Single Tube Reader USB
User Manual

![AZENTA LIFE SCIENCES]

Azenta US, Inc.

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Original manual printed in English.

These are the original instructions for the Single Tube Reader USB.

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Revision History

Part Number: 281947

Azenta Single Tube Reader USB User Manual

Revision	Date
Revision 5	JUL 2014
Revision A	25 APR 2017
Revision B	1 OCT 2018
Revision C	12 MAR 2020
Revision D	16 AUG 2021
Revision E	11 JUL 2022

Table of Contents

1. Introduction

The Single Tube Reader USB from Azenta is a sophisticated 2D Datamatrix code reader. It is capable of reading standard pre-coded tubes from a range of manufacturers, assuming they adhere to the ISO 16022 Datamatrix Two Dimensional Bar Code format.

The Single Tube Reader USB can also read linear barcodes and has a larger viewing window to improve readability.

2. Installation
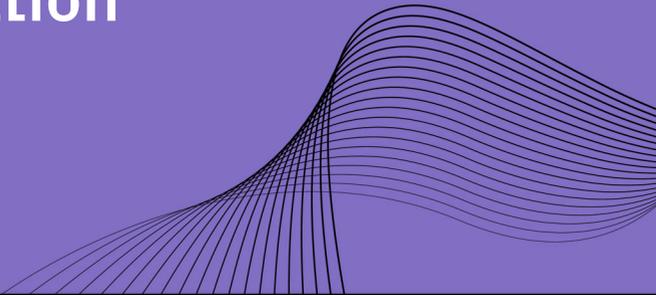
The system has been designed with minimal user setup and no software is required. The USB connector cable is already fitted.

Step	Action
1.	Ensure the connector cable is fully inserted into the reader, then connect the USB end to the USB port on the host device to power up the reader.
2.	The unit will beep twice and the LED will turn off. The Single Tube Reader USB is now ready for use.

NOTE: Any 1D or 2D Coded Tube scanned is sent directly through the keyboard buffer to wherever the cursor is blinking.

3. Specifications
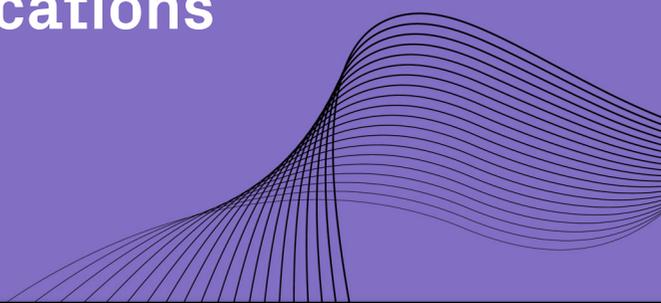
Parameter	Specification
Code formats read	2D Datamatrix, 1D linear barcodes, QR codes, ISO 16022, square and rectangular format, ECC 200, 0–20 grid sizes, white on black and black on white, numeric and alphanumeric
Sensor type	Sensor CMOS 1.2 Megapixel (1280 x 960) gray scale
Light source	Red LED with blue targeting LED
Read time	< 1 Second per tube or rack, either 1D or 2D
Ambient operating temperature	−20°C to 55°C
Tube compatibility	Reads single tubes from SBS format racks, either in 24, 48, 96, 240 or 384 formats; as well as glass compound storage tubes, cryo tubes and biological sample tubes

Parameter	Specification
Dimensions (H x W x D)	38 x 59 x 150 mm
Operating humidity	5% to 95% non-condensing
Power requirements	USB connection 5 vdc (mA): typical = <200 mA idle = <90 mA
Communication interface	USB 2.0 HID
Operating systems	Windows XP, Windows Vista, Windows 7, Windows 8, Windows 10, Windows CE, Mac O SX, Linux

4. Attaching the Cable
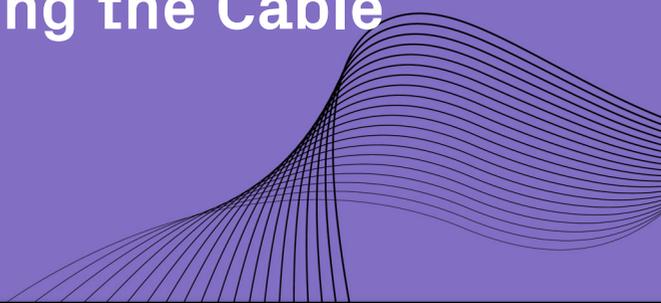
NOTICE

The RJ50 cable is a multi-pin connector and can be damaged if handled incorrectly. Ensure that the cable is fully pushed home. Errors may occur if the cable is not properly installed.

The connector cable is already attached, but if necessary the cable can be inserted by slotting the RJ50 connector into the reader.

NOTE: Ensure it is in the correct orientation.

5. Detaching the Cable

Step	Action
1.	Insert one end of a paperclip into the hole on the back of the reader.

Step	Action
2.	Apply pressure on the paperclip and gently pull the cable from the reader.

6. Reading a Tube
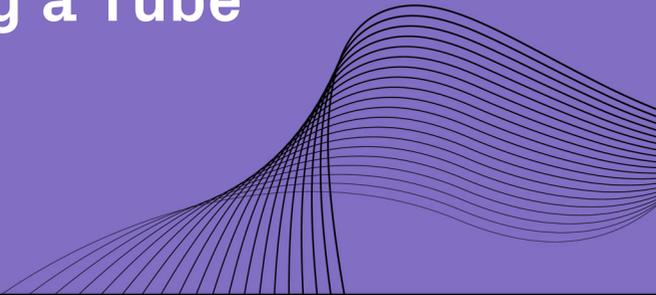
The Azenta Single Tube Reader USB simplifies reading tubes. By default, the device is not in continuous scanning mode, so the button will need to be pressed to scan. The continuous scanning feature of the Single Tube Reader USB reader can be turned *ON* by scanning the *Continuous Scan ON* Quick Setup Code on .

Continuous Scanning Disabled

Hold the tube approximately 0.5 cm (0.2 in) from the scanning window and press the button on top of the reader.

NOTE: This will prevent cross contamination and damage to the scanning window.

The unit will beep once to indicate a successful read.

Continuous Scanning Enabled

Hold the tube approximately 0.5 cm (0.2 in) from the scanning window.

*NOTE:* This will prevent cross contamination and damage to the scanning window.

The unit will beep once to indicate a successful read.

7. Reading a Linear Barcode

The Azenta Single Tube Reader USB also reads linear barcodes.

Use the targeting light to aim the beam over the linear barcode and press the read button. The unit will beep once to indicate a successful read.
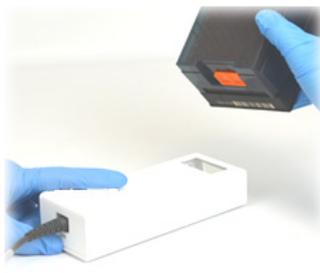
8. Reader Feedback
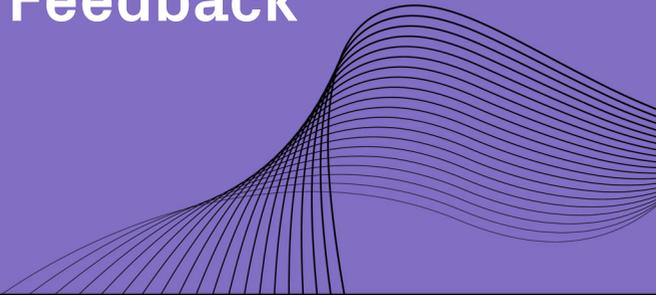
The Azenta Single Tube Reader USB reader uses a combination of LEDs and audibles to indicate different scenarios. See the chart below for more information.

Scenario	LED Feedback	Audio Feedback
Successfully powers up	Green LED lights up	2 Beeps
Attempting to decode	Green LED light is off	None
Successful decode and data transfer via cable	Green LED lights up	1 Beep
Configuration code successfully decoded and processed	Green LED lights up	2 Beeps
Configuration code successfully decoded but wasn't successfully processed	Green LED lights up	4 Beeps

9. Quick Setup Codes

The Azenta Single Tube Reader USB can be configured by scanning one of the codes from the table below.

NOTE: The configuration change will take effect immediately and be saved to memory.

Action	Setup Code	Setting
Continuous Scan Off		Default

Action	Setup Code	Setting
Continuous Scan On		Optional
Disable Alternative OS		Default
Enable Alternative OS (MAC/Linux)		Optional
Enabled reading of reversed codes (black on white or white on black).		Default
French Keyboard Mapping		Optional
German Keyboard Mapping		Optional
Japanese Keyboard Mapping		Optional

Action	Setup Code	Setting
Mirroring On		Default
Reader ID and Firmware		Technical Support
STD Contrast Code (35% AGC)		Optional
Suffix - Enter		Default
Suffix - Tab		Optional
Universal Keyboard Mapping		Default

10. Preventative Maintenance
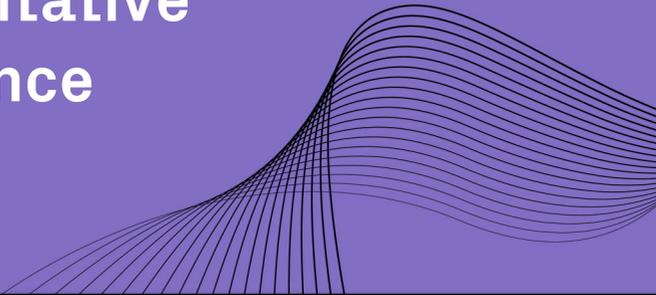
Periodically clean the scanning window with a moist, non-abrasive cloth to allow the best performance of the device. The following are safe to use for cleaning as needed:

- 70% Isopropyl Alcohol
- Cleanroom wipes
- Mild detergents

Appendix A: Troubleshooting
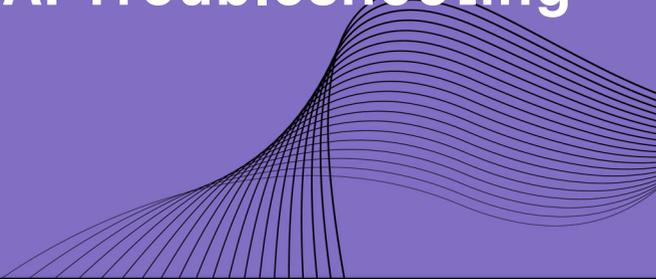
Single Tube Reader does not Read Barcodes

This procedure is for the recovery of Single Tube Reader units which cannot read barcodes.

Print this document to allow for easier scanning of the reset codes.

NOTE: This procedure applies only to Single Tube Readers which use QR codes for programming. Older Single Tube Readers use Datamatrix codes and are outside of scope of this procedure.

Step	Action
1.	Scan the QR code below. M20111_01 Reset to Factory Defaults M2 E3 Hold the scanner approximately 50 mm (2 in.) from the code. The blue aiming light from the scanner does not need to completely cover the code, as it is the wider area red illumination which provides the reading. A successful read and reset is indicated by two beeps from the scanner with the second beep at a higher pitch than the first.

Step	Action
2.	If scanning the Factory Reset code fails to resolve the issue, Mirror Reading mode of the scanner is set incorrectly (the scanner within the Single Tube Reader sees codes through a mirror therefore, this mode is required). Scan the code below (Factory Reset code printed as a mirror image). A successful read and reset is indicated by two beeps from the scanner with the second beep at a higher pitch than the first.

Step	Action
3.	Performing a Factory Reset returns the unit to basic factory settings. To reconfigure the device, scan the code below. A successful read is indicated by two beeps from the scanner with the second beep at a higher pitch than the first. Inverted image to allow reading via a mirror with the mode switched off.
4.	Program the scanner to read Datamatrix codes through the mirror. Scan the code below. A successful read is indicated by two beeps from the scanner with the second beep at a higher pitch than the first.

NOTE: Additional configuration codes can be found in "Quick Setup Codes" on page 18.

Appendix B:
Declaration of CE Conformity

DOCUMENT NUMBER: **309512**	TITLE: **Declaration of Conformity, Low Voltage Directive**	**AZENTA** LIFE SCIENCES
REVISION: B ECO# **EC132455**	DOCUMENT CLASSIFICATION: 04-Form, Template or Other	

DECLARATION OF CONFORMITY

Description: Scope USB – Single sample tube 2D code reader

Function: To provide instant "plug and play" decoding of all 2D barcoded tubes and 1D
                            barcoded tubes and racks.

Product code: FLX-20-1003, 20-1003

Business name and full address of the manufacturer of the machinery:
Azenta Life Sciences, Northbank, Irlam, Manchester M44 5AY, United Kingdom

Name and address of the person, established in the Community, authorized to compile the relevant technical documentation:
Azenta Life Sciences (Germany) GmbH, Im Leuschnerpark 1B, 64347 Griesheim, Germany

The manufacturer declares:
- That this equipment fulfills all the relevant provisions of Low Voltage Directive 2014/35/EU.
    - EN 61010-1:2010+A1:2019. Safety requirements for electrical equipment for measurement, control, and laboratory use. General requirements
- That this machinery fulfils all the relevant provisions of Directive 2014/30/EU (EMC Directive)
    - EN 61326-1:2021 Electrical equipment for measurement, control and laboratory use. EMC requirements. General requirements
- That this machinery is in conformity with Directive 2011/65/EU of the European Parliament and of the Council of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment and amendment 2015/863/EU.
    - BS EN IEC 63000:2018. Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances.

Year CE Marking Affixed to Product: 2016

Signed for and on the behalf of Azenta Life Sciences:

Rob Woodward

Rob Woodward (Oct 25, 2021 05:58 GMT+1)

Print name: Rob Woodward
Position: Senior Vice President, Global Quality Executive Management
Place: Irlam, Manchester

Date Printed: Saturday, October 23, 2021	**This is uncontrolled when printed**	PAGE **1** OF **1**

Appendix C: WEEE Statement

The symbol above indicates that Waste Electrical and Electronic Equipment (WEEE) is not to be disposed of as unsorted municipal waste. Equipment marked with this symbol is to be collected separately.

The objectives of this program are to preserve, protect and improve the quality of the environment, protect human health and utilize natural resources prudently and

rationally. Specific treatment of WEEE is indispensable in order to avoid the dispersion of pollutants into the recycled material or waste stream. Such treatment is the most effective means of protecting the customer's environment.

The waste collection, reuse, recycling, and recovery programs available to Azenta Life Sciences customers, vary by customer location. Please contact the responsible body (e.g., your laboratory manager) for information about local requirements.