



Gryphon™ | GFS4400

Fixed Mount Area Imager
Bar Code Reader



Quick Reference Guide

Datalogic USA Inc.

959 Terry Street

Eugene, OR 97402

U.S.A.

Telephone: (541) 683-5700

Fax: (541) 345-7140

© 2012-2017 Datalogic S.p.A. and/or its affiliates

An Unpublished Work - All rights reserved. No part of the contents of this documentation or the procedures described therein may be reproduced or transmitted in any form or by any means without prior written permission of Datalogic USA Inc. or its subsidiaries or affiliates ('Datalogic' or 'Datalogic USA').

Owners of Datalogic products are hereby granted a non-exclusive, revocable license to reproduce and transmit this documentation for the purchaser's own internal business purposes. Purchaser shall not remove or alter any proprietary notices, including copyright notices, contained in this documentation and shall ensure that all notices appear on any reproductions of the documentation.

Should future revisions of this manual be published, you can acquire printed versions by contacting your Datalogic representative. Electronic versions may either be downloadable from the Datalogic website (www.datalogic.com) or provided on appropriate media. If you visit our website and would like to make comments or suggestions about this or other Datalogic publications, please let us know via the "Contact Datalogic" page.

Disclaimer

Datalogic has taken reasonable measures to provide information in this manual that is complete and accurate, however, Datalogic reserves the right to change any specification at any time without prior notice.

Datalogic and the Datalogic logo are registered trademarks of Datalogic S.p.A. in many countries, including the U.S. and the E.U.

Gryphon is a trademark of Datalogic S.p.A. and/or its affiliates, registered in the U.S. All other trademarks and brands are property of their respective owners.

Patents

See www.patents.datalogic.com for patent list.

See the Regulatory Addendum included with your product for additional regulatory, safety and legal information.



Table of Contents

(EULA) FOR THE GRYPHON™ GFS44XX PRODUCT SERIES	iii
Setting Up the Reader	2
RS-232 Interface (GFS4450-9 only)	2
USB Interface (GFS4470 only)	3
Mounting Bracket	5
Programming	6
Using Programming Bar Codes	6
Configure Other Settings	6
Resetting Product Defaults	7
Reading Parameters	7
Aiming System	7
Good Read Green Spot Duration	8
Operating Modes	9
Technical Features	11
RS-232 Electrical Connections	16
LED and Beeper Indications	18
Button and LED Status	18
Indicators	19
Error Codes	24
GFS4400 Dimensions	25
Ergonomic Recommendations	26
Datalogic Limited Factory Warranty	27
Warranty Coverage	27
Warranty Claims Process	28
Warranty Exclusions	29
No Assignment	31
Risk of Loss	31
Services and Support	32

NOTES

DATALOGIC IP TECH S.R.L.

END USER SOFTWARE LICENSE AGREEMENT

(EULA) FOR THE GRYPHON™ GFS44XX PRODUCT SERIES

Notice to End User: There are two types of software covered by this END USER LICENSE AGREEMENT ("EULA"): (1) The Datalogic Product you have acquired contains embedded software ("Embedded Software") which is integral to the Product's operation; and (2) Optional Application Software provided to you on an optional basis ("Application Software"). Embedded Software and Application Software are collectively referred to as "Software" and are subject to the terms and conditions contained in this EULA. Software is provided only for use with, and for authorized end users of, the Datalogic Gryphon™ GFS44XX. Portions of the Embedded Software include or operate with Open Source software or libraries ("Open Source"). Use of Open Source is subject to the Open Source licenses available at the following website: <http://www.datalogic.com/oss>.

This EULA (End User Software License Agreement) ("EULA" or "Agreement") is a legally binding agreement governing the licensing of the Software and Documentation by Datalogic IP Tech S.r.l. and its subsidiaries and affiliates ("Datalogic") to the entity or person who has purchased or otherwise acquired a Datalogic Product ("End User"). For purposes of this Agreement, any software that is not Embedded Software or Application Software is software associated with a separate end-user license agreement is licensed to you under the terms of that license agreement. Datalogic and End User hereby agree as follows:

1. Definitions.

- 1.1 "Affiliate" means a business entity currently existing or later acquired that is controlled by, or is under common control with Datalogic S.p.A.
- 1.2 "Documentation" means materials such as user's guides, program reference guides, quick reference guides, manuals, or similar materials associated with or related to the Datalogic Product, whether in printed, "online", or other form.
- 1.3 "Proprietary Information" means: (a) source code, object code, software, documentation, and any related internal design, system design, data base design, algorithms, technology, technical data or information, implementation techniques, and trade secrets related to the Software, (b) any other trade secrets marked appropriately or identified as proprietary or confidential, and (c) any information that End User, under the circumstances, should recognize as confidential. Proprietary Information does not include any information that the receiving party can establish was (1) in the public domain, (2) already in the receiving party's possession or rightfully known prior to receipt, (3) rightfully learned from a third party not in violation of any other's proprietary rights, or (4) independently developed without access to Proprietary Information.
- 1.4 "Datalogic Product" means the Datalogic Gryphon™ GFS44XX series scanner product, including all embedded Software in and all Documentation related to such product, which has been purchased or otherwise acquired by End User, whether obtained directly or indirectly from Datalogic.
- 1.5 "Software" means any software or computer programs of Datalogic or its third party licensors in machine readable form which is embedded in the Datalogic Product, whether obtained directly or indirectly from Datalogic, including any replacement, update, upgrade, enhancement or modification.

2. Scope Of License Granted.

- 2.1 Datalogic grants to End User a personal non-exclusive, non-transferable, perpetual

license to use the Software, solely on the Datalogic Product in which it is embedded ("designated Datalogic Product"), in machine-readable form only, solely for End User's internal business purposes. This Agreement does not convey ownership of the Software to End User. Title to the Software shall be and remain with Datalogic or the third party from whom Datalogic has obtained a licensed right. As used in this Agreement, the term "purchase" or its equivalents when applied to the Software shall mean "acquire under license." End User is not entitled to receipt or use of the source code to any Software.

- 2.2 End User shall not copy, modify, decompile, disassemble, reverse engineer, or otherwise reproduce or remanufacture the Software, whether modified or unmodified, nor sell, assign, sublicense, distribute, lend, rent, give, or otherwise transfer the Software to any other person or organization, for purposes other than as expressly provided in this Agreement, without Datalogic's prior written consent.

3. Transfers, Support.

- 3.1 Any copying, installing, reproduction, remanufacture, reverse engineering, electronic transfer, or other use of the Software on other than the designated Datalogic Product will be a material breach of this Agreement. However, Datalogic may elect not to terminate this Agreement or the granted licenses, but instead may elect to notify End User that End User is deemed to have ordered and accepted a license for each breaching use. End User shall pay Datalogic the applicable list price for such licenses as of the date of such breach.
- 3.2 End User shall not sell, assign, sublicense, distribute, lend, rent, give, or otherwise transfer the Datalogic Product to any third party unless such third party agrees with Datalogic in writing to be bound by the terms and conditions of this Agreement. Any such transfer of the Datalogic Product absent such agreement shall be null and void.
- 3.3 End User may obtain support for Software from Datalogic at Datalogic's standard support fees and under Datalogic's standard support terms and conditions in effect at the time the support is requested.

4. Intellectual Property.

End User acknowledges that the Software comprises valuable trade secrets of Datalogic or Datalogic's third party licensors and that the Software is protected by United States copyright law and trade secret law, and by all applicable international intellectual property laws and treaty provisions. The license set forth in this Agreement does not transfer to End User any ownership of Datalogic's or its third party licensors' copyrights, patents, trademarks, service marks, trade secrets, or other intellectual property rights and End User shall have no right to commence any legal actions to obtain such rights. End User shall not remove, modify, or take any other action that would obscure any copyright, trademark, patent marking, or other intellectual property notices contained in or on the Datalogic Product.

5. Proprietary Information.

- 5.1 End User acknowledges that Proprietary Information is the confidential, proprietary, and trade secret property of Datalogic and Datalogic's third party licensors and End User acquires no right or interest in any Proprietary Information.
- 5.2 End User shall not disclose, provide, or otherwise make available the Proprietary Information of Datalogic or its third party licensors to any person other than End User's authorized employees or agents who are under confidentiality agreement, and End User shall not use the Proprietary Information other than in conjunction with use of

the Datalogic Product exclusively for End User's internal business purposes. End User shall take steps to protect the Proprietary Information no less securely than if it were End User's own intellectual property.

- 5.3 The provisions of this Proprietary Information Section shall survive and continue for five (5) years after the termination of this Agreement.

6. Limited Warranty.

- 6.1 Datalogic warrants that, under normal use and operation, the Datalogic Product will conform substantially to the applicable Documentation for the period specified in the Documentation. During this period, for all reproducible nonconformities for which Datalogic has been given written notice, Datalogic will use commercially reasonable efforts to remedy nonconformities verified by Datalogic. End User agrees to supply Datalogic with all reasonably requested information and assistance necessary to help Datalogic in remedying such nonconformities. For all defects reported to Datalogic within the warranty period, Datalogic's liability is limited to providing End User with one copy of corrections or responding to End User's problem reports according to Datalogic's standard assistance practices. Datalogic does not warrant that the product will meet End User's requirements or that use of the product will be uninterrupted or error free, or that Datalogic's remedial efforts will correct any nonconformance. This limited warranty does not cover any product that have been subjected to damage or abuse, whether intentionally, accidentally, or by neglect, or to unauthorized repair or unauthorized installation, and shall be void if End User modifies the product, uses the product in any manner other than as established in the Documentation, or if End User breaches any of the provisions of this Agreement.
- 6.2 EXCEPT AS PROVIDED IN THIS AGREEMENT, THE DATALOGIC PRODUCT IS PROVIDED "AS IS" AND DATALOGIC MAKES NO WARRANTIES OF ANY KIND, EXPRESS OR IMPLIED, WRITTEN OR ORAL, WITH RESPECT TO THE PRODUCT, AND SPECIFICALLY DISCLAIMS THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

7. Infringement.

To the maximum extent permitted by law, End User agrees to defend, indemnify and hold harmless Datalogic, its affiliates and their respective directors, officers, employees and agents from and against any and all claims, actions, suits or proceedings, as well as any and all losses, liabilities, damages, costs and expenses (including reasonable attorney's fees) arising out of or accruing from (a) the End User's use of Software, (b) any application the End User develops on the Software that infringes any Intellectual Property Rights of any person or defames any person or violates their rights of publicity or privacy, and (c) any non-compliance by the End User of this Agreement.

8. Limitation Of Liability.

DATALOGIC SHALL NOT BE LIABLE FOR ANY CLAIMS AGAINST END USER BY ANY OTHER PARTY. IN NO EVENT SHALL DATALOGIC'S LIABILITY FOR DAMAGES, IF ANY, WHETHER BASED UPON CONTRACT, TORT (INCLUDING NEGLIGENCE), PRODUCT LIABILITY, STRICT LIABILITY, WARRANTY, OR ANY OTHER BASIS, EXCEED THE PRICE OR FEE PAID BY END USER FOR THE DATALOGIC PRODUCT. UNDER NO CIRCUMSTANCES SHALL DATALOGIC BE LIABLE TO END USER OR ANY THIRD PARTY FOR LOST PROFITS, LOST DATA, INTERRUPTION OF BUSINESS OR SERVICE, OR FOR ANY OTHER SPECIAL, CONSEQUENTIAL, CONTINGENT, INDIRECT, INCIDENTAL, PUNITIVE, EXEMPLARY, OR OTHER SIMILAR DAMAGES, EVEN IF DATALOGIC HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

9. Government Restricted Rights; International Use.

- 9.1 Use, duplication, or disclosure of the Software by the U.S. Government is subject to the restrictions for computer software developed at private expense as set forth in the U.S. Federal Acquisition Regulations at FAR 52.227-14(g), or 52.227-19 or in the Rights in Technical Data and Computer Software clause at DFARS 252.227-7013(c)(1)(ii), whichever is applicable.
- 9.2 If End User is using the Datalogic Product outside of the United States, End User must comply with the applicable local laws of the country in which the Datalogic Product is used, with U.S. export control laws, and with the English language version of this Agreement. The provisions of the "United Nations Convention on International Sale of Goods" shall not apply to this Agreement.

10. Termination.

- 10.1 Either party may terminate this Agreement or any license granted under this Agreement at any time upon written notice if the other party breaches any provision of this Agreement.
- 10.2 Upon termination of this Agreement, End User immediately shall cease using any nonembedded software and shall return to Datalogic or destroy all non-embedded software covered by this Agreement, and shall furnish Datalogic with a certificate of compliance with this provision signed by an officer or authorized representative of End User. For embedded software, End User agrees to sign a waiver prepared by Datalogic concerning further use of the embedded Software. End User's resumed or continued use of the embedded Software after termination shall constitute End User's agreement to be bound by the terms and conditions of this Agreement for such use.

11. General Provisions.

- 11.1 Entire Agreement; Amendment. This document contains the entire agreement between the parties relating to the licensing of the Software and supersedes all prior or contemporaneous agreements, written or oral, between the parties concerning the licensing of the Software. This Agreement may not be changed, amended, or modified except by written document signed by Datalogic.
- 11.2 Notice. All notices required or authorized under this Agreement shall be given in writing, and shall be effective when received, with evidence of receipt. Notices to Datalogic shall be sent to the attention of Datalogic IP Tech S.r.l., Legal & IP Department, Via San Vitalino 13, 40012 Calderara di Reno (Bologna), Italy or such other address as may be specified by Datalogic in writing.
- 11.3 Waiver. A party's failure to enforce any of the terms and conditions of this Agreement shall not prevent the party's later enforcement of such terms and conditions.
- 11.4 Governing Law; Venue: Both parties agree to the application of the laws of the country in which End User obtained the license to govern, interpret, and enforce all of End User's and Datalogic's respective rights, duties, and obligations arising from, or relating in any manner to, the subject matter of this Agreement, without regard to conflict of law principles. The United Nations Convention on Contracts for the International Sale of Goods does not apply.

All rights, duties, and obligations are subject to the courts of the country in which End User obtained the license. For licenses granted by Licensee who operates in the countries specified below, the following terms applies.

For Americas.

This Agreement is governed by the laws of the State of Oregon. This Agreement and the rights of the parties hereunder shall be governed by and construed in accordance with the laws of the State of Oregon U.S.A, without regard to the rules governing conflicts of law. The state or federal courts of the State of Oregon located in either Multnomah or Lane counties shall have exclusive jurisdiction over all matters regarding this Agreement, except that Datalogic shall have the right, at its absolute discretion, to initiate proceedings in the courts of any other state, country, or territory in which End User resides, or in which any of End User's assets are located. In the event an action is brought to enforce the terms and conditions of this Agreement, the prevailing party shall be entitled to reasonable attorneys' fees, both at trial and on appeal.

For Europe, Middle East and Africa

This Agreement is governed by the laws of Italy. This Agreement and the rights of the parties hereunder shall be governed by and construed in accordance with the laws of Italy, without regard to the rules governing conflicts of law. Italian Court of Bologna shall have exclusive jurisdiction over all matters regarding this Agreement, except that Datalogic shall have the right, at its absolute discretion, to initiate proceedings in the courts of any other state, country, or territory in which End User resides, or in which any of End User's assets are located. In the event an action is brought to enforce the terms and conditions of this Agreement, the prevailing party shall be entitled to reasonable attorneys' fees, both at trial and on appeal.

For Asia- Pacific Countries

This Agreement is governed by the laws of the State of Hong Kong. This Agreement and the rights of the parties hereunder shall be governed by and construed in accordance with the laws of the State of Hong Kong without regard to the rules governing conflicts of law. The Court of Hong Kong shall have exclusive jurisdiction over all matters regarding this Agreement, except that Datalogic shall have the right, at its absolute discretion, to initiate proceedings in the courts of any other state, country, or territory in which End User resides, or in which any of End User's assets are located. In the event an action is brought to enforce the terms and conditions of this Agreement, the prevailing party shall be entitled to reasonable attorneys' fees, both at trial and on appeal.

- 11.5 Attorneys' Fees. In the event an action is brought to enforce the terms and conditions of this Agreement, the prevailing party shall be entitled to reasonable attorneys' fees, both at trial and on appeal.

- END -

Software Product Policy

Datalogic reserves the right to ship its products with the latest version of software/firmware available. This provides our customers with the very latest in Datalogic software technology.

The only exception to this policy is when the buyer has a signed contract with Datalogic that clearly defines the terms and conditions for making software/firmware changes in products shipped to the buyer.

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

NOTES



Gryphon GFS4400

Fixed Mount Area Imager

Bar Code Reader

The Gryphon GFS4400 is a fully self-contained standard range 2D bar code scanning module for use in self service kiosks or other semi automated equipment requiring the ability to read a bar code. It is intended to be an easy integration by system designers with little expertise in scanning technology. Unlike currently available products, the GFS4400 uses the latest and fastest imaging technology and offers Datalogic's Green Spot for good read feedback.

The scanning technology is essentially the same as the Gryphon I 4400 family of area imagers, with some enhancements for presentation reading and improved motion tolerance. The enclosure is designed for ease of integration, is sealed to IP54 for cleaning, and is constructed of a solvent- and disinfectant-tolerant resin for health care applications.

The GFS4400 is an area imaging scanner for OEM applications. It is available in two different data interface versions:

- GFS4470 Gryphon Fixed Scanner 2D Imager USB
- GFS4450-9 Gryphon Fixed Scanner 2D Imager RS-232 9-pin connector

Setting Up the Reader

Scan the appropriate barcode for your reader's interface type from the following section.

RS-232 Interface (GFS4450-9 only)

RS-232 standard interface



Select RS-232 STD

RS-232 Wincor-Nixdorf



Select RS-232 W-N

RS-232 for use with OPOS/UPOS/JavaPOS



Select RS-232 OPOS

USB Interface (GFS4470 only)

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

To simulate a Keyboard, scan the bar code below:



Interface Selection: USB-KBD

Select USB Keyboard with alternate key encoding:



USB Alternate Keyboard

Select USB Keyboard for Apple computers:



USB-KBD-APPLE

To simulate a serial interface, scan the bar code below:



Interface Selection: USB-COM



IMPORTANT

**Download the correct USB COM driver from:
<http://www.datalogic.com>.**

USB-OEM (for use with OPOS/UPOS/JavaPOS)

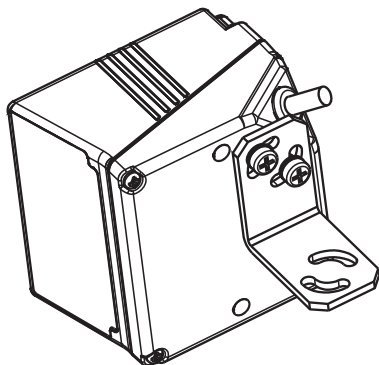
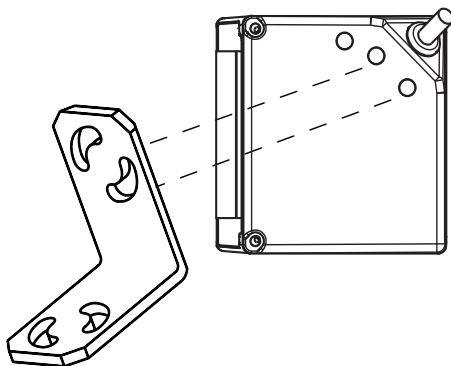


Select USB-OEM

Mounting Bracket

The GFS4400 can be mounted onto a stationary surface using a bracket as shown below. Just attach to the bottom of the reader using the provided screws, as shown in the two figures below. For specific size information, see "[GFS4400 Dimensions](#)" on page 25.

**Mounting the
Bracket**



Bracket Attached

Programming

The reader is factory-configured with a set of standard default features. After scanning the interface bar code from the Interfaces section, you can select other options and customize your reader through use of the programming bar codes available in the Gryphon I GFS4400 Product Reference Guide (PRG).

Programming can also be performed using the Datalogic Aladdin™ Configuration application, which is downloadable from the Datalogic website listed on the back cover of this manual. This multi-platform utility program allows device configuration using a PC. It communicates with the device using a serial or USB cable and can also create configuration barcodes to print.

Using Programming Bar Codes

This manual contains bar codes which allow you to reconfigure your reader. Some programming bar code labels, like ["Reset Default Settings" on page 7](#), 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 default settings restored, scan the bar code below to reset the reader to its initial configuration.



Defaults are based on the interface type. Be sure your reader is configured for the correct interface before scanning this label.



Reset Default Settings

The product can also be restored to its original factory default settings. Reference the PRG for this option, and for a list of standard factory settings.

Reading Parameters

Move the reader toward the target and center the aiming pattern and illumination system to capture and decode the image. 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.

Aiming System

A number of options for customizing control of the Aiming System are available. See the Gryphon I GFS4400 PRG for more information and programming bar codes.

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.



ENTER/EXIT PROGRAMMING MODE



Disabled



♦ Short (300 ms)



Medium (500 ms)



Long (800 ms)

Operating Modes

The reader can operate in one of several scanning modes.



See the PRG for further information on the operation of reading modes, and additional programmable features.

On Line — Scanning is activated when the button is pushed or through an external trigger (GFS4450-9 only).

Serial On Line — Scanning is initiated by command sent through the host interface (manual and external triggering can be enabled in this read mode through option setting).

Automatic — Scanning is continually on.

Automatic (Object Sense) — Scanning is turned on automatically when an item is placed in reader's field of view.



ENTER/EXIT PROGRAMMING MODE



Operating Mode = On Line

Operating Modes (continued)



Serial On Line



Operating Mode = Automatic



Operating Mode = Automatic (Object Sense)

Technical Features

Item	Description
Physical Characteristics	
Color	Grey
Dimensions	Height 1.54" / 39mm Length 2.24" / 57mm Width 2.28" / 58 mm
Weight (with cable, without bracket)	USB version - Approximately 6.3 ounces / 170 g RS-232 version - Approximately 7.2 ounces / 204 g
Electrical Characteristics	
Input Voltage	5 VDC \pm 5% Overvoltage tolerant to 14VDC
External Trigger Input (Only GFS4450-9): 1V - 5V Current Consumption for 1V = 2mA max 5V = 10mA max Min Pulse Duration = 25ms *	

* Although the scan engine can respond to this minimum pulse width for triggering, bar code decoding time is dependent on several factors. External Trigger should be held active until there is a good read decode or a determined timeout period.

Item	Description
Output (Only GFS4450-9): 14VDC	
Vout	14VDC
Vce	20 VDC max
Collector Current	40 mA continuous max
Vce Saturation	0.3 V max at 15 mA
Power Dissipation	80 mW max at 50 °C (ambient temperature)
Current & Power Consumption	
Input current at 5V in Automatic (Object Sense) Reading Mode	
Operating (typical)	180 mA
Operating (max)	250 mA
Idle/standby (typical)	65 mA (OnLine & Serial OnLine Modes) 115 mA (Automatic Object Sense Mode) No idle in Automatic Mode
Performance Characteristics	
Nominal Frame Rate	53 frames/second
Light Source	Dual Red LEDs
Roll (Tilt) Tolerance	Up to ± 180°

Pitch Tolerance	$\pm 40^\circ$	
Skew (Yaw) Tolerance	$\pm 40^\circ$	
Print Contrast Minimum	25% minimum reflectance	
Field of View	40° H x 26° V	

Depth of Field (Typical)		cm		inches	
		NF	FF	NF	FF
	Code 39 5mil	4.7	17.0	1.8	6.7
	Code 39 10mil	1.7	30.0	0.7	11.8
	Code 39 20mil	1.1	42.0	0.4	16.5
	EAN 7.5mil	2.8	22.0	1.1	8.7
	EAN 13mil	2.5	34.0	1.0	13.4
	PDF-417 6.6mil	3.3	15.0	1.3	5.9
	PDF-417 10mil	2.2	22.0	0.9	8.7
	PDF-417 15mil	2.5	30.0	1.0	11.8
	DataMatrix 10mil	2.7	17.0	1.1	6.7
	DataMatrix 15mil	1.2	21.0	0.5	8.3
	QR Code 10mil	3.5	12.0	1.4	4.7
	QR Code 15mil	0.5	20.0	0.2	7.9
Minimum Element Width	1D Min Resolution = 4 mil				
	PDF-417 Min Resolution = 5 mil				
	Datamatrix Min Resolution= 7 mil				

Note: the reading performances may change with different symbologies.

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; EAN 128; Code 93 ; MSI; PZN; Plessey; Anker Plessey; GS1 DataBar Omnidirectional; GS1 DataBar Limited; GS1 DataBar Expanded; GS1 DataBar Truncated; DATABAR Expanded Coupon.

2D / Stacked Codes

The Gryphon I GFS4400 scanner is capable of decoding the following symbologies using multiple frames (i.e. Multi-Frame Decoding): Datamatrix; Inverse Datamatrix; Datamatrix is configurable for the following parameters; Normal or Inverted; Square or Rectangular Style; Data length (1 - 3600 characters); Maxicode; QR Codes (QR, Micro QR and Multiple QR Codes); Aztec; Postal Codes - (Australian Post; Japanese Post; KIX Post; Planet Code; Postnet; Royal Mail Code (RM45CC); Intelligent Mail Barcode (IMB); Sweden Post; Portugal Post); LaPoste A/R 39; 4-State Canada; PDF-417; MacroPDF; Micro PDF417; GS1 Composites (1 - 12); Codablock F; French CIP13^a; GS1 DataBar Stacked; GS1 DataBar Stacked Omnidirectional; GS1 DataBar Expanded Stacked; GS1 Databar Composites; Chinese Sensible Code; Inverted 2D codes^b.

^aIt is acceptable to handle this with ULE

^bThe SW can apply the Normal/Reverse Decoding Control to the following symbologies: Datamatrix, QR, Micro QR, Aztec and Chinese Sensible Code.

NOTE: The Scanner can also decode mirrored images of 2D matrix codes Data-matrix, QR Code and Maxicode.

Interfaces Supported	GFS4450-9 version: RS-232 Standard GFS4470 version:USB-COM, USB-Keyboad, USB-OEM
User Environment	
Operating Temperature	-4° to 122° F (-20° to 50° C)
Storage Temperature	-4° to 158° F (-20° to 70° C)
Humidity	Operating: 5% to 90% relative humidity, non condensing
Drop specifications	5 drops from 30 inches (0.76 mt.) to concrete
Ambient Light immunity	Up to 100,000 Lux
Contaminants	IEC529-IP54
ESD Level	12 KV
Regulatory	
LED Emission Class	(IEC-62471:2006-07) Exempt (No Risk) IEC60825-1: 2007
Electrical Safety	IEC 60950-1 , CAN/CSA C22.2 No. 60950-1-07; UL 60950-1
EMI/RFI	North America (FCC) : Part 15 Class B, Canada (IC) : ICES-003 Class B, European Union EMC Directive, Australian (C-tick), Russia (Gost)

RS-232 Electrical Connections

9-pin connector

1	Trigger	Trigger signal input (see Figure 2 and Figure 3 on next page)
2	TX	Transmit Data (output from scanner)
3	RX	Receive Data (input to scanner)
4	NC	Not connected
5	GND	Ground
6	VCC	+5Vdc
7	CTS	Clear To Send (input to scanner)
8	RTS	Request To Send (output from scanner)
9	DIGITAL OUTPUT	Output signal (see Figure 1)

Default configuration is RS-232: 9600, 8, N, 1, no handshaking, ACK/NAK disabled.

Figure 1. Output Connection

Output Connection

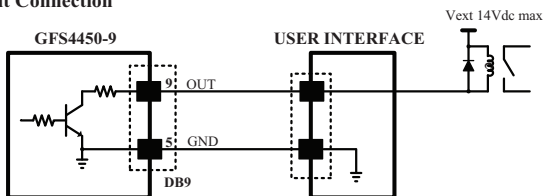


Figure 2. Using GFS4450-9 Power

Input Trigger Using
GFS4450-9 Power

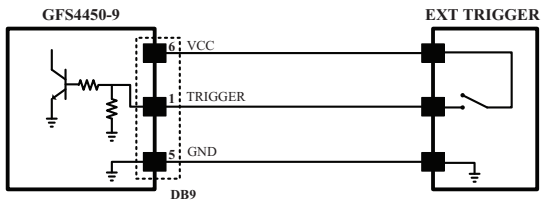
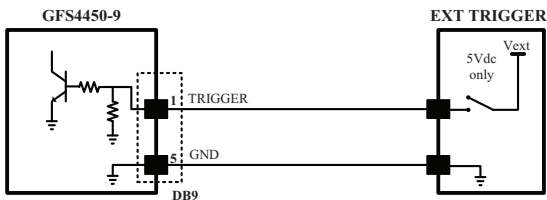


Figure 3. Using External Power Supply


Input Trigger Using
External Power



LED and Beeper Indications

Button and LED Status

The top of the product has a button and three indicator LEDs:

	POWER (yellow LED)	ON = Power ON
		OFF = Power OFF or standby (only USB version)
	GOOD (green LED)	ON = Good Read
		Blinks = USB enumeration or interface inactive or waiting for change of configuration
	TRIGGER (blue LED)	ON = External trigger or button pressed or phase active
		Blinks = During transfer of captured image, or during Flash memory updates
	Button	Press for manual trigger

Indicators

The reader's beeper sounds and its LED illuminates to indicate various functions or errors on the reader. An optional 'Green Spot' also performs useful functions. The following tables list these indications. One exception to the behaviors listed in the tables is that the reader's functions are programmable, and so may or may not be turned on. For example, certain indications such as the power-up beep can be disabled using programming bar code labels.

Indicator	Description	LED	Beeper
Power-up Beep	The reader is in the process of powering-up.		Reader beeps four times at highest frequency and volume upon power-up.
Good Read Beep	A label has been successfully scanned by the reader.	LED behavior for this indication is configurable via the feature 'Good Read: When to Indicate' (see the PRG for information.)	The reader will beep once at current frequency, volume, mono/bi-tonal setting and duration upon a successful label scan.

Indicator	Description	LED	Beeper
ROM Failure	There is an error in the reader's software/programming	Flashes	Reader sounds one error beep at highest volume.
Limited Scanning Label Read	Indicates that a host connection is not established.	N/A	Reader 'chirps' six times at the highest frequency and current volume.
Reader Active Mode	The reader is active and ready to scan.	The LED is lit steadily ^a	N/A
Reader Disabled	The reader has been disabled by the host.	The LED blinks continuously	N/A

Indicator	Description	LED	Beeper
Green Spot ^a flashes momentarily	Upon successful read of a label, the software shall turn the green spot on for the time specified by the configured value.	N/A	N/A
Image Capture	On when ready to capture image	Blue LED on	N/A
Flash Memory Update	Occurs while update is in progress	Blue LED blinks	

^aExcept when in sleep mode or when a Good Read LED Duration other than 00 is selected

Programming Mode - The following indications ONLY occur when the reader is in Programming Mode.

Indicator	Description	LED	Beeper
Label Programming Mode Entry	A valid programming label has been scanned.	LED blinks continuously	Reader sounds four low frequency beeps.
Label Programming Mode Rejection of Label	A label has been rejected.	N/A	Reader sounds three times at lowest frequency and current volume.
Label Programming Mode Acceptance of Partial Label	In cases where multiple labels must be scanned to program one feature, this indication acknowledges each portion as it is successfully scanned.	N/A	Reader sounds one short beep at highest frequency and current volume.
Label Programming Mode Acceptance of Programming	Configuration option(s) have been successfully programmed via labels and the reader has exited Programming Mode.	N/A	Reader sounds one high frequency beep and 4 low frequency beeps followed by reset beeps.

Label Program- ming Mode Cancel Item Entry	Cancel label has been scanned.	N/A	Reader sounds two times at low frequency and current volume.
---	-----------------------------------	-----	--

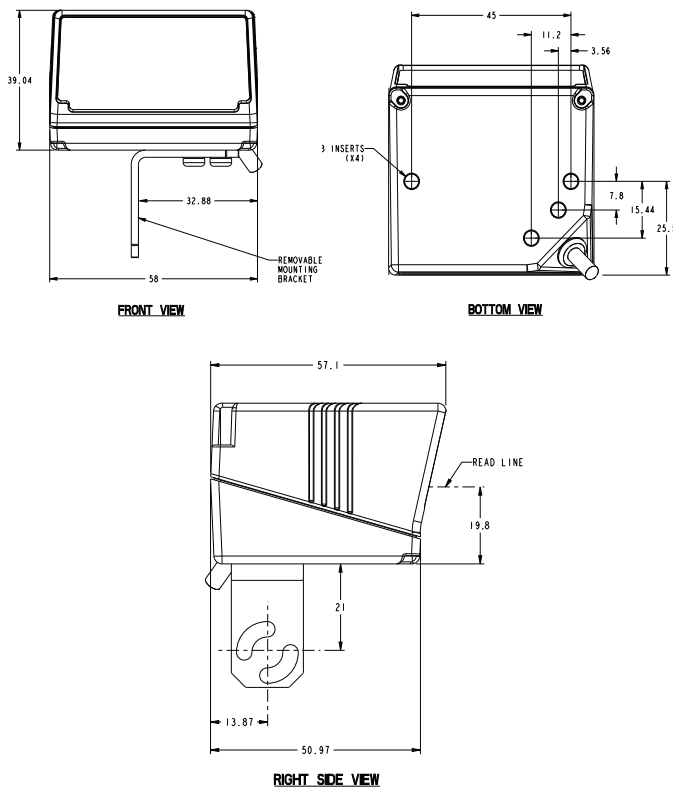
Error Codes

Upon startup, if the reader sounds a long tone, this means the reader has not passed its automatic Selftest and has entered FRU (Field Replaceable Unit) isolation mode. If the reader is reset, the sequence will be repeated. Press and release the trigger to hear the FRU indication code.

The following table describes the LED flashes/beep codes associated with an error found.

Number of LED Flashes/Beeps	Error	Corrective Action
1	Configuration	Contact Helpdesk for assistance
2	Interface PCB	
6	Digital PCB	
11	Imager	

GFS4400 Dimensions



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.

Datalogic Limited Factory Warranty

Warranty Coverage

Datalogic warrants to Customer that Datalogic's products will be free from defects in materials and workmanship for a period of 1.5 years from product shipment. This warranty does not extend to batteries and cables. As consumable items batteries and cables carry a 90 day warranty from time of purchase for DOA (dead on arrival) defects. In order to obtain service under this Warranty, Customer must notify Datalogic of the claimed defect before the expiration of the Warranty period and obtain from Datalogic a return authorization number for return of the product to designated Datalogic service center. If Datalogic determines Customer's claim is valid, Datalogic will repair or replace product without additional charge for parts and labor. Customer shall be responsible for packaging and shipping the product to the designated Datalogic service center, with shipping charges prepaid. Datalogic shall pay for the return of the product to Customer if the shipment is to a location within the country in which the Datalogic service center is located. Customer shall be responsible for paying all shipping charges, duties,taxes, and any other charges for products returned to any other locations.

Datalogic hardware products are warranted against defects in material and workmanship under normal and proper use. The liability of Datalogic under this warranty is limited to furnishing the labor and parts necessary to remedy any defect covered by this warranty and restore the product to its normal operating condition. Repair or replacement of product during the warranty does not extend the original warranty term. 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.

If Datalogic determines that a product has defects in material or workmanship, Datalogic shall, at its sole option repair or replace the

product without additional charge for parts and labor, or credit or refund the defective products duly returned to Datalogic. To perform repairs, Datalogic may use new or reconditioned parts, components, subassemblies or products that have been tested as meeting applicable specifications for equivalent new material and products. Customer will allow Datalogic to scrap all parts removed from the repaired product. The warranty period shall extend from the date of shipment from Datalogic for the duration published by Datalogic for the product at the time of purchase (Warranty period). Datalogic warrants repaired hardware devices against defects in workmanship and materials on the repaired assembly for a 90 day period starting from the date of shipment of the repaired product from Datalogic or until the expiration of the original warranty period, whichever is longer. Datalogic does not guarantee, and it is not responsible for, the maintenance of, damage to, or loss of configurations, data, and applications on the repaired units and at its sole discretion can return the units in the "factory default" configuration or with any software or firmware update available at the time of the repair (other than the firmware or software installed during the manufacture of the product). Customer accepts responsibility to maintain a back up copy of its software and data.

Warranty Claims Process

In order to obtain service under the Factory Warranty, Customer must notify Datalogic of the claimed defect before the expiration of the applicable Warranty period and obtain from Datalogic a return authorization number (RMA) for return of the product to a designated Datalogic service center. If Datalogic determines Customer's claim is valid, Datalogic will repair or replace product without additional charge for parts and labor. Customer shall be responsible for packaging and shipping the product to the designated Datalogic service center, with shipping charges prepaid. Datalogic shall pay for the return of the product to Customer if the shipment is to a location within the

country in which the Datalogic service center is located. Customer shall be responsible for paying all shipping charges, duties, taxes, and any other charges for products returned to any other locations. Failure to follow the applicable RMA policy, may result in a processing fee. Customer shall be responsible for return shipment expenses for products which Datalogic, at its sole discretion, determines are not defective or eligible for warranty repair.

Warranty Exclusions

The Datalogic Factory Warranty shall not apply to:

- (i) any product which has been damaged, modified, altered, repaired or upgraded by other than Datalogic service personnel or its authorized representatives;
- (ii) any claimed defect, failure or damage which Datalogic determines was caused by faulty operations, improper use, abuse, misuse, wear and tear, negligence, improper storage or use of parts or accessories not approved or supplied by Datalogic;
- (iii) any claimed defect or damage caused by the use of product with any other instrument, equipment or apparatus;
- (iv) any claimed defect or damage caused by the failure to provide proper maintenance, including but not limited to cleaning the upper window in accordance with product manual;
- (v) 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;

- (vi) any damage or malfunctioning caused by non-restoring action as for example firmware or software upgrades, software or hardware reconfigurations etc.;
- (vii) the replacement of upper window/cartridge due to scratching, stains or other degradation and/or
- (viii) any consumable or equivalent (e.g., cables, power supply, batteries, keypads, touch screen, triggers etc.).

No Assignment

Customer may not assign or otherwise transfer its rights or obligations under this warranty except to a purchaser or transferee of product. No attempted assignment or transfer in violation of this provision shall be valid or binding upon Datalogic.

DATALOGIC'S LIMITED WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, ORAL OR WRITTEN, STATUTORY OR OTHERWISE, INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR NONINFRINGEMENT. DATALOGIC SHALL NOT BE LIABLE FOR ANY DAMAGES SUSTAINED BY CUSTOMER ARISING FROM DELAYS IN THE REPLACEMENT OR REPAIR OF PRODUCTS UNDER THE ABOVE. THE REMEDY SET FORTH IN THIS WARRANTY STATEMENT IS THE CUSTOMER'S SOLE AND EXCLUSIVE REMEDY FOR WARRANTY CLAIMS. UNDER NO CIRCUMSTANCES WILL DATALOGIC BE LIABLE TO CUSTOMER OR ANY THIRD PARTY FOR ANY LOST PROFITS, OR ANY INCIDENTAL, CONSEQUENTIAL IN-DIRECT, SPECIAL OR CONTINGENT DAMAGES REGARDLESS OF WHETHER DATALOGIC HAD ADVANCE NOTICE OF THE POSSIBILITY OF SUCH DAMAGES.

Risk of Loss

Customer shall bear risk of loss or damage for product in transit to Datalogic. Datalogic shall assume risk of loss or damage for product in Datalogic's possession. In the absence of specific written instructions for the return of product to Customer, Datalogic will select the carrier, but Datalogic shall not thereby assume any liability in connection with the return shipment.

Services and Support

Datalogic provides several services as well as technical support through its website. Log on to www.datalogic.com and click on the links indicated for further information.

Products

Search through the links to arrive at your product page where you can download specific **Manuals** and **Software & Utilities**, including:

- **Datalogic Aladdin™**, a multi-platform utility program that allows for both RS-232 and USB COM communications interfacing. The GUI-based application provides an easy mechanism for setting scanner configuration, as well as configuration bar code printing.

Service & Support

- **Technical Support** - Product documentation and programming guides and Technical Support Department in the world
- **Service Programs** - Warranty Extensions and Maintenance Agreements
- **Repair Services** - Flat Rate Repairs and Return Material Authorization (RMA) Repairs
- **Downloads** - Manuals & Documentation, Data Sheets, Product Catalogues, etc.

Contact Us

- Information Request Form and Sales & Service Network

NOTES



www.datalogic.com

©2012-2017 Datalogic S.p.A. and/or its affiliates. All rights reserved.

Datalogic and the Datalogic logo are registered trademarks of Datalogic S.p.A. in many countries, including the U.S.A. and the E.U.

Datalogic USA Inc.

959 Terry Street | Eugene, OR 97402 | U.S.A. |

Telephone: (541) 683-5700 |

Fax: (541) 345-7140



820090214

(Rev D)

January 2017