Gryphon™ I GD4200

QUICK REFERENCE GUIDE

General Purpose Corded
Handheld Linear Bar Code Reader

DATALOGIC

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The number of arbitrators will be three, with each side to the dispute being entitled to appoint one arbitrator. The two arbitrators appointed by the parties will appoint a third arbitrator who will act as chairman of the proceedings. Vacancies in the post of chairman will be filled by the president of the SIAC. Other vacancies will be filled by the respective nominating party. Proceedings will continue from the stage they were at when the vacancy occurred. If one of the parties refuses or otherwise fails to appoint an arbitrator within 30 days of the date the other party appoints its, the first appointed arbitrator will be the sole arbitrator, provided that the arbitrator was validly and properly appointed. All proceedings will be conducted, including all documents presented in such proceedings, in the English language. The English language version of these terms and conditions prevails over any other language version.

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Software Product Policy

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To arrange for a Software Maintenance and Support Agreement please contact your Datalogic sales person.

NOTES

GRYPHON™ GD4200

DESCRIPTION

With rich feature sets and extensive model options, the Gryphon™ product series from Datalogic represents the premium level of data collection equipment for general purpose applications.

The Gryphon GD4200 readers' ability to capture bar codes from near to far, to read both high-density and low resolution codes, to decode hard-to-read, poor or damaged codes and to easily read bar codes from mobile devices make these readers the perfect choice for today's and tomorrow's applications in retail and office environments, pharmacies, light industrial, warehouses and manufacturing plants.

Top Productivity for POS and Document Handling

Perfect for manual reading, the Gryphon GD4200 linear imager uses Datalogic's Motionix ™ motion detection technology that detects the operator's natural actions to automatically switch the scanner into "ready to read" scan mode. The distinctive "soft line viewfinder" of Datalogic helps the operator to easily identify the code to be read, making easier and faster to point, shoot and decode the correct label, reducing accidental readings in an environment with multiple bar codes.

Decoding

The Gryphon™ I GD4200 reliably decodes all standard 1D (linear), including GS1 DataBar™ linear codes, Postal Codes (China Post). The data stream - acquired from decoding a symbol - is rapidly sent to the host. The reader is immediately available to read another symbol.

Hands Free Stand/Holder

An accessory is available which holds the reader at a convenient angle, allowing hands free scanning of items. It can also be used as a holder. The reader automatically rec-

ognizes the insertion and changes its Scan Mode to allow the user to operate in hands-free mode.

SETTING UP THE READER

Follow the steps below to connect and get your reader up and communicating with its host.

1. Connect the Cable to the reader and the Host as shown below.
2. Configure the Interface (see page 8).
3. Program the Reader starting on page 16) (optional, as needed).

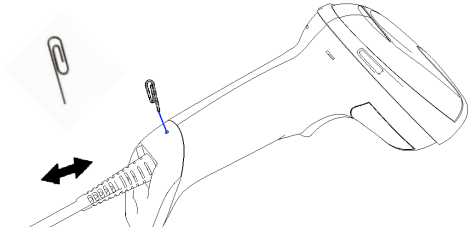
Connecting to the Host Interface

DISCONNECTING THE CABLE

To remove the interface cable from the reader, first locate the hole on the back of the handle. Next, take a paper clip and modify it as shown in the figure below. Insert the end of the paper clip into the hole and press it to push on the clip that holds the connector. As you apply pressure, pull out the cable.

When reinserting the cable, make sure the connector clip is on the same side as the reader release hole. Insert the cable, it should click when it is fully inserted.

NOTE: We recommend the use of a perfectly straight new staple to make the operation easier (see the pictures below).

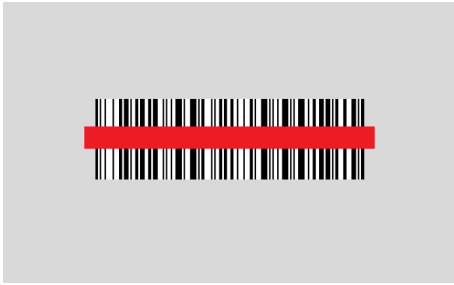


USING THE GRYPHON™ I GD4200

The Gryphon™ I GD4200 normally functions by capturing and decoding codes. The reader is equipped with an internal Motionix™ motion-sensing function which activates the aiming system on device motion. The intelligent aiming system indicates the field of view which should be positioned over the bar code:

Aiming System

Relative Size and Location of Aiming Pattern



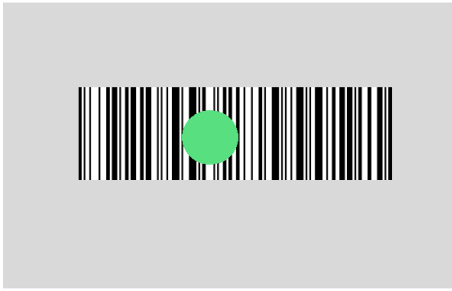
Linear Bar

A red beam illuminates the label. The field of view indicated by the aiming system will be smaller when the reader is closer to the bar code and larger when it is farther from the code. Symbologies with smaller bars or elements (mil size) should be read closer to the unit. Symbologies with larger bars or elements (mil size) should be read farther from the unit. If the aiming system is centered and the entire bar code is within the aiming field,

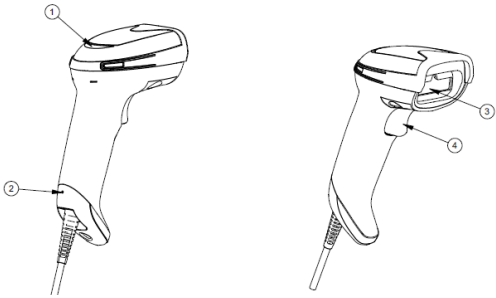
you will get a good read. Successful reading is signaled by an audible tone plus a good-read green spot LED indicator.

Refer to the Gryphon I GD4200 Product Reference Guide (PRG) for more information about this feature and other programmable settings.

Relative Size and Location of Green Spot



PARTS OF THE READER



1. LED
2. Cable Release Hole
3. Scan Window
4. Trigger

SELECTING THE INTERFACE TYPE

Upon completing the physical connection between the reader and its host, proceed directly to Interface Selection below for information and programming for the interface type supported by the reader and scan the appropriate bar code to select your system's correct interface type, according to your application.

For interfaces other than those listed in this manual, see the Gryphon™ I GD4200 Product Reference Guide (PRG), available online at www.datalogic.com.

Interface Selection

The reader will support all the following host interfaces:

- RS-232 STD
- RS-232 WN
- IBM46XX port 9b (a specific cable's required)
- USB HID POS
- USB Toshiba TEC
- USB (Keyboard, COM, OEM)
- USB Composite (Keyboard + COM)
- USB for Magellan Scanners
- Keyboard Wedge

Information and programming options for each interface type are provided in this section. For defaults and additional information associated with each interface, proceed to the corresponding chapter in the Gryphon™ I GD4200 PRG.

CONFIGURING THE INTERFACE

Scan the appropriate programming bar code to select the interface type for your system.

NOTE: Unlike some other programming features and options, interface selections require that you scan only one programming bar code label. DO NOT scan an ENTER/EXIT bar code prior to scanning an interface selection bar code.
Some interfaces require the scanner to start in the disabled state when powered up. If additional scanner configuration is desired while in this state, pull the trigger and hold for 5 seconds. The scanner will change to a state that allows programming with bar codes.

RS-232

Select RS232-STD
RS-232 standard interface

Select RS232-WN
RS-232 Wincor-Nixdorf

Select RS-232 OPOS
RS-232 for use with OPOS/UPOS/JavaPOS

IBM
Select IBM - P9B IBM-46xx Port 9B reader interface

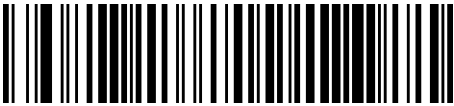
USB Interface

The reader attaches directly to a USB host, or a powered USB hub, and is powered by it. No additional power supply is required. When using a USB interface, the reader auto-detects the USB cable and defaults to the USB keyboard interface.

USB
Select USB Keyboard (with standard key encoding)
Select USB-COM-STD (simulates RS-232 standard interface)
Select USB Alternate Keyboard (with alternate key encoding)
Select USB-OEM

Keyboard Wedge Interface

To use a Keyboard Wedge interface, scan the bar code for the desired keyboard type.

KEYBOARD
 Select KBD-AT (AT, PS/2 25-286, 30-286, 50, 50Z, 60, 70, 80, 90 & 95 w/Standard Key Encoding)
 Select KBD-AT-NK (IBM AT PS2 with standard key encoding but without external keyboard.)
 Select KBD-AT-ALT (AT, PS/2 25-286, 30-286, 50, 50Z, 60, 70, 80, 90 & 95 w/Alternate Key)
 Select KBD-AT-ALT-NK (for IBM AT PS2 with alternate key encoding but without external keyboard)
 Select KBD-XT (PC/XT w/Standard Key Encoding)

KEYBOARD (CONTINUED)
 Select KBD-IBM-3153 **(for IBM Terminal 3153)**
 Select KBD-IBM-M **(for IBM Terminals 31xx, 32xx, 34xx, 37xx make only keyboard)**
 Select KBD-IBM-MB **(for IBM Terminals 31xx, 32xx, 34xx, 37xx make break keyboard)**
 Select KBD-DIG-VT **(for DIGITAL Terminals VT2xx, VT3xx, VT4xx)**

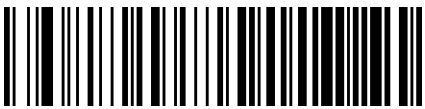
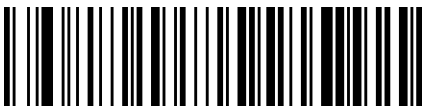
Country Mode

This feature specifies the country/language supported by the keyboard. Only the following interfaces support ALL Country Modes.

- USB Keyboard (without alternate key encoding)
- AT, PS/2 25-286, 30-286, 50, 50Z, 60, 70, 80, 90 & 95 w/Std Key Encoding
- Keyboard Wedge for IBM AT PS2 with standard key encoding but without external keyboard
- AT, PS/2 25-286, 30-286, 50, 50Z, 60, 70, 80, 90 & 95 without Alternate Key

- Keyboard Wedge for IBM AT PS2 without alternate key encoding but without external keyboard

All other interfaces support ONLY the following Country Modes: U.S., Belgium, Britain, France, Germany, Italy, Spain, Sweden.

COUNTRY MODE
ENTER/EXIT PROGRAMMING MODE
Country Mode = U.S.
Country Mode = Belgium
Country Mode = United Kingdom
 Country Mode = Croatia*
 Country Mode = Czech Republic*

COUNTRY MODE (CONTINUED)

Country Mode = Denmark*

Country Mode = France

Country Mode = French Canadian

Country Mode = Germany

Country Mode = Hungary*

Country Mode = Italy

Country Mode = Japanese 106-key*

COUNTRY MODE (CONTINUED)

Country Mode = Lithuanian

Country Mode = Norway*

Country Mode = Poland*

Country Mode = Portugal*

Country Mode = Romania*

Country Mode = Slovakia

Country Mode = Spain

COUNTRY MODE (CONTINUED)

Country Mode = Sweden

Country Mode = Switzerland*

* Supports only the interfaces listed in the Country Mode feature description.

PROGRAMMING

The reader is factory-configured with a set of standard default features. After scanning the interface bar code from the Interfaces section, select other options and customize your reader through use of the programming bar codes available in the Gryphon™ I GD4200 PRG. Check the corresponding features section for your interface, and also the Data Editing and Symbologies chapters of the PRG.

Using Programming Bar Codes

This manual contains bar codes which allow you to reconfigure your reader. Some programming bar code labels, like the "Reset Default Settings" on page 16, require only the scan of that single label to enact the change.

Other bar codes require the reader to be placed in Programming Mode prior to scanning them. Scan an ENTER/EXIT bar code once to enter Programming Mode; scan the desired parameter settings; scan the ENTER/EXIT bar code again to accept your changes, which exits Programming Mode and returns the reader to normal operation.

Configure Other Settings

Additional programming bar codes are available in the PRG to allow for customizing programming features. If your installation requires different programming than the standard factory default settings, refer to the PRG.

Resetting Product Defaults

If you aren't sure what programming options are in your reader, or you've changed some options and want your custom factory settings restored, scan the bar code below to reset the reader to its initial configuration. Reference the PRG for other options, and a listing of standard factory settings.

NOTE: Factory defaults are based on the interface type. Be sure your reader is configured for the correct interface before scanning this label. See "Selecting the Interface Type" on page 7 for more information.

Reset Default Settings

NUMLOCK

This option specifies the setting of the Numbers Lock (Numlock) key while in keyboard wedge interface. This only applies to alternate key encoding interfaces. It does not apply to USB keyboard.

NUMLOCK
ENTER/EXIT PROGRAMMING MODE
★ Numlock = Numlock key unchanged
Numlock = Numlock key toggled

★ = default value

CAPS LOCK STATE

This option specifies the format in which the reader sends character data. This applies to keyboard wedge interfaces. This does not apply when an alternate key encoding keyboard is selected.

CAPS LOCK STATE
ENTER/EXIT PROGRAMMING MODE
★ Caps Lock OFF
Caps Lock ON
AUTO Caps Lock Enable

★ = default value

READING PARAMETERS

Move the reader toward the target and center the aiming pattern and illumination system to capture and decode the image. See "Using the Gryphon™ I GD4200" on page 5 for more information.

The aiming system will briefly switch off after the acquisition time, and if no code is decoded will switch on again before the next acquisition. The illuminator will remain on until the symbol is decoded.

As you read code symbols, adjust the distance at which you are holding the reader.

Good Read Green Spot Duration

Successful reading can be signaled by a good read green spot. Use the bar codes that follow to specify the duration of the good read pointer beam after a good read.

GOOD READ GREEN SPOT DURATION
ENTER/EXIT PROGRAMMING MODE
Disable
★ Short (300 ms)
Medium (500 ms)

GREEN SPOT DURATION (CONTINUED)

Long (800 ms)

★ = default value

OPERATING MODES

Scan Mode

The reader can be set to operate in one of several scanning modes. See the PRG for more information and settings for any of the following options:

Trigger Single (Default) This mode is associated with the typical handheld reader operation. When the trigger is pulled, illumination is turned on and the scanner attempts to read a label.

Scanning is activated until one of the following occurs:

- the programmable “maximum scan on time”[1] has elapsed
- a label has been read
- the trigger is released

Trigger Pulse Multiple - Scanning begins when the trigger is pulled and continues after the trigger is released, until the trigger is pulled again or until the programmable “maximum scan on time”[1] has elapsed. Reading a label does not disable scanning. Double Read Timeout[1] prevents undesired multiple reads while in this mode.

Trigger Hold Multiple - When the trigger is pulled, scanning starts and the product scans until the trigger is released or “maximum scan on time”[1] has elapsed. Reading a label does not disable scanning. Double Read Timeout[1] prevents undesired multiple reads while in this mode.

Always On - The illuminator is always ON and the reader is always ready for code reading. Double Read Timeout[1] prevents undesired multiple reads.

Flashing - The reader illuminator flashes on and off regardless of the trigger status. Code reading takes place only during the Flash On Time[2]. Double Read Timeout[1] prevents undesired multiple reads.

Object Detection - The scanner looks for changes within its field-of-view. The Aiming Pattern is always on to show the optimum reading area. If a predefined amount of movement is detected, the red illumination switches on. Scanning continues until a label is read or "maximum scan on time"[1] is reached.

1. See the Product Reference Guide (PRG) for these and other programmable features.
2. Controlled by Flash On Time and Flash Off Time. Use the PRG to program these options.

SCAN MODE

ENTER/EXIT PROGRAMMING MODE

★ Trigger Single

Trigger Pulse Multiple

Trigger Hold Multiple

Flashing

Always ON

Stand Mode

★ = default value

TECHNICAL SPECIFICATIONS

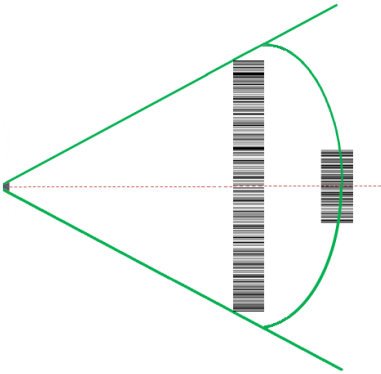
The following table contains Physical and Performance Characteristics, User Environment and Regulatory information.

PHYSICAL CHARACTERISTICS	
Color	Black White
Dimensions	Height 16.6 cm (6.5") Length 10.9 cm (4.3") Width 6.8 cm (2.7")
Weight (without cable)	GD4200 approx. 163 g (5.75 oz.)
ELECTRICAL CHARACTERISTICS	
Power Supply	GD4220: 5VDC ± 5% GD4290: 4.5 - 14.0 VDC
Consumption	Operating (Typical): <350mA @ 5V <150mA @12V Standby/Idle (Typical): <60mA @5V <30mA @12V
Max. Scan Rate	400 reads/sec
Reading Indicators	Top and rear illumination, Good Read Spot, Beep
ENVIRONMENTAL CHARACTERISTICS	
Operating Temperature	0 °C to + 50 °C (+32° F to +122 °F)
Storage Temperature	-40 °C to + 70 °C (-40 ° F to +158 °F)
Humidity	95% non condensing
Drop Resistance	IEC 68-2-32 Tested 1.8 m (6 ft)
ESD Protection	16 KV
Protection Class	IP52
Cable Length	Refer to www.datalogic.com
OPTICAL CHARACTERISTICS	
Tilt Tolerance[a]	± 45°
Pitch Tolerance[a]	± 65°
Skew Tolerance[a]	± 65°
Field of View[a]	HORIZONTAL 36° +/- 1°
PCS (Datalogic Test Chart)	minimum 15%

a. Based on ISO 15423 specifications.

READING PARAMETERS	
DOF[a]	Code 39 5mils: 50 to 370mm / 1.97 to 14.6 inch[b]
	Code 39 7.5mils: 50 to 540mm / 1.97 to 21.3 inch[b]
	Code 39 10mils: 50 to 735mm / 1.97 to 28.9inch[b]
	Code 39 20mils: 25 to 1470mm / 0.98 to 57.87 inch[b]
	EAN13 13 mils: 35 to 900mm / 1.38 to 35.43 inch[b]
Resolution (Maximum)	0.0077mm /3mils

a. The depth of field is defined by an arc and not a plane. Shorter bar codes of a given resolution can be read at a further distance than longer bar codes (as explained in the following image).
b. All labels grade A, typical environmental light, 20°C, label inclination 10°.



DECODE CAPABILITY
1D Bar Codes
UPC/EAN/JAN (A, E, 13, 8); UPC/EAN/JAN (including P2 /P5); UPC/EAN/JAN (including; ISBN / Bookland & ISSN); UPC/EAN Coupons; Code 39 (including full ASCII); Code 39 Trioptic; Code39 CIP (French Pharmaceutical); LOGMARS (Code 39 w/ standard check digit enabled); Danish PPT; Code 32 (Italian Pharmacode 39); Code 128; Code 128 ISBT; Interleaved 2 of 5; Standard 2 of 5; Interleaved 2 of 5 CIP (HR); Industrial 2 of 5; Discrete 2 of 5; Datalogic 2 of 5 (China Post Code/Chinese 2 of 5); IATA 2of5 Air cargo code; Code 11; Codabar; Codabar (NW7); ABC Codabar; Code 93; MSI; PZN; Plessey; Anker Plessey; Follet 2 of 5; GS1 DataBar Limited; GS1 DataBar Expanded; GS1 DataBar Truncated; DATABAR Expanded Coupon.

LED AND BEEPER INDICATIONS

The reader's beeper sounds and its illumination flashes or changes color to indicate various functions or errors on the reader. A "Green Spot" also lights to indicate a good read. The tables below list these indications. Refer to the PRG for a more detailed list.

INDICATION	LED	BEEPER
Power-up	Upper LED flashes/blinks on power-up, however, this may be too rapid to view. With a USB interface, the LED blinks until enumeration with the host is completed.	Reader beeps four times at highest frequency and volume upon power-up.
Good Read	Upper green LED comes on for programmed time (default). LED behavior for this indication is configurable using Aladdin utility.	One beep at current frequency, volume, mono/bi-tonal setting upon a successful label scan. It is also possible to upload custom jingles with Aladdin.
ROM Failure	200ms on / 200ms off	Reader sounds one error beep at highest volume for 200 mS.
Limited Scanning Label Read	N/A	Reader 'chirps' six times at the highest frequency and current volume.
Reader Disabled	The LED blinks continuously 100mS on / 900 mS off	N/A

TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	POSSIBLE SOLUTION
Nothing happens when the scan button is pulled.	No power to the imager.	Check system power. Ensure power supply is connected.
	Interface or power cables are loose.	Ensure all cable connections are secure.
LED comes on, but bar code is not decoded.	Reader not programmed for correct bar code type.	Ensure reader is programmed to read the type of bar code scanned. Refer to the PRG for more information.
	Bar code label is unreadable.	Check the label to ensure it is not defaced. Try to scan another bar code type.
	Distance between reader and bar code is incorrect.	Move reader closer to or further from the bar code.
Bar code is decoded but not transmitted to the host.	Reader not programmed for the correct host type.	Scan the appropriate host type bar code. Refer to the PRG for more information.

WARRANTY

Datalogic warrants that the Products shall be free from defects in materials and workmanship under normal and proper use during the Warranty Period. Products are sold on the basis of specifications applicable at the time of manufacture and Datalogic has no obligation to modify or update Products once sold. The Warranty Period shall be **three years** from the date of shipment by Datalogic, unless otherwise agreed in an applicable writing by Datalogic.

Datalogic will not be liable under the warranty if the Product has been exposed or subjected to any: (1) maintenance, repair, installation, handling, packaging, transportation, storage, operation or use that is improper or otherwise not in compliance with Datalogic's instruction; (2) Product alteration, modification or repair by anyone other than Datalogic or those specifically authorized by Datalogic; (3) accident, contamination, foreign object damage, abuse, neglect or negligence after shipment to Buyer; (4) damage caused by failure of a Datalogic-supplied product not under warranty or by any hardware or software not supplied by Datalogic; (5) any device on which the warranty void seal has been altered, tampered with, or is missing; (6) any defect or damage caused by natural or man-made disaster such as but not limited to fire, water damage, floods, other natural disasters, vandalism or abusive events that would cause internal and external component damage or destruction of the whole unit, consumable items; (7) use of counterfeit or replacement parts that are neither manufactured nor approved by Datalogic for use in Datalogic-manufactured Products; (8) any damage or malfunctioning caused by non-restoring action as for example firmware or software upgrades, software or hardware reconfigurations etc.; (9) loss of data; (10) any consumable or equivalent (e.g. cables, power supply, batteries, etc.); or (11) any device on which the serial number is missing or not recognizable.

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ERGONOMIC RECOMMENDATIONS

CAUTION: In order to avoid or minimize the potential risk of ergonomic injury, follow the recommendations below. Consult with your local Health & Safety Manager to ensure that you are adhering to your company's safety programs to prevent employee injury.

- Reduce or eliminate repetitive motion
- Maintain a natural position
- Reduce or eliminate excessive force
- Keep objects that are used frequently within easy reach
- Perform tasks at correct heights
- Reduce or eliminate vibration
- Reduce or eliminate direct pressure
- Provide adjustable workstations
- Provide adequate clearance
- Provide a suitable working environment
- Improve work procedures.

TECHNICAL SUPPORT

Support Through the Website

Datalogic provides several services as well as technical support through its website. Log on to (www.datalogic.com).

For quick access, from the home page click on the search icon 🔍, and type in the name of the product you're looking for. This allows you access to download Data Sheets, Manuals, Software & Utilities, and Drawings.

Hover over the Support & Service menu for access to Services and Technical Support.

Reseller Technical Support

An excellent source for technical assistance and information is an authorized Datalogic reseller. A reseller is acquainted with specific types of businesses, application

software, and computer systems and can provide individualized assistance.

CLEANING PROCEDURE

Exterior surfaces and scan windows exposed to spills, smudges or debris accumulation require periodic cleaning to ensure best performance during scanning operations.

Follow the procedures described in this instruction sheet to keep your Gryphon device in good operating condition.

WARNING: Be sure to turn off power and unplug the device from electrical outlet before cleaning.

CAUTION: DO NOT use abrasive pads or cleaning agents.

Common Cleaning Solutions

The cleaners and disinfectants listed below are recommended for use on Datalogic Disinfectant-Ready Enclosures:

PRODUCT	CHEMICAL CONTENT
Sani-Cloth® HB, Sani-Cloth® Plus, Super Sani-Cloth®	Quaternary Ammonium Chloride solution
Hepacide Quat II	Virucidal disinfectant cleaner
Alcohol Wipes	70% Isopropyl Alcohol
CaviWipes™	Isopropanol 10-20%; Ethylene Glycol Monobutyl Ether 1-5%
Virex® 256	n-Alkyl Dimethyl Benzyl Ammonium Chloride; Didecyl Dimethyl Ammonium Chloride
Formula 409® Glass and Surface Cleaner	n-Alkyl Dimethyl Benzyl Ammonium Chloride; n-Propoxypropanol
Windex® Blue	Isopropyl Alcohol
Clorox® Bleach; Clorox Healthcare Bleach Germicidal Cleaner	Sodium Hypochlorite; Sodium Hydroxide
Hydrogen Peroxide	3%

PRODUCT	CHEMICAL CONTENT
ProSpray™ Wipes (Disinfectant towelettes}	0.647% o-phenylphenol; 0.070% o-benzyl-p-chlorophenol
100% Gentle dish soap and water	

NOTE: Standard product enclosures are resistant to harsh chemical cleaning.

CAUTION: DO NOT spray or pour cleaner directly onto the unit.
DO NOT use solutions in their concentrated form.
DO NOT use aerosols, solvents or abrasives.
DO NOT use paper towels or rough cloths to clean windows.

Cleaning enclosure and window surfaces

1. Moisten a soft cloth with a recommended cleaning solution. Be sure to apply the solution to your cloth first. Wring excessive liquid from the cloth.
2. Use the cloth to wipe down the surface of the unit. Use cotton swabs, lightly moistened, to reach in corners and crevices.
3. Use another clean dry cloth to remove any residue of the cleaning agent and ensure the unit is dry.

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