STD-461F EMC**
  - **MIL-STD-1686A ESD**
- **Input power options:**
  - **115 VAC @ 60 Hz**
  - **220 VAC @ 50 Hz**
  - **18-32 VDC**
- **Rackmount or Tabletop Mounting**
- **Automatic Duplex Printing**
- **256 MHz Processor and 32 MB Memory**

Environmental Characteristics

Temperature, operating	5°C to +50°C
Temperature, non-operating	-20°C to +71°C
Humidity	10% to 95%, non-condensing
Altitude, operating	-1,500 ft. to 15,000 ft.
Altitude, non-operating	-1,500 ft. to 45,000 ft.
Vibration, operating	MIL-STD-810G, Method 514.6, Proc I
Vibration, non-operating	MIL-STD-810G, Method 514.6, Proc I, Secured Cargo, Basic Transportation
Shock, operating	MIL-STD-810G, Method 516.6, Proc I
Shock, non-operating	MIL-STD-810G, Method 516.6, Proc V & VI
Inclination	0° to 30° in any axis
EMI/EMC	MIL-STD-461F, Method CE102, CS101, CS114, CS115, RE102, RS103
ESD	MIL-STD-1686A
Grounding and bonding	MIL-STD-464 & BAC5117-1
Sand, Dust and Rain	Highly resilient Filtered air intake

Physical Characteristics

Dimensions	10.8" H x 17.5" W x 22.6" D
Weight	38 lbs. (Standard tabletop)
Mounting	Tabletop or rackmount

Electrical Characteristics

Input Power (standard)	115 VAC @ 60 Hz (nominal) 220 VAC @ 50 Hz (nominal)
Input Power (optional)	18-32 VDC with external inverter
Power Consumption	Printing 468W Standby 58W
Data Interface	Ethernet via RJFTV D38999 USB 2.0 via USBFTV D38999

Performance Characteristics

Resolution	2400 x 600 dpi
Print Speed	32 ppm
Duplex Printing	Automatic
Memory	32MB Installed
Emulations	GDI, PCL6
Paper Sizes	Up to 8.5" x 14" (legal)
Paper Input	250-sheet input tray
Processor	266 MHz

Ordering Table

95-1301-MP000-00X

MOUNTING	
0	Tabletop
2	Rackmount

POWER	
3	110 VAC
4	220 VAC
8	18-32 VDC

CONFIG	
1	Standard
x	Customer Specific

Contact factory for additional configurations and options

MODEL 1351

Military Grade Black & White Laser Printer

- **32 ppm print speed**
- **2400 x 600 dpi print resolution**
- **Fast Ethernet and USB 2.0 ports via rugged military circular connectors**
- **Tested and Passed:**
  MIL-STD-810G Shock, Method 516.5
  MIL-STD-810G Vibration, Method 514.5
  MIL-STD-461F EMI/EMC
  MIL-STD-704E Transients
  RTCA/DO-160F Humidity, Section 6.3.1, Category A
  MIL-STD-1686A ESD
- **Input power options:**
  115 VAC @ 60 Hz
  220 VAC @ 50 Hz
  18-32 VDC w/ external inverter
- **Mounting configurations: Rackmount, Tabletop or Shock Tray**
- **Automatic duplex printing**
- **Heater for -20°C** (standard) or -40**°C (optional) operation**
- **256 MHz Processor and 32 MB Memory**

Environmental Characteristics

Temperature, operating	0°C to +50°C -20°C to +50°C w/ Heater
Temperature, non-operating	-40°C to +71°C
Humidity	RTCA/DO-160F, Section 6.3.1, Category A, 6% to 95% RH, non-condensing
Rapid decompression	MIL-STD-810F, Method 500.4, Procedure III from 8,000 ft. up to 41,000 ft. in 15 sec.
Altitude, operating	-1,500 ft. to 15,000 ft.
Altitude, non-operating	-1,500 ft. to 45,000 ft. w/ ink cartridges removed
Vibration, operating	MIL-STD-810F, Method 514.5, Procedure I, Cat 8 Wheeled Vehicle, US Army CHS-3 profile
Vibration, non-operating	MIL-STD-810G, Method 514.6, Proc I, secured cargo, basic transportation
Shock, operating	MIL-STD-810F, Method 516.5 Procedure I (functional shock for wheeled vehicles)
Shock, non-operating (Bench handling)	MIL-STD-810F, Method 516.5 Procedure VI
Transportation	MIL-STD-810F, Method 516.5, Procedure IV, Transit Drop
Crash acceleration	MIL-STD-810F, Method 516.5 Procedure V (16g limit)
Explosive Atmosphere	MIL-STD-810F, Method 511.4, Procedure I (up to 11,000 ft.)
Inclination	0° to 30° in any axis
EMI/EMC	MIL-STD-461E, Method CE101, CE102, CS101, CS102, CS114, CS115, CS116, RE101, RE102, RS101, RS103
ESD	DO-160E Section 25 (20 contact points)
Sand and dust	MIL-STD-810F, Method 510.4, Proc. I, II & III
Rain	MIL-STD-810F, Method 506.4, Procedure III
Grounding & bonding	MIL-STD-464 & BAC5117-1

Physical Characteristics

Dimensions	10.9" H x 17.43" W x 22.58" D
Weight	40 lbs. (tabletop)
Mounting	Tabletop, Rackmount or ARINC shock tray

Performance Characteristics

Resolution	2400 x 600 dpi
Print Speed	32 ppm black
Duplex Printing	Automatic
Memory	32MB installed
Emulations	GDI, PCL 6
Paper Sizes	Letter (8.5 x 11") & A4
Paper Input	250-sheet input tray
Processor	266 MHz

Electrical Characteristics

Input Power (standard)	110 VAC @ 60 Hz 220VAC @ 50 Hz
Input Power (optional)	18-32 VDC w/ external inverter
Power Consumption	Printing 468W Standby 58W
Power Transients	MIL-STD-704 or MIL-STD-1275
EMI Filtering	MIL-STD-461 compliant, military grade input power EMI Filter standard
Data Interface	Ethernet via RJFTV D38999 USB 2.0 via USBFTV D38999

Ordering Table

95-1351-MPH00-00X

MOUNTING		POWER		HEATER		CONFIG	
0	Tabletop	3	110 VAC	0	None	1	Standard
2	Rackmount	4	220 VAC	1	Installed	x	Customer Specific
4	Shock Tray	8	18-32 VDC				

Contact factory for additional configurations and options

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An Engineering-Based small business with a focus on meeting your mission critical packaging needs

MODEL 1401

Rugged Full Color Laser Printer

- A proprietary reference design concept facilitates options and numerous standard and custom configurations
- Print engine is internally shock/vibration isolated
- 23 pages per minute print speed (monochrome and color)
- 600 x 2400 dpi print resolution max
- 128MB memory installed
- 8.5" x 14" max paper size
- Duplex printing capability
- 10/100 Ethernet and USB 2.0 ports
- MIL-Grade and Designed-to-meet:
  - MIL-STD-810G Shock
  - MIL-STD-810G Vibration
  - MIL-STD-461F EMC/EMI
  - MIL-STD-1686A ESD
- Input power:
  - 115 VAC @ 60 Hz (nominal)
  - 220 VAC @ 50 Hz (nominal)
  - 18-32 VDC
- Tabletop, rackmount, and ARINC shock tray mounting options

Environmental Characteristics

Temperature, operating	0°C to +40°C -20°C to +40°C w/ optional heater
Temperature, non-operating	-40°C to +71°C
Humidity	10% to 95%, non-condensing
Altitude, operating	-1,500 ft. to 15,000 ft.
Altitude, non-operating	-1,500 ft. to 40,000 ft.
Vibration	MIL-STD-810F, Method 514.6, Procedure I
Shock, operating	MIL-STD-810F, Method 516.6, Procedures I
Shock, non-operating (Bench handling)	MIL-STD-810F, Method 516.6, Procedures V & VI
EMI/EMC	MIL-STD-461F, CE102, CS101, CS114, CS115, CS116, RE102 & RS103
ESD	MIL-STD-1686A
Sand and Dust	MIL-STD-810F, Method 510.4, Procedure III
Rain	MIL-STD-810F, Method 506.4, Procedure III

Physical Characteristics

Dimensions	(8U) 13.78" H x 17.16" W x 23.9" D
Weight	65 lbs. (Standard tabletop)
Mounting	Tabletop, rackmount, ARINC shock tray

Electrical Characteristics

Input Power (standard)	115 VAC @ 60 Hz (nominal) 220 VAC @ 50 Hz (nominal)
Input Power (optional)	18-32 VDC with external inverter
Power Consumption	Printing 420W Standby 80W Deep Sleep <1W Add 100W with heater
EMI Filtering	MIL-STD-461 compliant, military grade input power EMI Filter standard
Power Transients	Optional (MIL-STD-704 or MIL-STD-1275)
Data Interface	Ethernet via RJFTV D38999 USB 2.0 via USBFTV D38999

Performance Characteristics

Resolution	600 x 2400 dpi
Print Speed	23 ppm color & black
Duplex Printing	Automatic
Memory	128MB Installed
Languages and Fonts	PCL 6, BR-Script3
Paper Sizes	Up to 8.5" x 14" (legal)
Paper Input	250-sheet input tray
Processor	333 MHz

Ordering Table

95-1401-MPH00-00X

MOUNTING		POWER		HEATER		CONFIG.	
0	Tabletop	3	110 VAC	0	None	1	Standard
2	Rackmount	4	220 VAC	1	Installed	x	Customer Specific
4	Shock Tray	8	18-32 VDC				

Contact factory for additional configurations and options

CORPORATE ORGANIZATION

Technology Dynamics Incorporated (TDI) is known in the industry as "The All Power Company" and is a well-established technology-based company in operation in excess of 36+ years. The company is well focused on providing complex rugged and MIL-SPEC power supply, power conversion and electronic packaging products as summarized below.

TECHNOLOGY DYNAMICS, INC.
"The All Power Company"
Bergenfield, NJ

TECHNOLOGY DYNAMICS, INC.
Bergenfield, NJ
- Switching Power Supplies
- DC-DC Converters
- DC-UPS Battery Backup

Bergenfield, NJ

NOVA ELECTRIC
Bergenfield, NJ
- Rugged Transformers
- Custom EMI Filters
- Bypass Switches
- Pure Sinewave DC-AC Inverters
- True Online UPS
- Frequency Converters

Bergenfield, NJ

ELECTRONICS INTEGRATION TECHNOLOGY, INC.
Eatontown, NJ
- Contract Manufacturing
- Build-to-Print
- PCB Assembly & Services

Eatontown, NJ

NOVA INTEGRATION SOLUTIONS
Saint Cloud, FL
- Rugged & Mil-Spec Printers
- Rackmount & Custom Chassis
- ATR Chassis & Backplanes

St Cloud, FL

NOVA BATTERY SYSTEMS
Bergenfield, NJ
- Custom Battery Packs
- Custom Battery Chargers
- Battery Research & Testing

Bergenfield, NJ

MID-EASTERN INDUSTRIES
Bergenfield, NJ
- Linear Power Supplies
- Towed Array Power Supplies
- Control Power Systems

Bergenfield, NJ

Technology Dynamics Inc.
Global Vision in Power Conversion
www.theallpower.com

TECHNOLOGY DYNAMICS, INC. (TDI)
100 School Street, Bergenfield, NJ 07621
P 201.385.0500 | F 201.385.0702 | www.technologydynamicsinc.com

DC-DC CONVERTERS, SWITCHING POWER SUPPLIES, DC UPS, COTS AND CUSTOM POWER SUPPLIES

Founded in 1976 TDI manufactures high-reliability switching power supplies, DC-DC converters, DC-UPS battery back-up systems and power supplies in the range from 50 watts to 30KW. With a vast library of 3,500 standard, modified and full custom field proven designs, TDI can support any application found in a telecom, data processing, medical, industrial and military program. While many companies offer consumer products, these products are designed for "rugged" and MIL-SPEC applications. They are designed from the inception to meet harsh industrial applications and military environments.

ELECTRONIC INTEGRATION TECHNOLOGY INC.
EATONTOWN, NJ

NOVA ELECTRIC
BERGENFIELD, NJ

NOVA BATTERY SYSTEMS
BERGENFIELD, NJ

MID-EASTERN INDUSTRIES

100 School Street, Bergenfield, NJ 07621
P 201.385.0500 | F 201.385.0702 | www.mideastind.com

TOWED ARRAY, LABORATORY AND HIGH VOLTAGE LINEAR POWER SYSTEMS UP TO 20KW

Founded in 1958, Mid-Eastern Industries manufactures high precision linear power supplies for commercial, industrial and military applications. These products contain advanced innovative technologies unique to the industry. Mid-Eastern is the leading supplier of high voltage power supplies for sonar systems. Other industries supported by Mid-Eastern products include research institutes, universities, laboratories, entertainment and homeland security. Mid-Eastern Industries leads the way in the design and manufacture of precision low-noise linear power supplies.

NOVA BATTERY SYSTEMS (NBS)

136 School Street, Bergenfield, NJ 07621
P 201.244.3010 | F 973.206.2006 | www.novabatterysystems.com

CUSTOM BATTERY PACKS, CHARGERS, POWER SUPPLIES AND SAFETY TESTING

NBS specializes in the design and manufacture of battery packs, chargers and safety testing of battery systems for commercial, medical, industrial and military applications. NBS provides a full range of battery-based products and cell technologies including rechargeable and non-rechargeable battery packs from 0.2Ah to 28Ah configured in standard, modified and fully custom configurations. In addition to battery packs, NBS provides a full line of standard, specialty, fast and super-fast chargers to include battery maintenance stations. NBS also provides UN, UL, CE and military safety testing on complete battery packs.

ELECTRONICS INTEGRATION TECHNOLOGY, INC. (EIT)

10 Industrial Way East, Eatontown, NJ 07724
P 732.542.2292 | F 732 542-2294 | www.eit-inc.com

PC BOARD SERVICES, COMPLEX BOX ASSEMBLY, SYSTEMS INTEGRATION AND TESTING

A full-service contract manufacturer, EIT specializes in ruggedized COTS and MIL-SPEC electronic assemblies. Areas of expertise include Surface Mount Technologies (SMT) with mixed technology PC boards, complex box assembly, systems integration and testing services. The company excels in delivering high-mix small to medium production runs with fast and accurate prototyping. EIT handles consignment kits all the way through complete turnkey projects. They perform all phases from design to manufacturing to testing. These capabilities ensure defect-free final products delivered on schedule and within budget.

NOVA ELECTRIC

100 School Street, Bergenfield, NJ 07621
P 201.385.0500 | F 201.385.0702 | www.novaelectric.com

DC-AC INVERTERS, ONLINE UPS SYSTEMS, FREQUENCY CONVERTERS, TRANSFORMERS AND EMI FILTERS

Founded in 1970, Nova Electric manufacturers rugged UPS Systems, DC-AC inverters and solid-state frequency converters in power levels ranging from 1.5 KVA to 30,000 KVA. They are designed for use in severe environments to include industrial and military applications. Typical applications include commercial utilities, mines, steel mills, airports and other severe environment applications. Nova Electric products can also be found in numerous military programs as well such as in shelters, communication systems, shipboard and airborne applications qualified to MIL-STD-810, MIL-STD-461, MIL-STD-1399, MIL-STD-167 and MIL-STD-901. Nova Electric is the company of choice for rugged UPS systems to the Military.

The Florida Design Center:
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10 Industrial Way East
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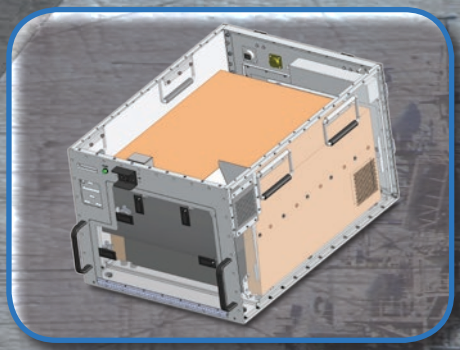
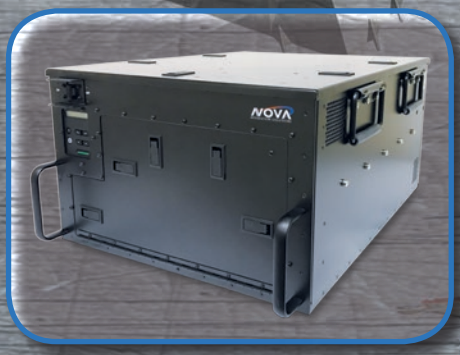
Web: www.eit-inc.com



CUSTOM DESIGNS



RUGGED B&W LASER

RUGGED COLOR INKJET