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Diversified NANO Solutions Corporation Reference Guide of Solutions and Services



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inkverse 
infinite ink infuser



Diversified NANO Solutions Corporation Reference Guide of Solutions and Services

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Introduction

This Reference Guide displays Diversified NANO Solutions Corporation (DNSC) services and digital ink solutions suitable for digital inkjet systems manufactured by the companies and brands listed in Section C “Compatibility” below.

Pricing and terms are adapted on a per individual customer basis and tailored to the specific needs of each commercial scenario. Pricing varies between the “From” and “To” value and is determined depending on projected business volume with DNSC, business objective, geographic region, strategic considerations and more. DNSC accepts purchase orders based on its General Terms and Conditions and based on specific purchasing agreements to be entered into by DNSC and its customers.

Fulfillment, Delivery and Shipping

DNSC provides worldwide fulfillment through distribution locations in the USA and Europe. For quick and user friendly adaptation to target inkjet systems, x-nano™ digital inks are delivered in INKVERSE™ Blade containers, which includes QuickConnect system for air- and spill-free snap-in connection into INKVERSE™-Ready containers, cartridges and inkjet ink tubing.

Contact

Please contact DNSC by phone: 844-308-5347 or 858-924-1005, email: info@diversifiednano.com or web: diversifiednano.com to discuss your specific need, for customer setup and to place orders.

1. x-nano™ Digital Inks and Fluids

Background

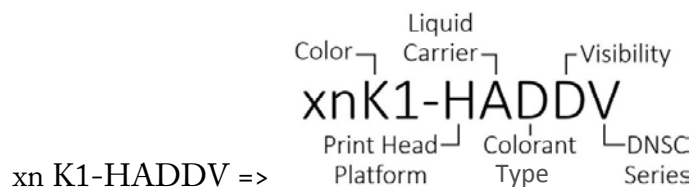
A. x-nano™ Ink Part Number structure:

DNSC x-nano™ digital ink part# reflect general ink properties and compatibility hints to help guide users and prospects through the process of identifying an ink to fit their needs. Although a helpful starting point, the DNSC part# number alone cannot include all relevant ink criteria to determine optimal performance in a given user environment.

x-nano™ Digital Ink part# share the following general built:

xn<Color> <Serial Number> - <Print Head Platform><Liquid Carrier><Colorant Type><Visibility><DNSC Series>

Example:



The above example would reflect:

x-nano™ Black V1 for HP, aqueous, dye-based, visible, member of DNSC V- Series

The parameters referenced in the Part# can acquire the following values:

- Color:** Km – Black MICR, K – Black non-MICR, C – Cyan, M – Magenta, Y – Yellow, R – Red, B – Blue, G – Green, N – None
- Serial Number:** 1, 2, 3...
- Print Head Platform:** H – HP, C – Canon Thermal, L – Lexmark, K – Kyocera, P – Panasonic, E – Epson, M – Konica Minolta, F – Fuji Dimatix, B – Brother, R – Ricoh
- Liquid Carrier:** A – Aqueous, S – Solvent, U – UV Curing, O – Oil
- Colorant Type:** D – Dye, P – Pigment, H – Hybrid Dye/Pigment, N – None
- Visibility:** D – Daylight, U – UV light, I – IR, X – magnetic field, N – None
- DNSC Series:** K – MICR, V – Value, E – Elite, I – Invisible, S – Special, M – Magnetic Fluids, C – Custom

B. Application:

The intended application of the ultimate ink user drives ink choice. Often an intended application or substrate undergoes adaptation to match ink availability while achieving a similar outcome, which preserves the application's objective. In the following DNSC introduces a few general terms to describe possible applications and substrate categories, which are often encountered. When not certain whether the desired ink will perform with a given application, please consult with the DNSC technical support team.

In the following you will find a few application categories referenced in the description of each x-nano™ ink item:

MP - Multi purpose, non-coated porous, non-porous, corrugate,
NP - non porous surface treated, PH- Pharma Packaging/Foils,
S – Security/Authentication, MR - Magnetic Reading,
IS- Invisible Scanning, PL- Plastic, ME - Metal, O – Other

C. Compatibility:

Determining ink system compatibility with a particular x-nano™ digital ink requires information about the print system. Important criteria are the manufacturer or integrator of the system, the print system model and the manufacturer and model number of the inkjet print heads in use. You will find compatibility Groups 1-3 below referenced throughout the DNSC

- Group 1:** This group references printer manufacturers using Kyocera, Panasonic, Brother and Konica Minolta print head platforms, such as Canon/Océ, Xerox/Impika, Kodak, Brother, Domino, Screen, KBA, and more.
- Group 2:** This group references printer manufacturers using Ricoh and Epson print heads, such as Epson, Ricoh and others using Epson and Ricoh print heads.
- Group 3:** This group references printer manufacturers using HP, Lexmark and Canon print heads such as: HP, Canon, Pitney Bowes, Domino, KBA, Atlantic Zeiser and more, using similar print heads.

Please contact DNSC for inkjet systems and manufacturer brands not mentioned in the above list. DNSC recommends acquiring a small amount of the desired digital ink for performance testing prior to execution of volume purchases.

1.1 x-nano™ Digital Ink Price Schedule (Aqu.)

Pos	Name	(Part#)	Description	Price* per L [\$]	
				<i>from</i>	<i>to</i>
Value-Series					
1	Black V1	xnK1#ADDV	x-nano™ Black V1 for #, Aqueous, Dye, Visible, Value-Series, MP, Group#	CALL	99.99
2	Black V2	xnK2#AHDV	x-nano™ Black V2 for #, Aqueous, Hybrid, Visible, Value-Series, MP, Group#	CALL	99.99
3	Cyan V1	xnC1#ADDV	x-nano™ Cyan V1 for #, Aqueous, Dye, Visible, Value-Series, MP, Group#	CALL	99.99
4	Magenta V1	xnM1#ADDV	x-nano™ Magenta V1 for #, Aqueous, Dye, Visible, Value-Series, MP, Group#	CALL	99.99
5	Yellow V1	xnY1#ADDV	x-nano™ Yellow V1 for #, Aqueous, Dye, Visible, Value-Series, MP, Group#	CALL	99.99
Elite-Series					
1	Black E1	xnK1#APDE	x-nano™ Black E1 for #, Aqueous, Pigment, Visible, Elite-Series, MP, Group#	CALL	169.99
2	Cyan E1	xnC1#APDE	x-nano™ Cyan E1 for #, Aqueous, Pigment, Visible, Elite-Series, MP, Group#	CALL	169.99
3	Magenta E1	xnM1#APDE	x-nano™ Magenta E1 for #, Aqueous, Pigment, Visible, Elite-Series, MP, Group#	CALL	169.99
4	Yellow E1	xnY1#APDE	x-nano™ Yellow E1 for #, Aqueous, Pigment, Visible, Elite-Series, MP, Group#	CALL	169.99
K – Series					
1	MICR K1	xnKm1#APXK	x-nano™ MICR Black K1 (50-60%) for #, Aqueous, Pigment, Visible (X), K-Series, MP, S, MR, PH, Group#	CALL	CALL
2	MICR K2	xnKm2#APXK	x-nano™ MICR Black K2 (90-110%) for #, Aqueous, Pigment, Visible (X), K-Series, MP, S, MR, PH, Group#	CALL	CALL
3	MICR K3	xnKm3#APXK	x-nano™ MICR Black K3 (115-150%) for #, Aqueous, Pigment, Visible (X), K-Series, MP, S, MR, PH, Group#	CALL	CALL

Pos	Name	(Part#)	Description	Price* per L [\$]	
				<i>from</i>	<i>to</i>
I – Series					
1	Red i1	xnR1#APUI	x-nano™ Red i1 for #, Aqueous, Pigment, Invisible (U), I-Series, MP, S, IS, PH, Group#	CALL	499.99
2	Green i1	xnG1#APUI	x-nano™ Green i1 for #, Aqueous, Pigment, Invisible (U), I-Series, MP, S, IS, PH, Group#	CALL	499.99
3	Green i2	xnG2#APUI	x-nano™ Green i2 for #, Aqueous, Pigment, Invisible (U), I-Series, MP, S, IS, PH, Group#	CALL	499.99
4	Blue i1	xnB1#ADUI	x-nano™ Blue i1 for #, Aqueous, Dye, Invisible (U), I-Series, MP, S, IS, PH, Group#	CALL	499.99
5	Blue i2	xnB2#ADUI	x-nano™ Blue i2 for #, Aqueous, Dye, Invisible (U), I-Series, MP, S, IS, PH, Group#	CALL	499.99
6	Yellow i1	xnY1#AHUI	x-nano™ Yellow i1 for #, Aqueous, Hybrid, Invisible (U), I-Series, MP, S, IS, PH, Group#	CALL	599.99
7	Orange i1	xnO1#AHUI	x-nano™ Orange i1 for #, Aqueous, Hybrid, Invisible (U), I-Series, MP, S, IS, PH, Group#	CALL	599.99
8	White i1	xnW1#AHUI	x-nano™ White i1 for #, Aqueous, Hybrid, Invisible (U), I-Series, MP, S, IS, PH, Group#	CALL	499.99
9	Black i1	xnK1#ADII	x-nano™ Black i1 (783) for #, Aqueous, Dye, Invisible (I), I-Series, MP, S, IS, PH, Group#	CALL	599.99
10	Black i2	xnK2#ADII	x-nano™ Black i2 (820) for #, Aqueous, Dye, Invisible (I), I-Series, MP, S, IS, PH, Group#	CALL	599.99
11	Black i3	xnK3#ADII	x-nano™ Black i3 (1040) for #, Aqueous, Dye, Invisible (I), I-Series, MP, S, IS, PH, Group#	CALL	599.99
S-Series					
1	Black S1	xnK1#ADDS	x-nano™ Black S1 fast Dry for #, Aqueous, Dye, Visible, S-Series, MP, NP, PH, Group#	CALL	129.99
2	Red S1	xnR1#APDS	x-nano™ Red S1 Spot for #, Aqueous, Pigment, Visible, S-Series, MP, PH, Group#	CALL	129.99
3	Blue S1	xnB1#APDS	x-nano™ Blue S1 Spot for #, Aqueous, Pigment, Visible, S-Series, MP, PH, Group#	CALL	129.99
4	Aquavar S1	xnN1#ANNS	x-nano™ Aquavar S1 Clear Varnish for #, Aqueous, No Colorant, Clear, S-Series, MP, PH, O, Group#	CALL	49.99
5	JetFix S2	xnN2#ANNS	x-nano™ JetFix S1 Clear Cleaning Fluid for #, Aqueous, No Colorant, Clear, S-Series, O, Group#	CALL	60.00

Pos	Name	(Part#)	Description	Price* per L [\$]	
				<i>from</i>	<i>to</i>
M- Series					
1	Mag. N-Fl. M1	xnK1#APDM	x-nano™ Magnetic Fluid Ro= 1.7 for #, Aqueous, Pigment, Visible, M-Series, MP, O, Group#	CALL	950
2	Mag. N-Fl. M2	xnK2#APDM	x-nano™ Magnetic Fluid Ro= 2.0 for #, Aqueous, Pigment, Visible, M-Series, MP, O, Group#	CALL	1450
C- Series					
1	Custom Fl C1	xn#####C	x-nano™ Custom Fluid for #, #, #, #, C-Series, Group#	CALL	CALL

2. INKVERSE™ - Infinite Ink Infuser

INKVERSE™ is a modular, quick-connect/disconnect, endlessly extendable, print device independent, shareable fluid delivery array for liquid ink digital inkjet platforms of any type and performance level. This novel system also utilizes convenient magneto-mechanic attachments of modules and module stacks to target systems, minimizes waste; as well as is reusable and environmentally sustainable.

INKVERSE™ benefits:

- Shared use through an expandable network of inter-connected INKVERSE™ modules sharing ink with plurality of target print devices
- Standardized ink delivery array components
- Streamlined supply chain, lower cost per printed item
- Uninterrupted print operation using hot-swapping modules with air-free INKVERSE™ IV-QuickConnect

About INKVERSE™

The INKVERSE™ System consists of one or multiple INKVERSE™ Blade modules, which are connected to a target inkjet delivery system, print head cartridges or print head arrays through IV-QuickConnect connections. Both INKVERSE™ Blades and the target system require matching IV-QuickConnect male and female points of connection.

Standard INKVERSE™ Configuration

INKVERSE™ Blade modules are configured with two male connection points, from where multiple connection options can be configured to connect to one or multiple bulk containers, one or multiple print cartridges, print head arrays, other INKVERSE™ Blade modules, and more.

INKVERSE™ Conversion

To adapt an existing non-INKVERSE™ compliant system, users require an INKVERSE™ conversion which places IV QuickConnect male/female connection points into existing containers, ink supply lines or ink cartridge containers. These connection points allow the easy connect to INKVERSE™ and reconnect to the existing delivery system in the user's discretion with minimal, if any, need for system priming or maintenance.

Typical Initial Steps to Adopt

A. Choose the x-nano™ digital ink you require with your system.

x-nano™ digital inks are designed for a large system variety and applications. Once the appropriate ink for a user has been identified, DNSC manufacturing and procurement resources are positioned to produce and fulfill inks at lowest cost levels, by avoiding unnecessary supply chain and administrative overheads. Contact DNSC for the digital ink which is right for you and discuss how to achieve and take most advantage of lower ink cost.

B. Acquire INKVERSE™-Ready cartridge and/or bulk container filled with the ink of your choice.

Note: Since bulk containers are not subject to physical wear the INKVERSE™-Ready conversion may only be a one-time per system operation. In the case of INKVERSE™-Ready cartridges with built in print head nozzles, the INKVERSE™-Ready cartridge will be subject to a functional life expectation inversely proportional to its level of use. For example: The INKVERSE™-Ready TIJ 2.5 cartridge will typically require replacement every 500-1000ml of ink use.

C. Acquire INKVERSE™ Blades filled with the ink of your choice configured to match your print system needs.

INKVERSE™ Blades can be configured for sharing with multiple ink containers, cartridges and other Blades. Depending on target use, expected volume and system integration requirements, users can choose from a variety of options to configure Blades of varying sizes and built in sharing with print heads, ink containers or other Blades.

2.1 INKVERSE™ Accessories and Ink Delivery Containers Price Schedule

Pos	Name	(Part#)	Description	Price* per Unit [\$]	
				<i>from</i>	<i>to</i>
INKVERSE™ Accessories					
1	IV Conversion Kit	IVCK	Tools, connectors and tubing to create INKVERSE™-Ready target device	CALL	150
2	IV Cross	IVCA	Cross (X) connector with three male and one female Quick Connector	CALL	150
3	IV Splice	IVSA	Splice (Y) connector with two male and one female Quick Connector	CALL	110
4	IV Inter-Connect	IVIC	Blade inter-connect assembly with two female Quick Connectors	CALL	110
5	IV Priming Kit	IVPK	INKVERSE™ Priming Kit for INKVERSE™ tub and QuickConnect assemblies	CALL	120
6	IV Custom Steel Container	IVSC	High quality stainless steel containers for INKVERSE™ Blade assemblies	CALL	CALL
7	IV Mounting Kit	IVMC	Custom INKVERSE™ mounting kit for INKVERSE™ Blade assembly (1 to 10 Blades)	CALL	CALL
8	IV Filling	IVF	INKVERSE™ filling service & final assembly fee	CALL	30
INKVERSE™ Blade Containers (without ink content)					
1	IV Blade 760	IVB0076	INKVERSE™ Blade 760ml including two male Quick Connectors to connect with INKVERSE™-Ready devices	CALL	25
2	IV Blade 1000	IVB0100	INKVERSE™ Blade 1000ml including two male Quick-Connectors to connect with INKVERSE™-Ready devices	CALL	25
3	IV Blade 2000	IVB0200	INKVERSE™ Blade 2000ml including two male Quick-Connectors to connect with INKVERSE™-Ready devices	CALL	30
4	IV Blade 5000	IVB0500	INKVERSE™ Blade 5000ml including two male Quick-Connectors to connect with INKVERSE™-Ready devices	CALL	40
5	IV Blade 10000	IVB1000	INKVERSE™ Blade 10000ml including two male Quick-Connectors to connect with INKVERSE™-Ready devices	CALL	50
6	IV Blade 20000	IVB2000	INKVERSE™ Blade 20000ml including two male Quick-Connectors to connect with INKVERSE™-Ready devices	CALL	60

Pos	Name	(Part#)	Description	Price* per Unit [\$]	
				<i>from</i>	<i>to</i>
INKVERSE™ Blade Containers (with ink content)					
1	IV Blade 760	IV76+p#Ink	INKVERSE™ Blade 760ml filled with ink PN# and 2 Quick-Connectors to connect with INKVERSE™-Ready devices	####	####
2	IV Blade 1000	IV1+p#Ink	INKVERSE™ Blade 1000ml filled with ink PN# and 2 Quick-Connectors to connect with INKVERSE™-Ready devices	####	####
3	IV Blade 2000	IV2+p#Ink	INKVERSE™ Blade 2000ml filled with ink PN# and 2 Quick-Connectors to connect with INKVERSE™-Ready devices	####	####
4	IV Blade 5000	IV5+p#Ink	INKVERSE™ Blade 5000ml filled with ink PN# and 2 Quick-Connectors to connect with INKVERSE™-Ready devices	####	####
10	IV Blade 10000	IV10+p#Ink	INKVERSE™ Blade 10000ml filled with ink pn# and 2 Quick-Connectors to connect with INKVERSE™-Ready devices	####	####
11	IV Blade 20000	IV20+p#Ink	INKVERSE™ Blade 20000ml filled with ink pn# and 2 Quick-Connectors to connect with INKVERSE™-Ready devices	####	####

For example:

The “From” and “To” cost of IV20-xnK1-KADDV, which is an INKVERSE™ Blade 20000ml filled with Black V1 visible dye ink for Kyocera, result from the following computation:

$$\text{Cost of empty INKVERSE™ Blade 20000 (\$CALL - \$60) + Filling (\$CALL - \$30) + Ink Cost (20 x \$CALL - 20 x \$99.99) = Total (\$CALL - \$2089.80)}$$

2.2 INKVERSE™-Ready Inkjet Cartridges and Bulk Containers Price Schedule

Part#	Name	Description	Price* per Unit [\$]	
			<i>from</i>	<i>to</i>
Cartridges & Containers with INKVERSE™-Ready option HP TIJ 2.5				
CN25	Empty New	Factory New Empty TIJ 2.5 (HP45) cartridge	CALL	30
CR25	Empty Recycled	Recycled Empty TIJ 2.5 (HP45) cartridge	CALL	10
F25	Fill	Filling of TIJ 2.5 (HP45) Empty with ink of choice	CALL	15
IVR25	INKVERSE™-Ready Kit	INKVERSE™ connectors, tubing, incl. - install and prime	CALL	40
25#	Content (“25” + Part# Ink)	Select ink from x-nano™ Ink Price List. Pricing X will compute based on 40ml cost of the ink selected.	X(1)	X(1)

(1) For example: The one unit cost of a new INKVERSE™-Ready TIJ 2.5 cartridge filled with “Invisible UV fluorescent Red: “Red i1” is the sum of Empty New (\$30) + Fill (\$15) + INKVERSE™-Ready Kit (\$40) + 40ml of REDi1 HAP (= \$20) = Total (\$105) => Total Part#: CNIV25xnR1-HAPUI

Part#	Name	Description	Price* per Unit [\$]	
			<i>from</i>	<i>to</i>
HP UltraSpeed 70 System – 970 Cartridge				
CN70	Empty New	Factory New Empty 970 Cartridge	CALL	120
CR70	Empty Recycled	Recycled Empty 970 Cartridge	CALL	60
F70	Fill	Filling of Empty 970 Empty with ink of choice	CALL	10
IVR70	INKVERSE™-Ready Kit	INKVERSE™ connectors, tubing, incl. Install and prime	CALL	40
70#	Content (“70” + Part# Ink)	Select x-nano™ Elite-Series ink from Ink Price List. Pricing X will compute based on 100ml cost of the ink selected.	X(1)	X(1)

(1) For example: The one unit (one time) cost of a new INKVERSE™-Ready 970 cartridge filled with “Elite Black 1”: “Black E1” is the sum of Empty New (\$120) + Fill (\$10) + INKVERSE™-Ready Kit (\$40) + 100ml of “Black E1” (= \$17) = Total (\$187) => Total Part#: CNIVR70xnK1-HAPDE

HP UltraSpeed 70 System – 971 Cartridge

CN71	Empty New	Factory New Empty 971 Cartridge	CALL	120
CR71	Empty Recycled	Recycled Empty 971 Cartridge	CALL	60
F71	Fill	Filling of Empty 971 Empty with ink of choice	CALL	10
IVR71	INKVERSE™-Ready Kit	INKVERSE™ connectors, tubing, incl. Install and prime	CALL	40
71#	Content (“70” + Part# Ink)	Select x-nano™ Elite-Series ink from Ink Price List. Pricing X will compute based on 100ml cost of the ink selected.	X(1)	X(1)

(1) For example: The one unit (one time) cost of a new INKVERSE™-Ready 971 cartridge filled with “Elite Black 1”: “Black E1” is the sum of Empty New (\$120) + Fill (\$10) + INKVERSE™-Ready Kit (\$40) + 100ml of “Black E1” (= \$17) = Total (\$187) => Total Part#: CNIVR71xnK1-HAPDE

VersaJet 36xx MICR Color & 4C Stealth

CN36	Empty New	Factory New Empty Refillable 252XL-xn Cartridge	CALL	25
CR36	Empty Recycled	Recycled Empty Refillable 252XL-xn Cartridge	CALL	15
F36	Fill	Filling of Empty 252XL with ink of choice	CALL	10
IVR36	INKVERSE™-Ready Kit	INKVERSE™ connectors, tubing, incl. - install and prime	CALL	0
36#	Content (“36” + Part# Ink)	Select x-nano™ I-Series ink from Ink Price List. Pricing X will compute based on 20ml cost of the ink selected.	X(1)	X(1)

(1) For example: The one unit cost of a new Refillable 252XL Cartridge filled with “Invisible UV Fluorescent Red 1”: “Red i1 EAP” is the sum of Empty New (\$25) + Fill (\$10) + INKVERSE™-Ready Kit (\$0) + 20ml of “Red i1” (= \$10) = Total (\$45) => Total Part#: CN36xnR1-HEPDI

Part#	Name	Description	Price* per Unit [\$]	
Ink Container & Cartridges for Canon/Ricoh/Epson/Kodak /Brother/Océ /Other Industrial and Production Systems				
CN##	Empty New	Manufacturer provided	CALL	0
CR##	Empty Recycled	Manufacturer/user provided	CALL	0
F##	Fill	Filling of Empty Container with ink of choice	CALL	30
IVR##	INKVERSE™-Ready Kit	INKVERSE™ connectors, tubing, incl. Install and prime	CALL	40
###	Content (“##” + Part# Ink)	Select x-nano™ Elite-Series ink from Ink Price List. Pricing X will compute based on container volume and cost of the ink selected.	X(1)	X(1)

(1) For example: The one unit cost of an INKVERSE™-Ready 10L filled with “Value Black 1”: “Black V1 HAP” is the sum of Empty New (0) + Fill (\$30) + INKVERSE™-Ready Kit (\$40) + 10L of “Black V1” (= \$999.90) = Total (\$1069.90) => Total Part#: CNIV##xnK1-#ADDV

At high volume lowest cost terms, the one unit cost of an INKVERSE™-Ready 10L filled with “Value Black 1”: “Black V1” would be Empty New (0) + Fill (\$5) + INKVERSE™-Ready Kit (\$20) + 10L of “Black V1” (= \$CALL) = Total (\$99.90) => Total Part#: C##xnK1-#ADDV

* Published Pricing is subject to change at DNSC discretion and does not include “ink-fee” charges, which may incur depending on print head platform, printer manufacturer and subject to customer discretion. “From” and “To” outline available cost limits per given part#’s.

3. Custom Fluid and System Development

In the event a target application is unachievable with existing x-nano™ digital inks and fluids, DNSC offers a custom ink development service on a time and material basis. Consultation is free and will establish the success probability of an intended fluid development project. Once a client or user is determined to move forward with a project DNSC will submit a project agreement with milestones for review and execution. Please contact DNSC to discuss your custom ink development requirements.