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USER MANUAL



CR1500

MANUAL VERSION 04
RELEASE DATE: JULY 2018

code
REVOLUTIONIZING BARCODE READING

Statement of Agency Compliance

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Industry Canada (IC)

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Industrie Canada (IC)

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Code Reader™1500 User Manual

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The software and/or products of Code Corporation include inventions that are patented or that are the subject of patents pending. Relevant patent information is available at <http://www.codecorp.com/legal/patents.php>

The Code Reader software uses the Mozilla SpiderMonkey JavaScript engine, which is distributed under the terms of the Mozilla Public License Version 1.1.

The Code Reader software is based in part on the work of the Independent JPEG Group.

Code Corporation, 12393 S. Gateway Park Place, Ste. 600, Draper, Utah 84020

www.codecorp.com

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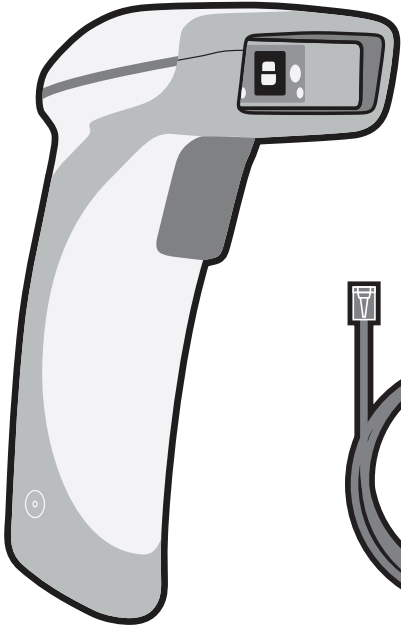
1.0 CR1500 Readers and Accessories

Model Number-Version	Description
CR1500-K10x	CR1500 Reader, Cabled, Light Gray, CodeShield
CR1500-K20x	CR1500 Reader, Cabled, Dark Gray
CR1500-L20x	CR1500 DPM Reader, Cabled, Dark Gray
CR1500-M20x	CR1500 XHD Reader, Cabled, Dark Gray

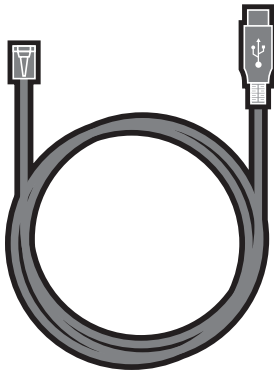
CR1500 Accessories	
Product SKU	Description
CRA-US2	Goose-Neck Stand, Light Gray
CRA-US3	Goose-Neck Stand, Dark Gray
CRA-WMB3	Wall Mount Bracket, Light Gray
CRA-MB9	Clamp Mount

Cables	Description
Refer to www.codecorp.com/cables.php for a complete list of available cables.	

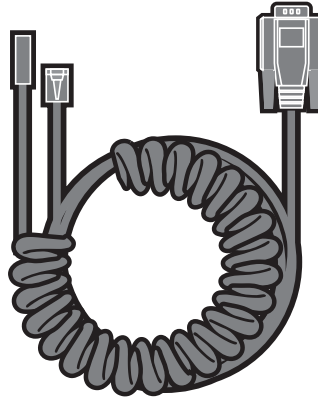
2.0 - Unpacking



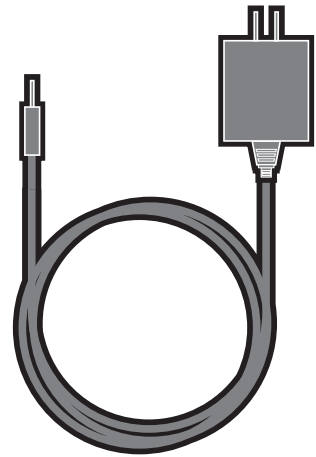
CR1500



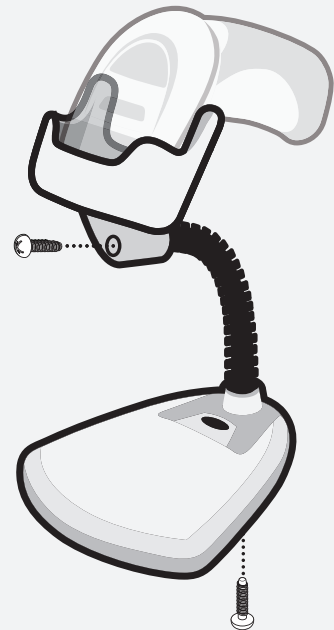
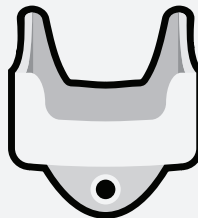
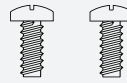
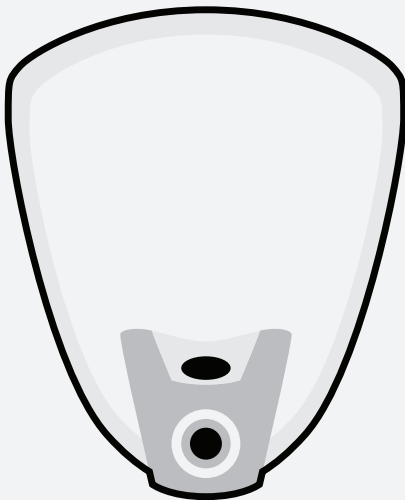
USB Cable



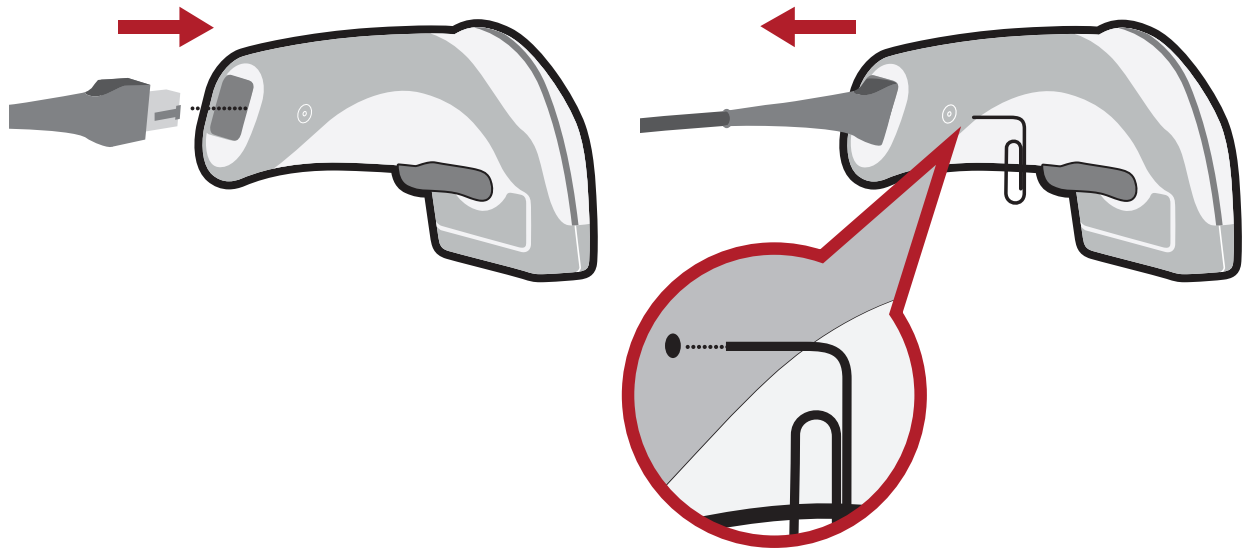
RS232 Cable



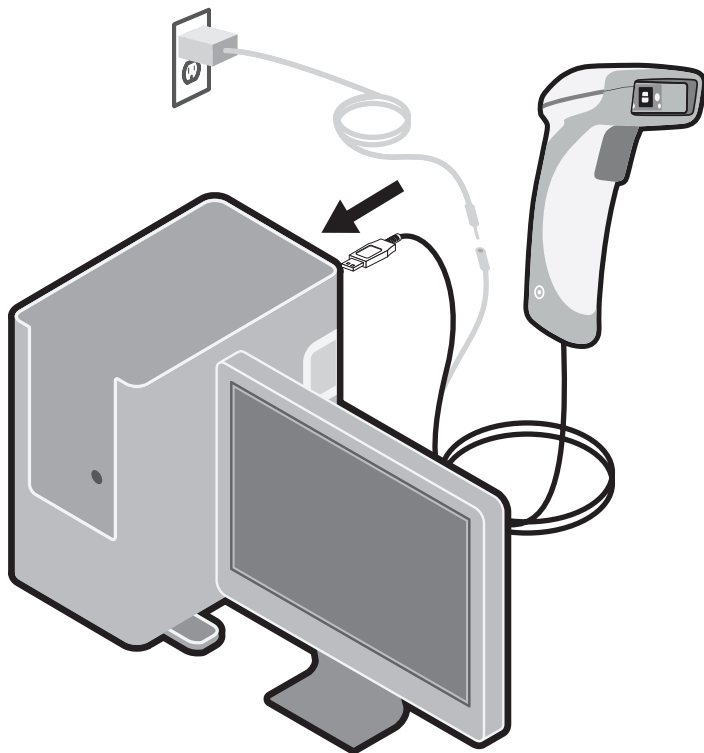
5VDC
Power Supply








3.0 - Attaching and Detaching a Cable

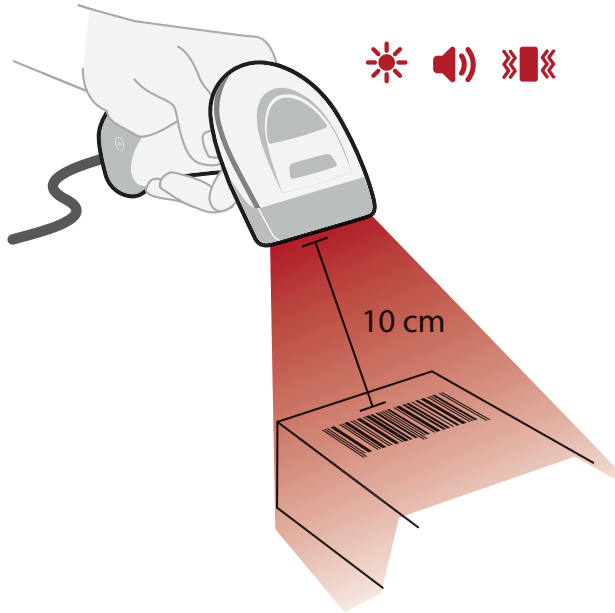


4.0 - Set Up

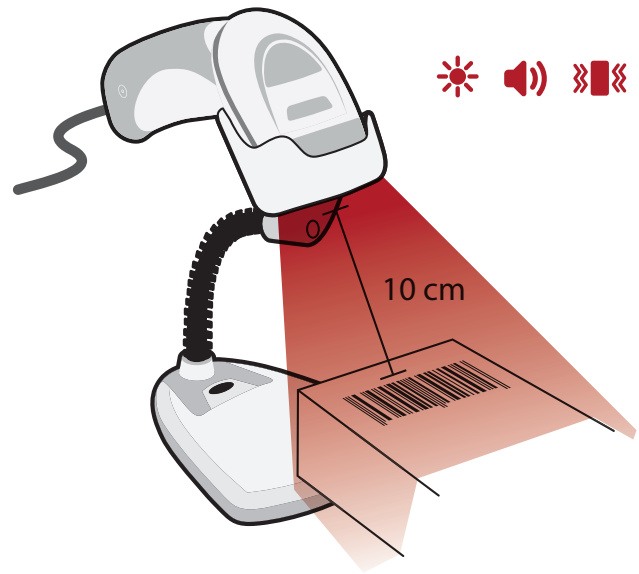


- ①  Plug In
- ②  Wait 2 seconds
2 Sec.
- ③  LED will Flash
- ④  Reader will beep
2x
- ⑤  Reader will vibrate

5.0 - Using a CR1500 out of a Stand



6.0 - Using a CR1500 in a Stand



7.0 - Typical Reading Ranges

Test Barcode	CR1500-KXXX (Standard)	CR1500-L2XX (DPM)	CR1500-M2XX (XHD)
	Min Inches (mm) / Max Inches (mm)	Min Inches (mm) / Max Inches (mm)	Min Inches (mm) / Max Inches (mm)
3 mil Code 39	3.3" (85 mm) / 4.2" (107 mm)		0.6" (14 mm) / 1.5" (39 mm)
5.8 mil PDF417			0.4" (9 mm) / 1.7" (44 mm)
7.5 mil Code 39	0.7" (18 mm) / 6.6" (167 mm)	0.9" (24 mm) / 6.7" (170 mm)	1.4" (35 mm) / 2.3" (58 mm)
10.5 mil GS1 DataBar	0.2" (5 mm) / 8.1" (205 mm)	0.2" (5 mm) / 6.1" (155 mm)	0.6" (15 mm) / 2.8" (71 mm)
13 mil Code 128	0.5" (13 mm) / 10.4" (265 mm)	0.7" (17 mm) / 9.6" (245 mm)	1.2" (31 mm) / 3.3" (83 mm)
3.3 mil Data Matrix			0.4" (11 mm) / 1.1" (29 mm)
4.2 mil Data Matrix		1.0" (25 mm) / 2.4" (60 mm)	0.4" (9 mm) / 1.2" (31 mm)
5 mil Data Matrix	1.1" (28 mm) / 3.9" (100 mm)	0.8" (20 mm) / 2.8" (70 mm)	0.4" (9 mm) / 1.5" (39 mm)
6.3 mil Data Matrix	0.7" (18 mm) / 5.3" (135 mm)	0.5" (12 mm) / 3.6" (92 mm)	0.3" (7 mm) / 1.6" (41 mm)
10 mil Data Matrix	0.2" (5 mm) / 6.5" (165 mm)	0.2" (5 mm) / 5.9" (150 mm)	0.3" (7 mm) / 2.1" (54 mm)
20.8 mil Data Matrix	0.5" (13 mm) / 12.9" (328 mm)	0.4" (10 mm) / 10.4" (265 mm)	0.3" (7 mm) / 3.6" (92 mm)

Note: Working ranges are a combination of both the wide and high density fields. All samples were high quality codes and were read along a physical center line at a 10° angle. Default automatic gain control settings were used with regular office lighting. Accuracy= +/- 10%. Testing conditions may affect working ranges. Measured from the front of the device in metric units then converted to Imperial units.

8.0 - Reader Feedback

Scenario	Top LED Light	Sound	Vibration
CR1500 Successfully Powers Up	Green LED Flashes	1 Beep	Handle Vibrates
CR1500 Successfully Enumerates with Host (via cable)	Once Enumerated, the Green LED turns Off	1 Beep	Handle Vibrates
Attempting to Decode	Green LED Light is Off	None	No Vibration
Successful Decode and Data Transfer	Green LED Flashes	1 Beep	Handle Vibrates
Configuration Code Successfully Decoded and Processed	Green LED Flashes	2 Beep	Handle Vibrates
Configuration Code successfully decoded but wasn't successfully processed	Green LED Flashes	4 Beep	Handle Vibrates
Downloading File/Firmware	Amber LED Flashes	None	No Vibration
Installing File/Firmware	Red LED is On	3-4 Beeps*	Handle Vibrates

*Depending on comm port configuration

9.0 - Symbologies Defaulted On

The following are symbologies that have a default of ON. To turn symbologies on or off, scan the symbology barcodes located in the CR1500 Configuration Guide located on our website at www.codecorp.com/files.php.

Aztec	All GS1 DataBar
Codabar	Interleaved 2 of 5
Code 39	PDF417
Code 93	QR Code
Code 128	UPC/EAN/JAN
Data Matrix	
Data Matrix Rectangle	

10.0 - Symbologies Defaulted Off

Code barcode readers can read a number of barcode symbologies that are not enabled by default. To turn symbologies on or off, scan the symbology barcodes located in the CR1500 Configuration Guide located on our website at www.codecorp.com/files.php.

Code 11	Micro PDF417
Code 32	MSI Plessey
Code 49	NEC 2 of 5
Composite	Pharmacode
Grid Matrix	Plessey
Han Xin Code	Postal Codes
Hong Kong 2 of 5	Standard 2 of 5
IATA 2 of 5	Telepen
Matrix 2 of 5	Trioptic
Maxicode	

11.0 - Reader ID and Firmware Version

For device management and obtaining support from Code, reader information will be needed. To find out the Reader ID, firmware version and optional licenses, open a text editor program (i.e., Notepad, Microsoft Word, etc.) and scan the Reader ID and Firmware configuration barcode on the right.



Reader ID, Firmware and Licenses

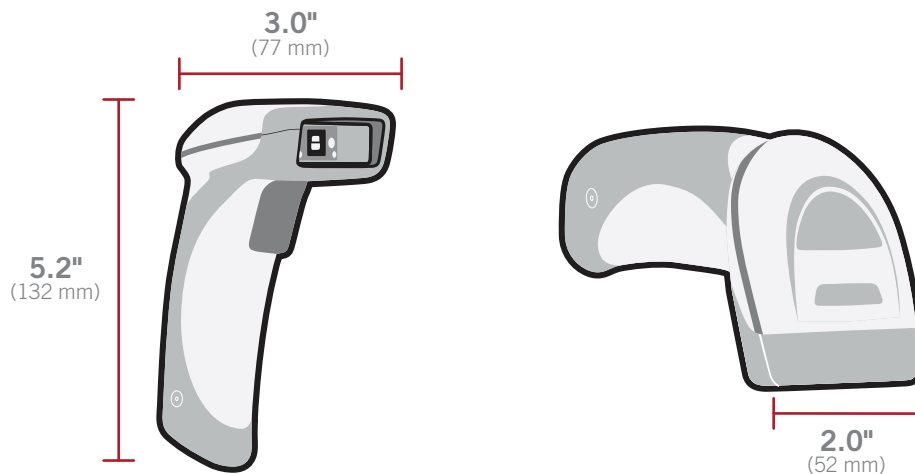
You will see a text string indicating your firmware version and CR1500 ID number.

example: `<RD><RR MD="CR1500" /></RD><RD><RR SN="1060000003" /></RD><RD><FW VS="1.1.4 " /></RD><RD><LC GL="" /></RD>`

Model Number	Serial Number	Firmware Version Number	License Part Number (if there is any)
<code><RD><RR MD="CR1500" /></RD></code>	<code><RD><RR SN="1060000003" /></RD></code>	<code><RD><FW VS="1.1.4" /></RD></code>	<code><RD><LC GL="" /></RD></code>

Note: Code will periodically release new firmware for CR1500 readers. For information on latest firmware visit our website at www.codecorp.com/codesupport.php.

12.0 - CR1500 Overall Dimensions

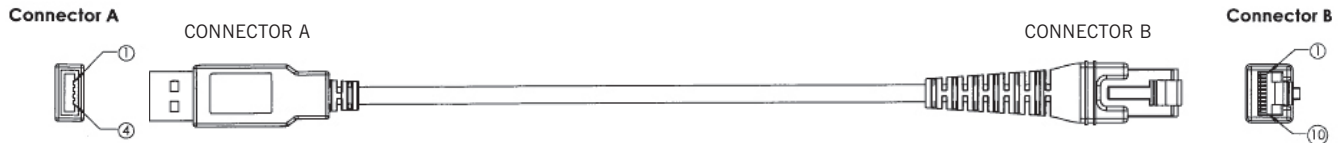


13.0 - USB Cable Example with Pinouts

NOTES:

1. Part to be ROHS and Reach compliant.
2. Maximum Voltage Tolerance = 5V +/- 10%.
3. Caution: Exceeding the maximum voltage will void manufacturer warranty.

CONNECTOR A	NAME	CONNECTOR B
1	VIN	1
2	D+	2
3	D-	3
4	GND	10
SHELL	-	NC

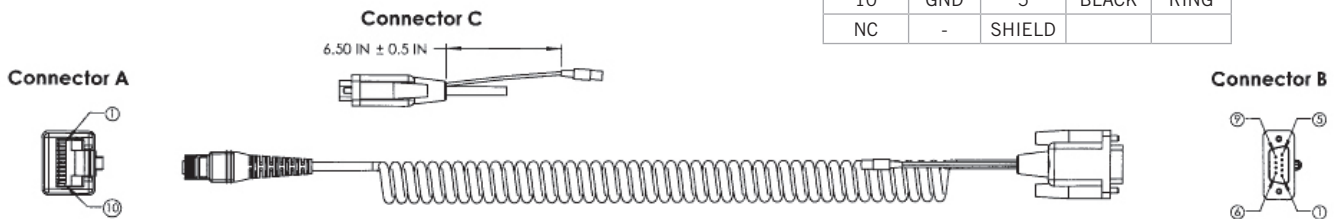


14.0 - RS232 Cable Example with Pinouts

NOTES:

1. Part to be ROHS and Reach compliant.
2. Maximum Voltage Tolerance = 5V +/- 10%.
3. Caution: Exceeding the maximum voltage will void manufacturer warranty.

CONN A	NAME	CONN B	COLOR	CONN C
1	VIN	1	RED	TIP
4	TX	2		
5	RTS	8		
6	RX	3		
7	CTS	7		
10	GND	5	BLACK	RING
NC	-	SHIELD		



15.0 - Reader Pinouts

The connector on the CR1500 is an RJ-50 (10P-10C). The pinouts are as follows:

Pin 1	+VIN (5v)
Pin 2	USB_D-
Pin 3	USB_D+
Pin 4	RS232 TX (output from reader)
Pin 5	RS232 RTS (output from reader)
Pin 6	RS232 RX (input to reader)
Pin 7	RS232 CTS (input to reader)
Pin 8	External Trigger (active low input to reader)
Pin 9	N/C
Pin 10	Ground

16.0 - CR1500 Maintenance

The CR1500 device needs only a minimum of maintenance to operate. A few tips are given below for maintenance suggestions.

Cleaning the CR1500 Window

CR1500 window should be clean to allow the best performance of the device. The window is the clear plastic piece inside the head of the reader. Do not touch the window. Your CR1500 uses CMOS technology that is much like a digital camera. A dirty window may stop the CR1500 from reading barcodes. If the window becomes dirty, clean it with a soft, non-abrasive cloth or a facial tissue (no lotions or additives) that has been moistened with water. A mild detergent may be used to clean the window, but the window should be wiped with a water moistened cloth or tissue after using the detergent.

Technical Support and Returns

For returns or technical support visit www.codecorp.com/codesupport.php.

17.0 - Online Resources for the CR1500

Please visit www.codecorp.com for resources to set up and manage the CR1500. On the Products page, you will find various information about the product including the CR1500 Configuration Guide Generator which provides all Manual Codes to configure the CR1500.

The Download section contains Firmware and Software for the device. They include:

The latest firmware of the device.

CortexTools2, a Windows utility program to configure your Code Reader, create configuration barcodes, update reader firmware, set data parsing rules, load custom JavaScript applications, upload images to your PC and much more.

Various Drivers (OPOS, JPOS, Virtual COM, etc.).

18.0 - Warranty

The CR1500 carries a standard five year limited warranty as described herein. Stand and Cables have a 30 day warranty period.

Limited Warranty. Code warrants each Code product against defects in materials and workmanship under normal use for the Warranty Coverage Term applicable to the product as described at www.codecorp.com/legal/warranty/term.php. If a hardware defect arises and a valid warranty claim is received by Code during the Warranty Coverage Term, Code will either: i) repair a hardware defect at no charge, using new parts or parts equivalent to new in performance and reliability; ii) replace the Code product with a product that is new or refurbished product with equivalent functionality and performance, which may include replacing a product that is no longer available with a newer model product; or ii) in the case of failure with any software, including embedded software included in any Code product, provide a patch, update, or other work around. All replaced products become the property of Code. All warranty claims must be made using Code's RMA process.

Exclusions. This warranty does not apply to: i) cosmetic damage, including but not limited to scratches, dents, and broken plastic; ii) damage resulting from use with non-Code products or peripherals, including batteries, power supplies, cables, and docking station/cradles; iii) damage resulting from accident, abuse, misuse, flood, fire or other external causes, including damage caused by unusual physical or electrical stress, immersion in fluids or exposure to cleaning products not approved by Code, puncture, crushing, and incorrect voltage or polarity; iv) damage resulting from services performed by anyone other than a Code authorized repair facility; v) any product that has been modified or altered; vi) any product on which the Code serial number has been removed or defaced. If a Code Product is returned under a warranty claim and Code determines, in Code's sole discretion, that the warranty remedies do not apply, Code will contact Customer to arrange either: i) repair or replace the Product; or ii) return the Product to Customer, in each case at Customer's expense.

Non Warranty Repairs. Code warrants its repair/replacement services for ninety (90) days from the date of shipment of the repaired/ replacement product to the Customer. This warranty applies to repairs and replacements for: i) damage excluded from the limited warranty described above; and ii) Code Products on which the limited warranty described above has expired (or will expire within such ninety (90) day warranty period). For repaired product this warranty covers only the parts that were replaced during the repair and the labor associated with such parts.

No Extension of Term of Coverage. Product that is repaired or replaced, or for which a software patch, update, or other work around is provided, assumes the remaining warranty of the original Code Product and does not extend the duration of the original warranty period.

Software and Data. The estimated RMA turn-around time from receipt at Code's facility to shipment of the repaired or replaced product to Customer is ten (10) business days. An expedited turn-around time may apply to products covered under certain CodeOne Service Plans. Customer is responsible for shipping and insurance charges for shipping Code Product to Code's designated RMA facility and repaired or replaced product is returned with shipping and insurance paid by Code. Customer is responsible for all applicable taxes, duties, and similar charges.

Transfer. If a customer sells a covered Code Product during the Warranty Coverage Term, then that coverage may be transferred to the new owner by written notification from the original owner to Code Corporation at:

CodeOne Service Center
12393 South Gateway Park Place, Suite 600
Draper, UT 84020

Limitation on Liability. Code's performance as described herein shall be Code's entire liability, and the Customer's sole remedy, resulting from any defective Code product. Any claim that Code has failed to perform its warranty obligations as described herein must be made within six (6) months of the alleged failure. Code's maximum liability related to its performance, or failure to perform, as described herein shall be limited to the amount paid by Customer for the Code product that is subject to the claim. In no event will either party be liable for any lost profits, lost savings, incidental damage, or other economic consequential damages. This is true even if the other party is advised of the possibility of such damages.

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