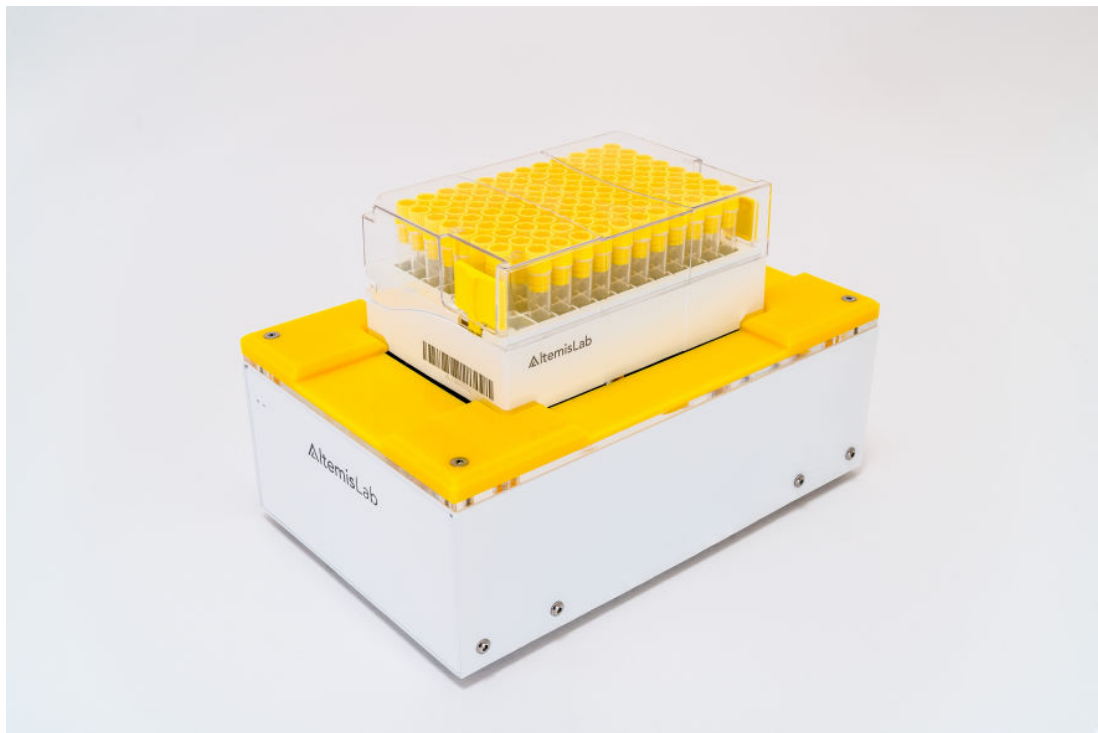


AlteRead™ SBS rack
2D barcode camera reader
User Manual



AlteRead™ SBS rack 2D barcode camera reader User Manual

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This is Version 1.1 of the
AlteRead SBS rack 2D barcode camera reader user manual

For use with:

Part Number	Description
252000	AlteRead SBS rack 2D barcode camera reader

Revised: June 2021

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Installation of the AlteRead SBS rack 2D barcode camera reader and AlteRead software

Included in the box:

- AlteRead SBS rack 2D barcode camera reader
- USB cable
- Power supply & cable
- Software CD
- Licence key
- User manual
- Installation & quick start guide

1. Turn on the AlteRead SBS rack 2D barcode camera reader

- Connect the AlteRead SBS rack 2D barcode camera reader to the power supply and switch the mains power on
- The BLUE status light on the front of the unit indicates power is on

2. Connect to the computer

- Connect the AlteRead SBS rack 2D barcode camera reader to a windows computer using the USB cable
- Windows should automatically install the necessary driver if required
- Alternatively install the AlteRead driver from the AlteRead software CD and wait for installation to complete

3. Install the AlteRead software

- Select and run the AlteRead software installer on the AlteRead software CD
- Follow the instructions on screen
- Follow the *installing the AlteRead software licence key* instructions on page 5

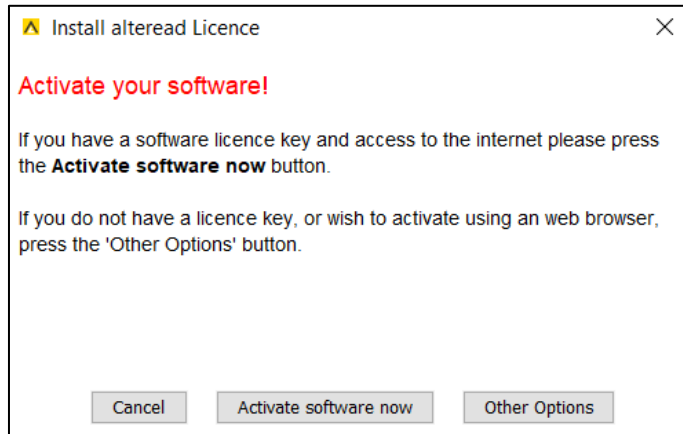
4. Proceed to set up

- The AlteRead SBS rack 2D barcode camera reader is ready to use once the RED status light on the front of the unit has changed to GREEN
- Follow the *Setting up the AlteRead SBS rack 2D barcode camera reader* instructions on page 9

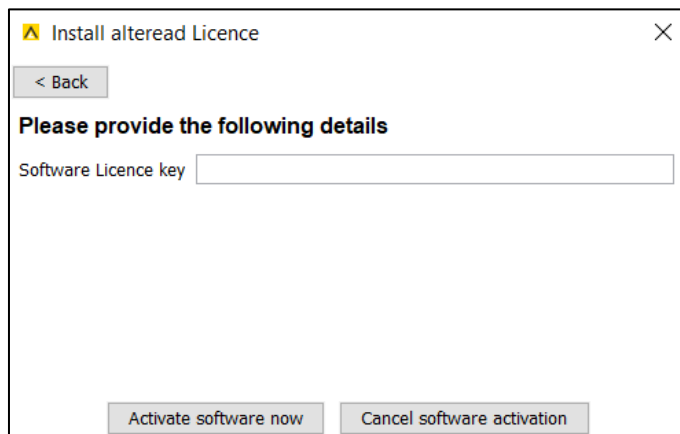
Installing the AlteRead software licence key

A unique **AlteRead software licence key** is included

1. The first time the AlteRead software is opened, this screen will show:



2. Ensure the computer is connected to the internet and select **Activate software now**. A new screen will show:



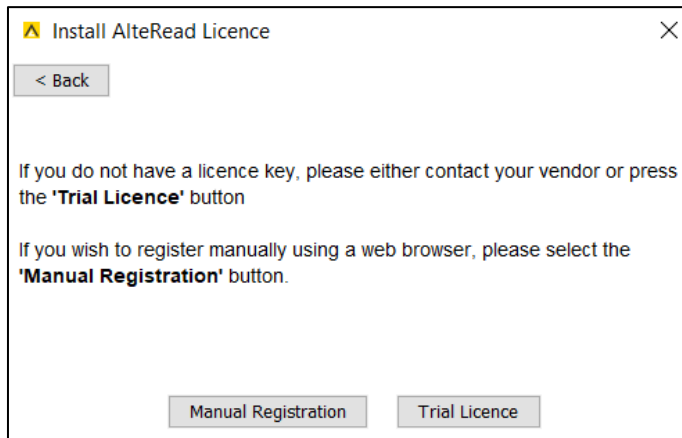
3. Enter the **AlteRead software licence key** provided
4. Select **Activate software now** and the AlteRead software registration will start



Other AlteRead software licence options

If the **Activate software now** process is not possible (perhaps due to a security restriction on the local system or if no internet connection is available) follow the options below:

1. Select **Other Options** and this screen will show:

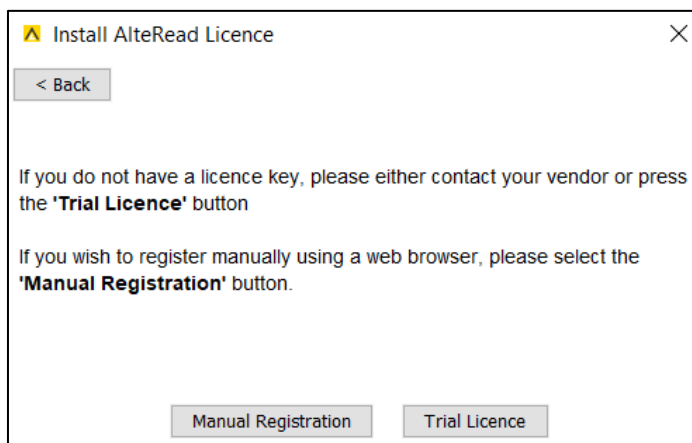


Trial licence

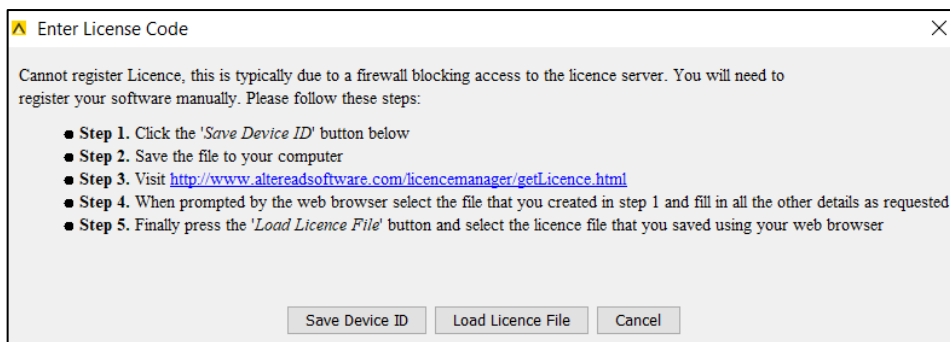
The AlteRead software will start and be fully functional except that 10% of the decoded barcodes will be absent and replaced with the word **TRIAL**.

Manual Registration

1. Select **Manual Registration** on this screen:



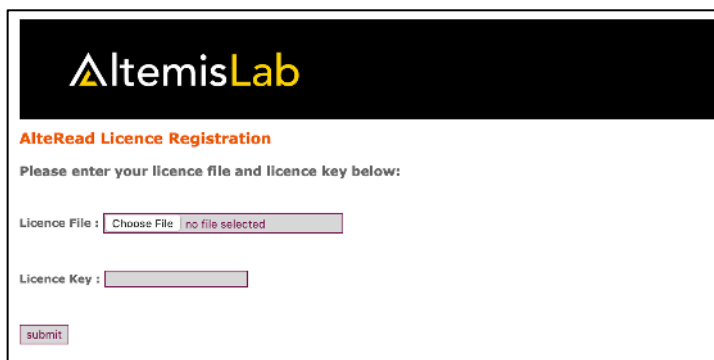
2. The following screen will show:



3. Select **Save Device ID** and save the file to the Desktop

4. Follow the link: <http://www.altereadsoftware.com/licencemanager/getLicence.html>

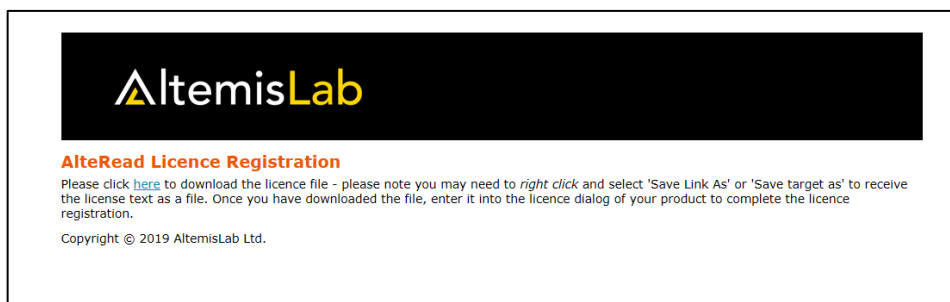
5. The following screen will show:



6. Select **Choose File** and select the file previously saved to the desktop

7. Enter the unique **AlteRead software licence key** (provided) when prompted

8. Select **submit** and the following screen will show:

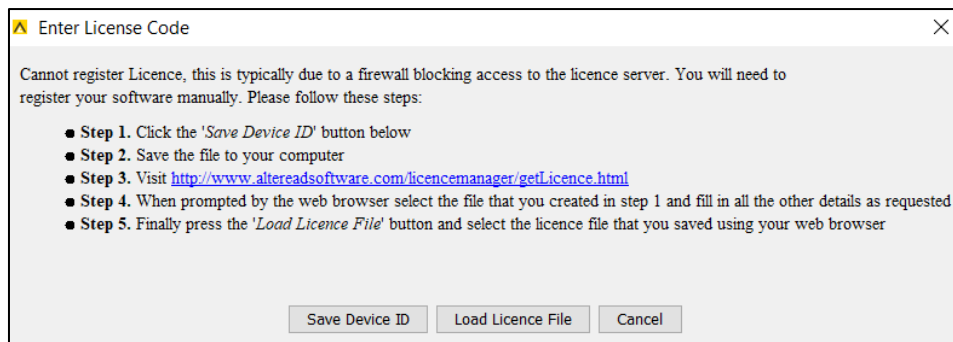


9. Download the licence file by selecting the **here** link

10. Select **Save Link As** (Firefox and Chrome) or **Save Target As** (Internet Explorer)

11. Save the file to the Desktop

12. Return to the *Enter Licence Code* screen:



13. Select *Load Licence File* and load the previously downloaded file

14. AlteRead software registration will now start

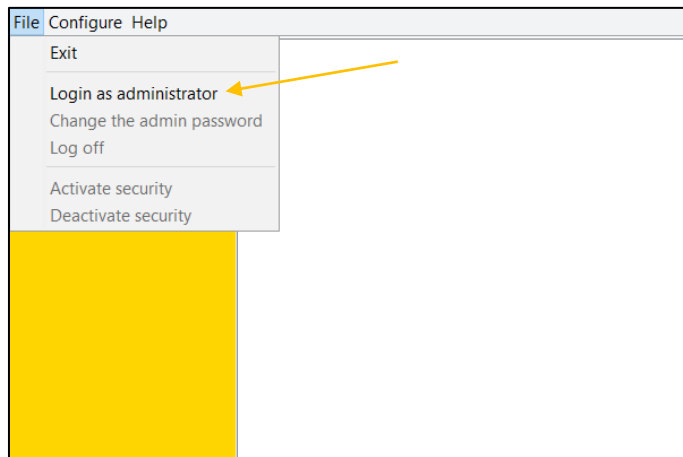
Please contact support@altemislab.com if any help is needed with registering the AlteRead software licence key.

Administrator login

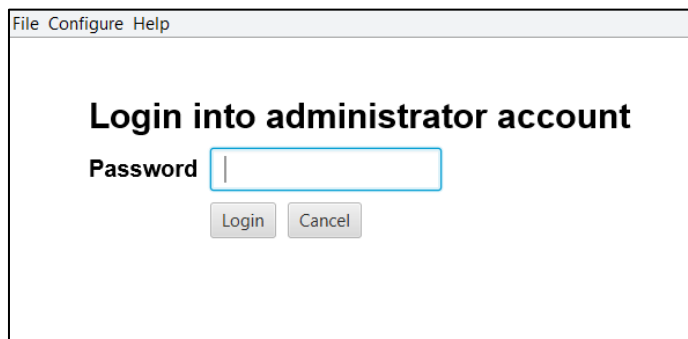
An administrator can be set up so that a password is required to change any settings in the AlteRead software. When the AlteRead software is first installed the user is prompted to create an administrator password.

Activate the security

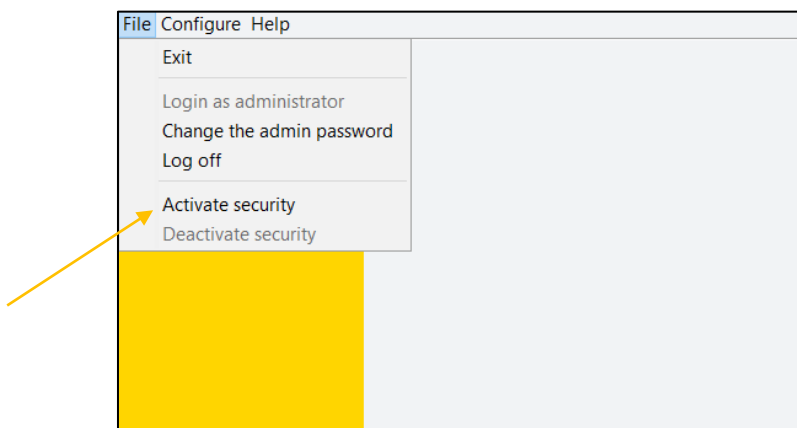
1. In the file menu, select ***Login as administrator***.



2. The following screen will appear and enter the password previously created



3. Select ***Activate security*** in the ***File*** menu:



4. It will not be possible for any other user to modify the settings, once the security is activated and the administrator has logged off

User Account is displayed in the window title when the security mode is enabled.

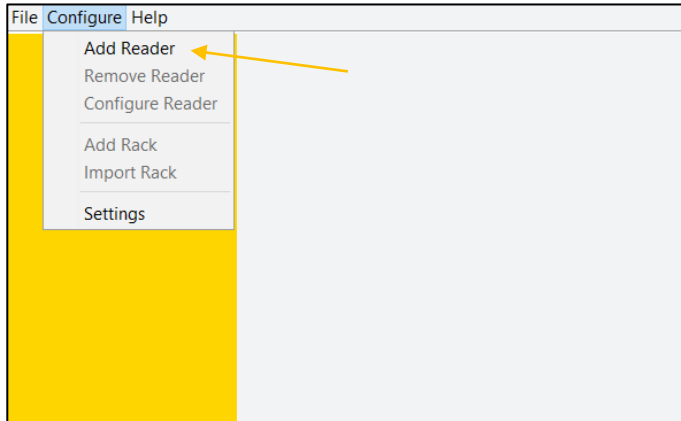
A warning message will show if a user attempts to modify the settings. Any attempt to alter the settings on the hard drive will disable the AlteRead software until the administrator password is entered.

From the ***File*** menu the administrator password can be changed, and the security settings can be deactivated.

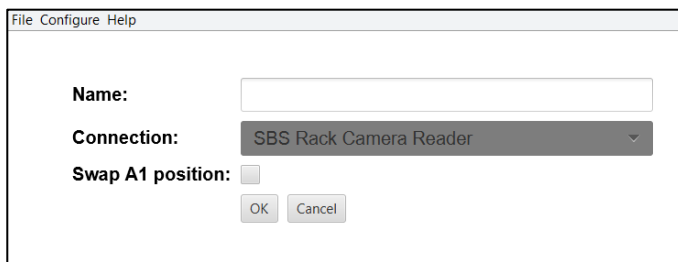
Setting up the AlteRead SBS rack 2D barcode camera reader

Add Reader

1. Select the **Configure** menu and then **Add Reader**.



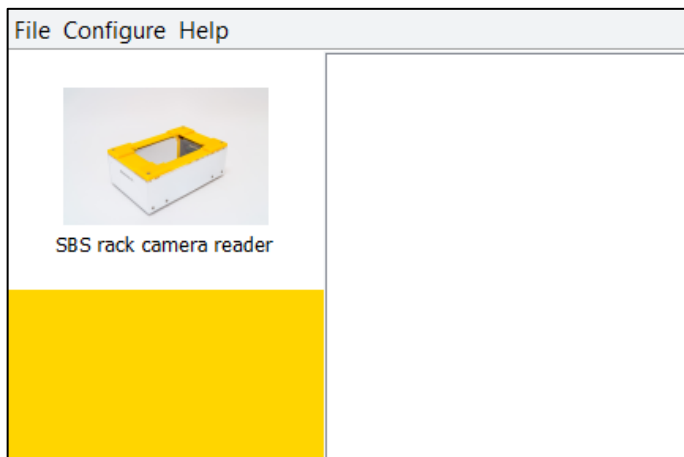
2. The following screen will show:



3. Enter a name for the reader and if more than one reader is connected; select the reader from the **Connection** drop down menu

Only AlteRead SBS rack 2D barcode camera readers that are connected will show.

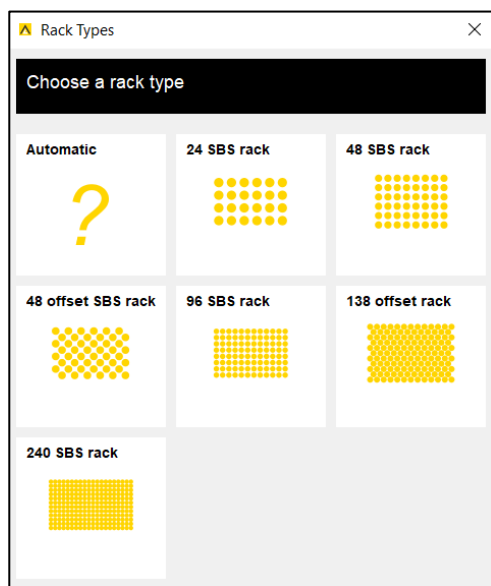
4. Check **Swap A1 position** only if the rack is to be placed on the reader with A1 at the opposite end
5. Select **OK**. The image for this reader will now be displayed on the home screen:



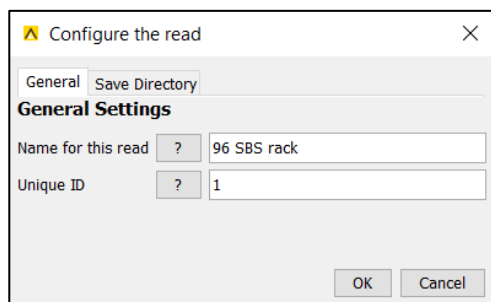
Add rack type

The AlteRead software has been pre-calibrated for the most commonly used SBS rack types. The smart AlteRead software can automatically detect between 24, 48 and 96 rack types when the **Automatic** rack type is selected. We recommend selecting specific rack type templates if one rack type is regularly used because this ensures the fastest results possible.

1. Select the **Configure** menu and then **Add Rack**
2. Select the rack type:

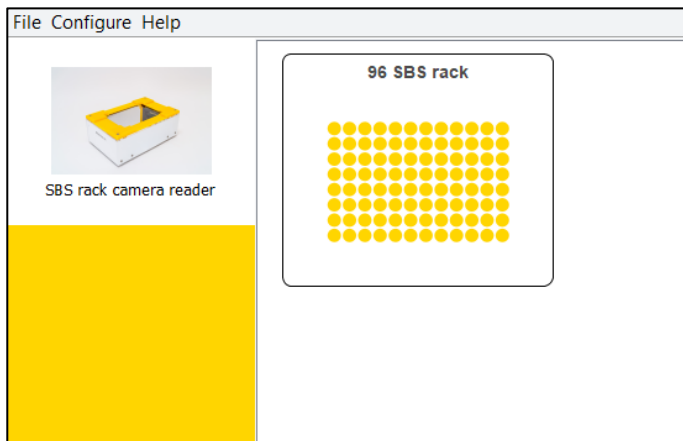


3. This screen will show:



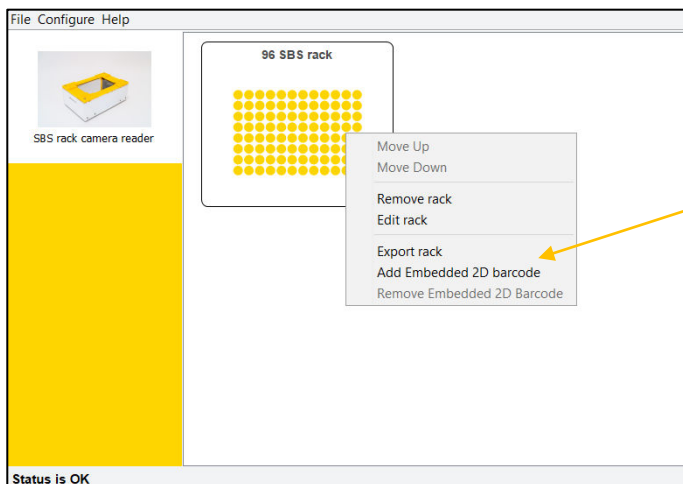
4. In the **Configure the read** screen the name for this rack can be edited if required
5. The unique ID is used for remote interaction (see remote control manual if needed)
6. Select **OK**

- The image for this rack type will now be displayed on the home screen:

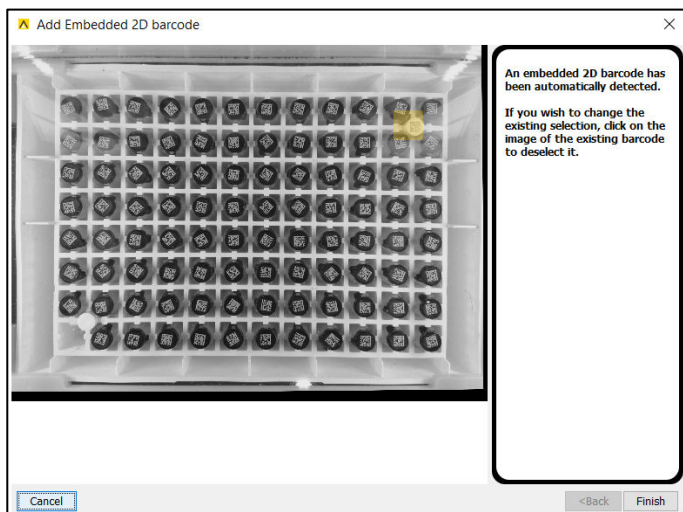


Adding an embedded 2D rack barcode (rack ID)

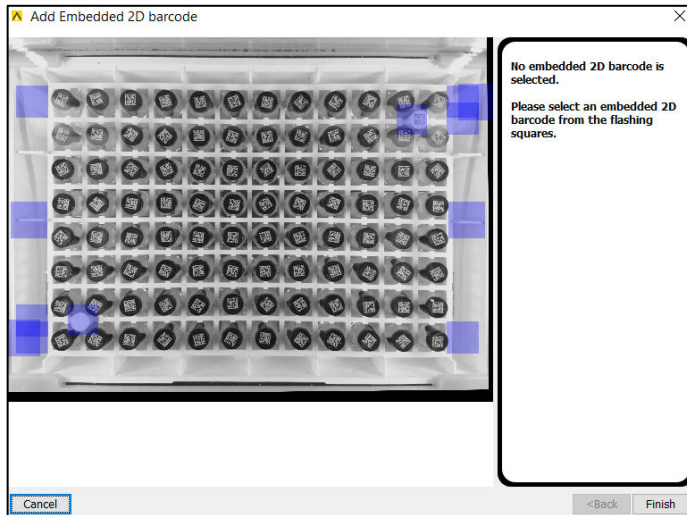
- Right click on the rack type showing on the home screen
- Select **Add Embedded 2D barcode**:



- The reader will automatically locate the embedded 2D barcode and the following screen will show:



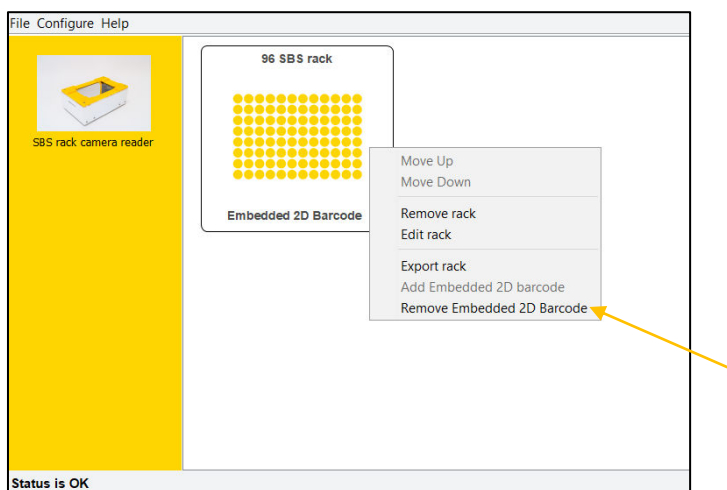
4. If the correct location is showing, select **Finish**
5. If the location of the embedded 2D barcode is incorrect, click on the yellow square
6. This screen will show:



7. Select the flashing blue square that is the correct position for the embedded 2D barcode. Select **Finish**
8. **Embedded 2D Barcode** will now be listed below the rack image on the home screen

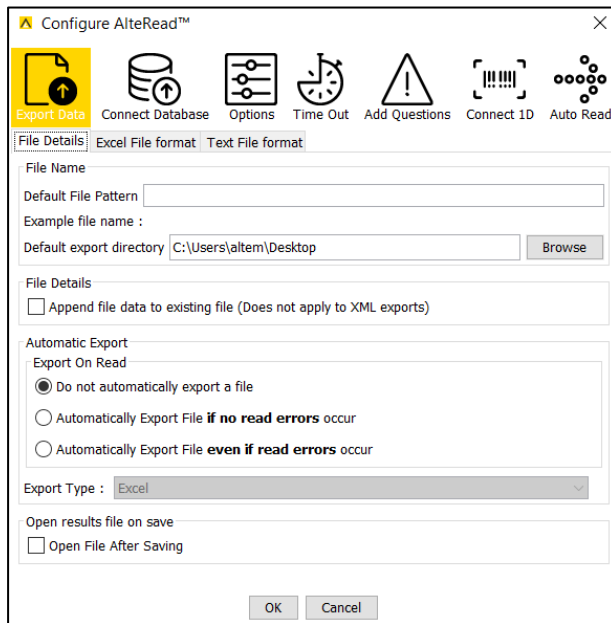
Removing an embedded 2D rack barcode (rack ID)

1. On the home screen; right click on the rack type
2. Select **Remove Embedded 2D barcode**



Export data settings

1. To set the preferences for exporting data select **Settings** in the **Configure menu**
2. In the **Settings** screen the first tab: **Export Data** has three sections:



File Details

- **Default File Pattern** – this is the default file name which will appear in the Save as file chooser or will be saved automatically if automatic export is selected (see below). Note the substitution for the special elements as follows:
 - **<date>** – places the date in the filename
 - **<time>** – places the time in the filename
 - **<barcode>** – places the linear barcode in the filename (if all racks are exported the barcodes are separated with an underscore). To be used if the linear barcode module is connected. #rack0 will display if a linear barcode reader is not connected.
 - **<embedded2D>** – places the embedded 2D rack barcode (rack ID) in the filename
 - **<uid>** – places the unique ID that was given to the read in configure the read settings (see page 12)
 - **<racktypename>** – places the name that was given to the rack in the configure the read settings (see page 12)

An automatic extension is shown beneath as the text is entered. In addition, be aware this pattern excludes the extension for the file name if exporting a text file; for an Excel file the extension .xls will be added if one is not already present and for XML .xml will be added.

- **Default Export Directory** – this is the default save directory which will be used in the Save as file chooser or will be saved automatically if automatic export is selected (see below).

- **File Details** – if the file to be saved to a file that already exists, data will be appended to the file instead of being overwritten and/or a dialogue warning of being overwritten is displayed. If the export is text, the data will be written at the end of the file and if the export is Excel, a new Excel sheet will be written. Note that this is ignored if export type is XML as it is not possible to append to an XML file.
- **Automatic Export** – if this is selected after reading, the resulting data from the read will automatically be saved using the options in this dialogue. There are two choices for the export; either to write the data if there are no read errors detected (only empty of confirmed reads are detected) or to always write the data regardless of the results in the read.
- **Export Type** – if automatic export is selected, this determines the format which will be automatically exported. The options are Text, Excel and XML.
- **To export as a .csv file** – Select Text as the Export type. Enter the filename and/or special elements followed by .csv in the Default File Pattern box
- **Open file after saving** – if this is selected the file will be opened directly after saving according to the type of file it is; Excel will open excel files and Notepad will open text files.

Excel File Format

Each line represents a column in the export file. The first line represents the first column in the Excel sheet, the second line as the second column and so on. There are a limited number of parameters shown. Should further “Data Types” wish to be entered, click on “Add Column” and then click on the new cell in “Data Type” and choose the type from the drop-down box. Use the remove column button if less data is required.

Data Type to be exported:

Data Type	Description
Rack Barcode	Linear barcode of the rack which has been read
Tube Barcode	2D barcode of the tube which has been read
Embedded 2D Barcode	2D barcode on the underside of the rack
Tube Position	Location of the tube
Tube Column	Column location of the tube
Tube Number	Tube counting row wise or column wise
Tube Row	Row location of the tube
Tube Row Text	Row location of the tube as text, starting from A
Date	Date of the read
Time	Time of the read
Datetime	Time and date of the read

The exact details of the data to be exported can be edited in the **Cell Formatting** column. Details of the **cell formatting** for each Data Type:

Letter	Date or Time Component	Presentation	Examples
G	Era designator	Text	AD
Y	Year	Year	1996; 96
M	Month in year	Month	July; Jul; 07
w	Week in year	Number	27
W	Week in month	Number	2
D	Day in year	Number	189
d	Day in month	Number	10
F	Day of week in month	Number	2
E	Day in week	Text	Tuesday; Tue
a	Am/pm marker	Text	PM
H	Hour in day (0-23)	Number	0
k	Hour in day (1-24)	Number	24
K	Hour in am/pm (0-11)	Number	0
h	Hour in am/pm (1-12)	Number	12
m	Minute in hour	Number	30
s	Second in minute	Number	55
S	Millisecond	Number	978
z	Time zone	General time zone	Pacific Standard Time; PST; GMT-08:00
Z	Time zone	RFC 822 time zone	-0800
Additional letters will result in additional text or digits. For example, M = 6, MM = 06, MMM = Jun and MMMM = June. For example, s = 4 and ss = 04			

Some examples are detailed below:

Date and Time Pattern	Result
yyyy.MM.dd G 'at' HH:mm:ss z	2001.07.04 AD at 12:08:56 PDT
EEE, MMM d, 'yy"	Wed, Jul 4, '01
h:mm a	12:08 PM
hh 'o'clock' a, zzzz	12 o'clock PM, Pacific Daylight Time
K:mm a, z	0:08 PM, PDT
yyyy.MMMMMM.dd GGG hh:mm a	02001.July.04 AD 12:08 PM
EEE, d MMM yyyyHH:mm:ss Z	Wed, 4 Jul 2001 12:08:56 -0700
yyMMddHHmmssZ	010704120856-0700
yyyy-MM-dd'T'HH:mm:ss.SSSZ	2001-07-04T12:08:56.235-0700

Date – presents the read date, all formatting characters which refer to the time are not allowed in the formatting string.

Time – presents the read date, all formatting characters which refer to the date are not allowed in the formatting string.



Excel Export Template actions:

- **No Error** – If there is a problem with the cell formatting string while editing, this will explain the problem
- **Write Excel Header** – If this is selected the column header will be written into the Excel sheet which is the name of the data type being written
- **Add Column** – This will add an extra column to the export template for the specified data
- **Remove Column** – This will remove the selected row from the export template
- **Up Arrow** – This will move the selected row up the table
- **Down Arrow** – This will the selected row down the table

Text File Format

The format is written in a system called a mark-up language (specifically Freemarker). The export can be prepared for both read results and Add Questions options.

Once a field has been edited the result can be tested by clicking the Test Data Export button which will display the results including any changes made. If the format is not correct an error will be shown. Once this configuration is established it can be saved and the text export will now be used.

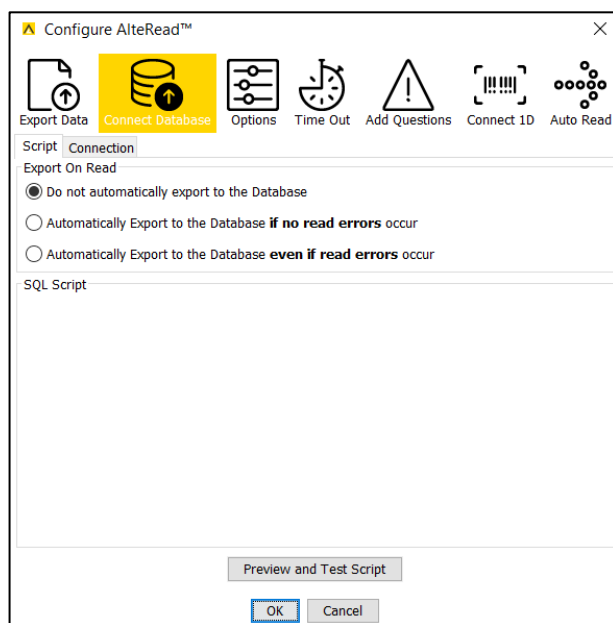
The **Reset Template** button will restore the original default text export template; clicking this will remove the newly edited template.

Connecting to a database

The database interaction feature allows for the results of a read to be inputted directly to a database. The results will be sent to the database system as long as no tubes fail to read.

A database connection can be setup either directly to the most common database systems (Oracle, Postgres, MySQL, SQL Server), by an ODBC connection configured on the computer running the AlteRead software or a compatible driver can be uploaded to communicate with another database system (e.g. Derby, SQLite).

1. Select **Settings** in the *Configure* menu
2. Select the second tab *Connect Database*.



3. Select the *Connection* tab
4. This window allows for the configuration of the connection to the database. The input elements are described below:
 - a) **Select Database Type** – in this option the main database systems can be selected:
 - HSQL Embedded
 - MySQL
 - JAVA/ODBC bridge
 - Postgres SQL
 - Oracle Thin
 - Other (see below)
 - SQL Server

- b) **Choose Jar File** – this is only active if Other has been selected in the previous option. In this case locate a JDBC compatible driver for your database which is packaged in a jar file to use. Ensure that this file is locatable in the future (for example, store it on the hard drive of the machine running the AlteRead software). Should there be difficulty in locating a driver for your database system, contact AltemisLab at support@altemislab.com.
- c) **Choose Driver Class** – this is this is only active if Other has been selected in the previous option. In this case select a driver class to use. Should there be more than one option, consult the documentation from the driver manufacturer. Should there be difficulty in locating a driver class for your database system, contact AltemisLab at support@altemislab.com.
- d) **Connection URL** – this will differ from system to system as different database systems have differing requirements. A brief summary of the types is detailed below:
 - i. HSQL Embedded – [jdbc:hsqldb:<database>](#) – In this case enter the name of the embedded database to use.
 - ii. MySQL – [jdbc:mysql://<server>:<port3306>/<database>](#) – The server is the name or IP address where the database is running and the port is where the MySQL server is listening. The database is the name of the database to be connected to.
 - iii. JAVA/ODBC Bridge – [jdbc:odbc:<datasource>](#) – The datasource is the name of the ODBC connection which has been setup on the local machine. If possible, it is preferable to configure a direct connection, but this option is available should it be required.
 - iv. Postgres SQL – [jdbc:postgresql://<server>:<port5432>/<database>](#) – The server is the name or IP address where the database is running and the port is where the Postgres SQL server is listening. The database is the name of the database to be connected to.
 - v. Oracle Thin – [jdbc:oracle:thin:@<server>:<port1521>:<sid>](#) – The server is the name or IP address where the database is running and the port is where the Postgres SQL server is listening.
 - vi. Other – This is detailed above.
 - vii. SQL Server – [jdbc:jtds:sqlserver://<server>:<port1433>;DatabaseName=<database>](#) – The server is the name or IP address where the database is running and the port is where the MySQL server is listening. The database is the name of the database to be connected to. Note that this is not the default Microsoft server but an alternative Open Source version – this is due to licensing restrictions from Microsoft.
- e) **Username** – This is the username to use to connect to the database
- f) **Password** – This is the password to use to connect to the database; note that it is



stored on the hard drive in a non-obvious format but still in a format which, with determination, can be read by a third party.

- g) The **Test Connection** button will use the above properties and attempt to connect to the database in question.

Database Script

1. Select **Settings** in the **Configure** menu
2. Select the second tab **Connect Database**
3. Select the **Script** tab

A script defines the SQL statements which will be executed after a rack has been scanned. Variables can be used to represent a value which is enclosed between two "@" symbols: @.

The available variables are shown below:

RACK_UUID – this is a unique id which is generated for every rack that is scanned.

WELL_UUID - this is a unique id which is generated for every tube that is scanned.

LINEAR – this is the barcode of the scanned rack.

ORIENTATION - this is the 2D barcode on the underside of the rack

BARCODE – this is the barcode of the scanned tube.

COL – this is the column of the scanned tube.

ROW – this is the row of the scanned tube.

NUM_ROWS – the number of rows in the rack

NUM_COLS – the number of columns in the rack

For each tube a query with the available variables will be executed; however, if a query would be exactly repeated it is not executed twice. An example script follows:

```
insert into rack (id, barcode) values ('@RACK_UUID@', '@LINEAR@');
insert into tube (id, rack_id, rack_col, rack_row, barcode)
  values ('@WELL_UUID@', '@RACK_UUID@', @COL@, @ROW@, '@BARCODE@');
```

This would generate one SQL statement (96 identical copies of the same statement mean that the statement would only be executed once) to insert the rack and (assuming a 96-tube rack) 96 SQL statements to insert the well data.

For testing purposes, **Preview and Test Script** button, on the script interface, can be clicked. This will display the exact SQL statements which will be executed.

If the **Execute** button at the top left of the window is clicked, the SQL will be executed against the host database. The data which is loaded in will have the barcodes beginning with **TEST** so they can be identified and purged from the database after the test.



For operation, the system can be configured to automatically execute when a rack is scanned as long as no read failures occur by clicking the Automatically Export checkbox on the script entry dialogue.

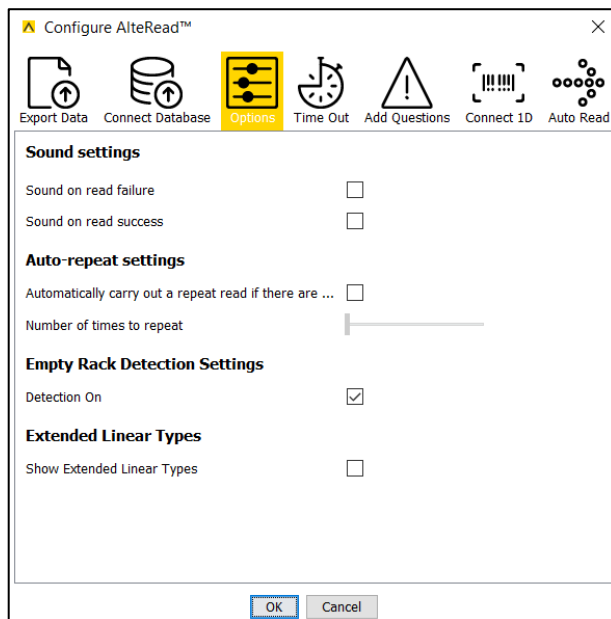
The available options are below:

- **Do not automatically export to the Database** – the export will not happen under any circumstances
- **Automatically export if no read errors occur** – only export if every well is either read or marked as empty
- **Automatically export even if read errors occur** – always export, even if a tube is not read correctly

All of the data which is uploaded will be in one single transaction. Therefore, if there is a problem with the update, the entire update will be cancelled – avoiding part racks from being uploaded.

Options

1. Select **Settings** in the **Configure** menu and select the third tab **Options**:



Sound settings

Check the boxes to activate two different sounds that will play on read failure and success.

Auto-repeat settings

The AlteRead software can be set to re-read the rack a number of times to attempt to decode a tube that may not decode correctly on a first read due to external factors.

1. Check the box to activate **Auto Repeat** and select the number of times the reader should repeat after a tube has failed to read

Empty Rack Detection Settings

The AlteRead software default adaptive mechanism detects locations without a tube during normal use. **EMPTY** replaces the barcode in the results data. This setting should be activated if completely empty racks are to read.

1. Select **Detection On** to read completely empty racks

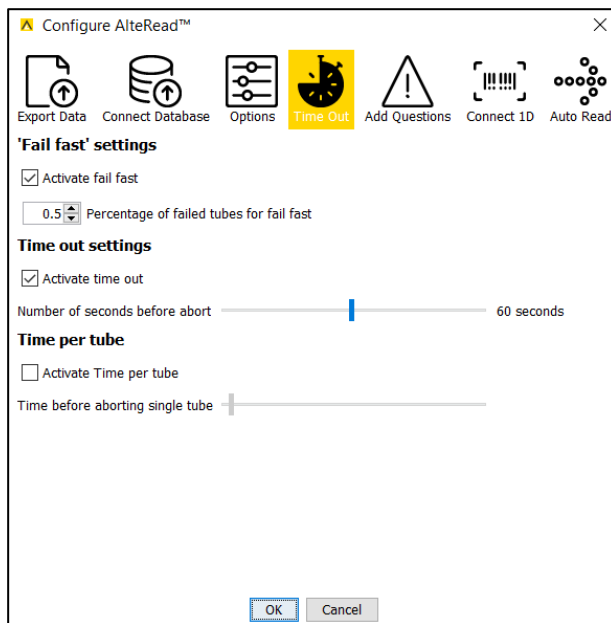
Extended Linear Types (when using the option linear (1D) barcode reader)

1. Select **Show Extended Linear Types** to enable reading of the rarely used EAN8, EAN13 and CODABAR linear barcode types (when using the option linear (1D) barcode reader)

Time Out

Failure to read some 2D barcodes is usually caused by damaged barcodes or when the reader is being used in areas with very bright lighting. The length of time that the reader attempts to re-read failed barcodes can be adjusted.

1. Select **Settings** in the **Configure** menu
2. Select the fourth tab **Time Out**.



'Fail fast' Setting

The percentage of tubes that have failed to read before the reader stops.

1. Check **Activate fail fast**
2. Select the percentage of tubes that fail before the reader stops (a fraction between 0 and 1)

Time out settings

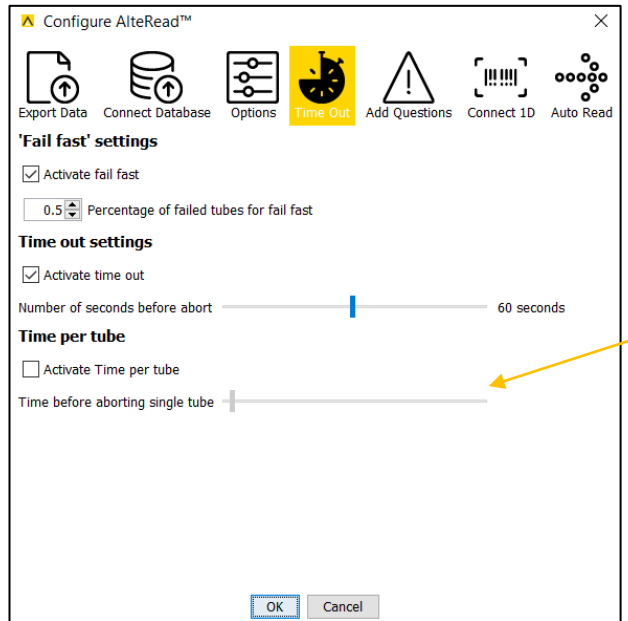
The number of seconds the reader will wait without having completed the read before aborting.

1. Check **Activate time out**
2. Set the number of seconds before the reader aborts

Time per tube

This is how long the reader will attempt to decode a single tube.

1. Check **Activate Time per tube**
2. Set the number of milliseconds per tube

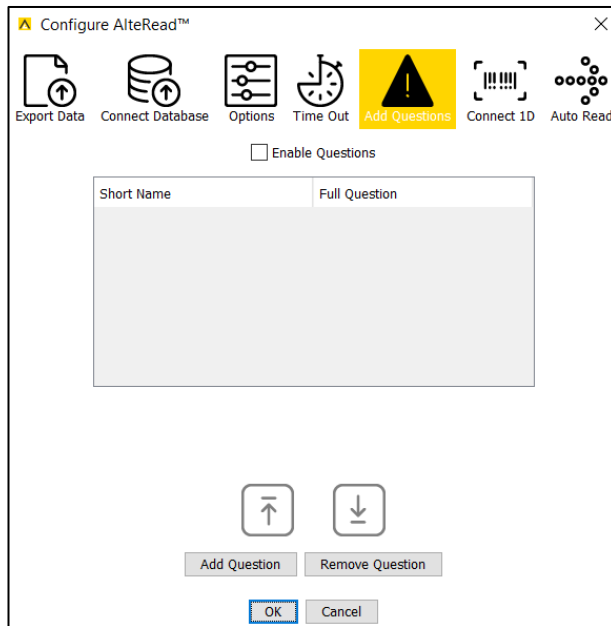


Please note that this needs to take into account the speed of the computer running the AlteRead software and other tasks the computer may be doing, such as a virus checker.

Add Questions

The AlteRead software can be configured so that the software prompts a user to input data in response to one or a series of defined questions.

1. Select **Settings** in the **Configure** menu
2. Select the fifth tab **Add Questions**:



In the AlteRead software a question has three sections:

- Short Name - a brief identifier which is used to categorise the answer
- Full Question - the full question text which is displayed to the user at read time
- Answer – the answer given by the user when the rack is read

1. Select **Add Question**
2. Double click in the Short Name box and edit the text
3. Double click in the Full Question box and edit the text
4. Use the arrow icons to change the order in which the questions will appear
5. Use Remove Question to delete a question
6. Check **Enable Questions**. The questions will now appear on the screen prior to the reader completing a read.

Connecting the optional Linear (1D) barcode reader

Part Number	Description
251050	AlteRead 1D Barcode Reader with mounting bracket For use with AlteRead SBS rack 2D barcode camera reader.

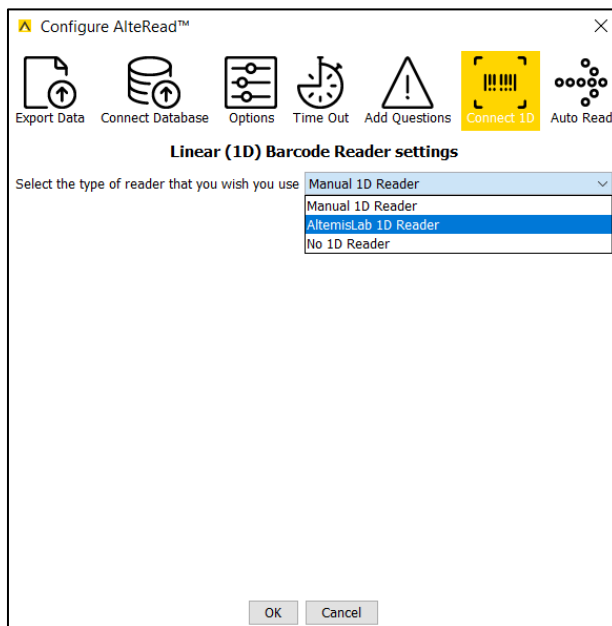
Installation

Attach the Linear (1D) barcode reader and bracket (supplied) to the AlteRead SBS rack 2D barcode reader. This has a strong magnet to accurately locate the linear (1D) barcode reader.

Connect the Linear (1D) barcode reader using the USB cable to the PC running the AlteRead software (no software or drivers are required).

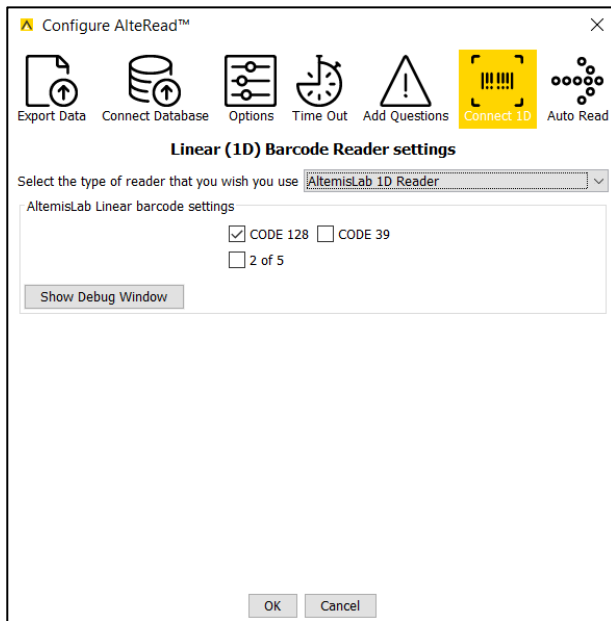
Linear (1D) barcode reader set up

1. Select **Settings** in the **Configure** menu
2. Select the sixth tab **Connect 1D**.



3. Select **AltemisLab 1D reader**

4. Check the linear barcode type box and select **OK**:



It is recommended that only the type of barcode that will be used is selected. This is especially important for barcodes without checksums such as Interleaved 2 of 5.

The Debug Window will open a separate window showing the results from the linear reader at varying different exposures typically used to detect a rack barcode. This is intended to be used for trouble shooting if the linear reader does not perform correctly.

Other 1D rack barcode reading options:

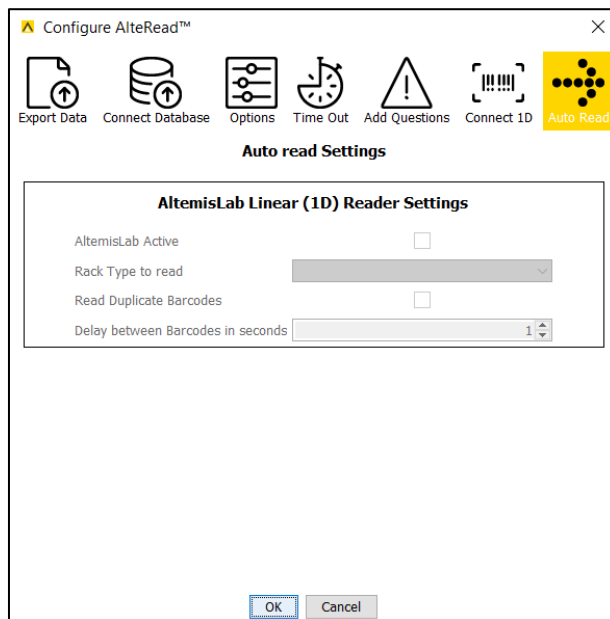
- **No 1D Reader:** When this is selected all rack 1D barcodes will be reported as #rack1.
- **Manual 1D Reader:** This configures the AlteRead software to prompt for the linear barcode which is typed in by the user manually or by using a handheld linear barcode scanner. Check the linear barcode type box as per step 2.

Please refer to page 13 for instructions on how to set up the reading of an Embedded 2D rack barcode.

Auto Read

The AlteRead SBS rack 2D camera reader can automatically read and decode racks that are placed on the reader when the AltemisLab linear (1D) barcode reader is connected. When a rack is placed on the reader the AltemisLab linear (1D) barcode reader detects the linear (1D) barcode on the side of the rack and initiates the read.

1. Select **Settings** in the **Configure** menu
2. Select the seventh tab **Auto Read**.



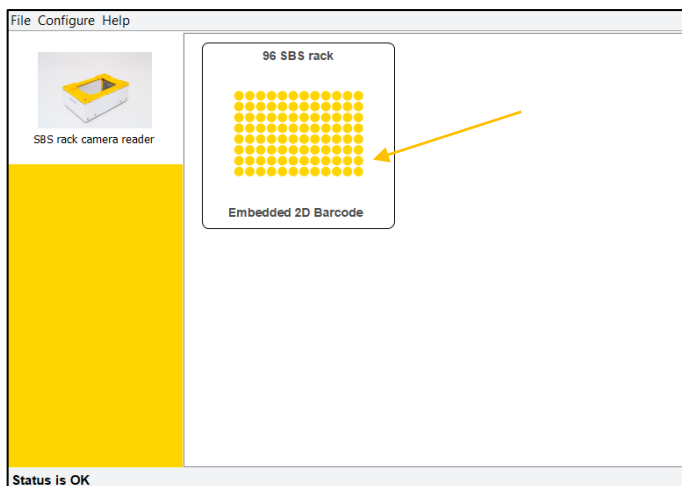
3. Check **AltemisLab Active**
4. Select the rack type to read (previously set up) from the drop-down menu
5. Check **Read Duplicate Barcodes** if the same barcode on the rack will be read twice in a row
6. Set the number of seconds for the **Delay between Barcodes** if the same barcode on a rack will be read twice in a row

Using the AlteRead SBS rack 2D barcode camera reader and AlteRead Software

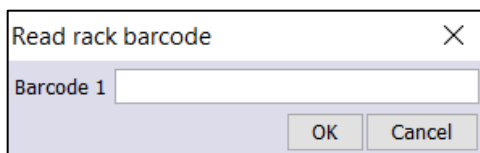
1. Place a rack on the AlteRead SBS rack 2D barcode camera reader. Ensuring the rack is sat and positioned correctly.
 - A1 should be at the AltemisLab logo end of the reader when using the default settings



2. Click anywhere on the rack image to initialise a read

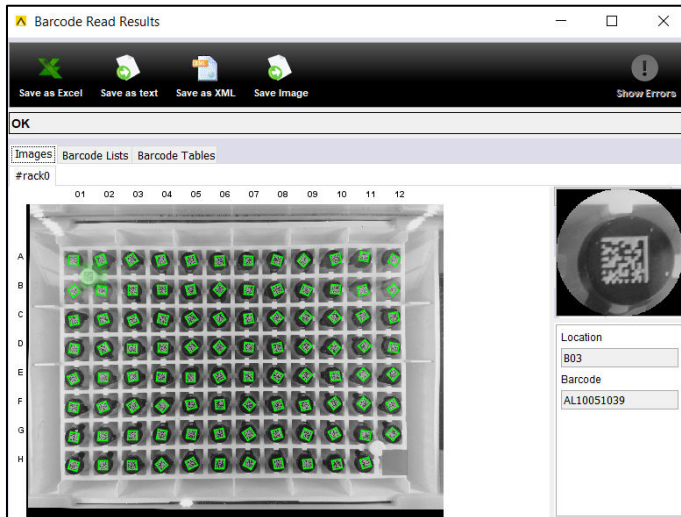


3.
 - a. The **Read rack barcode** screen will appear. Enter the rack barcode manually or use a handheld linear (1D) barcode scanner to read the 1D rack barcode. Select **OK**



- This is the default setting. To disable the linear (1D) barcode option go to **Connect 1D** in **Settings** and select **No 1D Reader** (see page 28).
 - See page 13 for instructions on how to set up the reading of an Embedded 2D rack barcode.
- b. If a linear (1D) barcode reader has been installed, the barcode reader will read the rack barcode (see page 27 for Linear barcode reader set-up)

4. If questions have been enabled in **Add Questions**, then a dialogue will appear prompting the user to answer the questions. Input the answer to the question(s) and click **OK**
5. The results of the read are shown:



The results are shown in three tabs: Images, Barcode Lists and Barcode Tables.

Images:

- a 2D barcode that has been correctly read will have a GREEN outline
- a missing tube will be a GREY box
- a 2D barcode present but damaged will be boxed RED
- Click on any location in the rack image to view a close-up image of the 2D barcode, the location and the barcode result.

If **Enable Questions** has been checked in **Add Questions** (see page 26) the results of the questions will be displayed.

6. Results can be exported automatically (see page 15) or saved from the results screen (see page 32)



Exporting data from the results screen

There are four export formats that can be selected: Excel, Text, XML and Image.

1. Select the file format to save by clicking on the icon in the header

Excel

The Excel file that is generated is a 'true' Excel file (rather than a csv file). The format of this is fixed to ensure reproducibility between AlteRead software versions. The header is coloured in yellow and the data is in rows beneath:

	A	B	C	D	E	F
1	Read Time	Embedded 2D Barcode	Tube Row	Tube Column	Tube Barcode	
2	14/7/2020 16:13	ALT00000944	A		1 AL10051043	
3	14/7/2020 16:13	ALT00000944	A		2 AL10051044	
4	14/7/2020 16:13	ALT00000944	A		3 AL10051045	
5	14/7/2020 16:13	ALT00000944	A		4 AL10051046	
6	14/7/2020 16:13	ALT00000944	A		5 AL10051047	
7	14/7/2020 16:13	ALT00000944	A		6 AL10051048	
8	14/7/2020 16:13	ALT00000944	A		7 AL10051093	
9	14/7/2020 16:13	ALT00000944	A		8 AL10051094	
10	14/7/2020 16:13	ALT00000944	A		9 AL10051095	

If Enable Questions is checked, the questions and the short name will be shown as an extra column in the Excel file. See page 16 for details on selecting the data to be exported.

Text

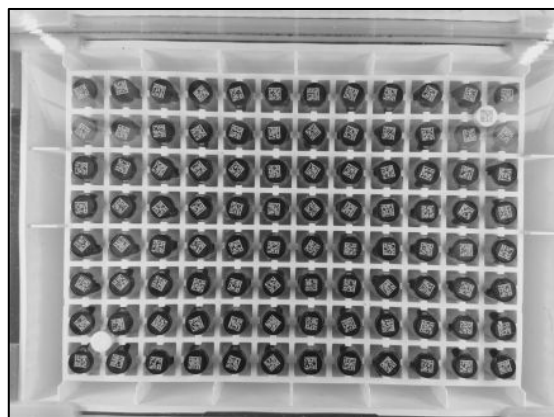
The text output is formatted to an initial default format with the column headers defined for the output.

XML

This format is used for integration and is a self-describing, fixed format. If Enable Questions is checked, the full details of the questions will be added as discrete elements at the top of the file. Should further information be required on this format, contact AltemisLab.

IMAGE

The rack image will be saved as a .png file.



Technical Support Contact Information

Please contact AltemisLab for service, support and warranty. Please have available; the AlteRead SBS rack 2D barcode camera reader's serial number and the AlteRead software version number.

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Warranty Information

Model: AlteRead™ SBS rack 2D barcode camera reader
Part number: 252000
Five-year factory warranty