
BarCode Reader

**BarCode Reader
BCR Demo Application Guide**

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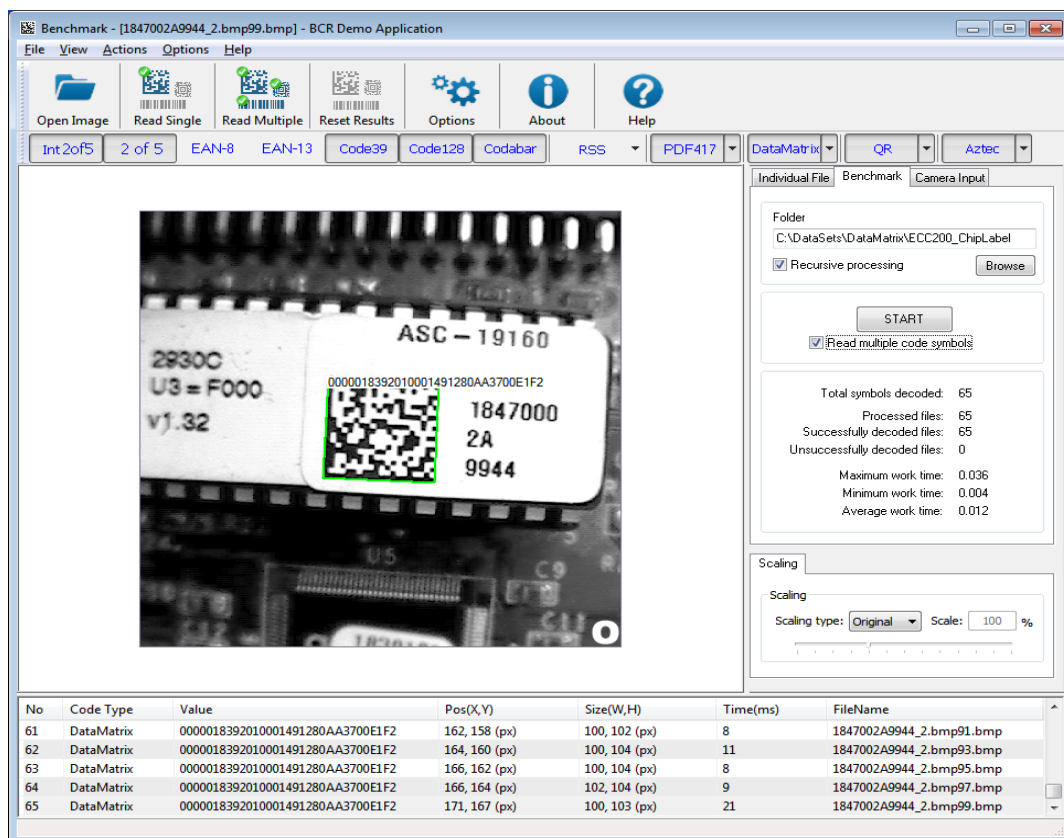
BarCode Reader Demo Application Guide

1. About program

The application BCRDemo is intended for demonstration of BCR library possibilities as regards the detection and the decoding of barcode symbols. The images may be loaded from individual file, from multiple files or from video source. The current version supports the next two-dimensional barcode symbologies: stacked barcode PDF417 part of RSS, three matrix barcodes Data Matrix, QR and Aztec, as well as linear barcodes Interleaved 2of5, 2of5, EAN-8, EAN-13, Code39, Code128, Codabar, RSS

The main application window is depicted below.

2. Main Window



Main application window contains four components for information displaying:

- Basic left top window displays current loaded image and results of reading and detection
- Right top window displays some dialog for current mode control
- Reading results component displays detailed information about barcode symbols reading
- Detection results component displays detailed information about barcode symbols detection

The application has four control elements:

- **Main Toolbar**
- **Code Toolbar**
- **Tabulated Dialogs**
- **Scaling dialog**

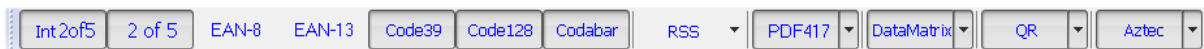
2.1. Main Toolbar



Main Toolbar is intended to control the following application functions:

- **Open Image** Allows to choose a current file by means of standard dialog
- **Read Single** Starts a single barcode symbol reading
- **Read Multiple** Starts a multiple barcode symbols reading
- **Reset** Clears reading and detection results
- **Options** Calls dialog «Options». (See 2.5. Options dialog)
- **About** Calls program information dialog
- **Help** Calls program help

2.2. Code Toolbar



This control element holds the selection of barcode symbology types to be read on the processed images.

2.3. Tabulated Dialogs

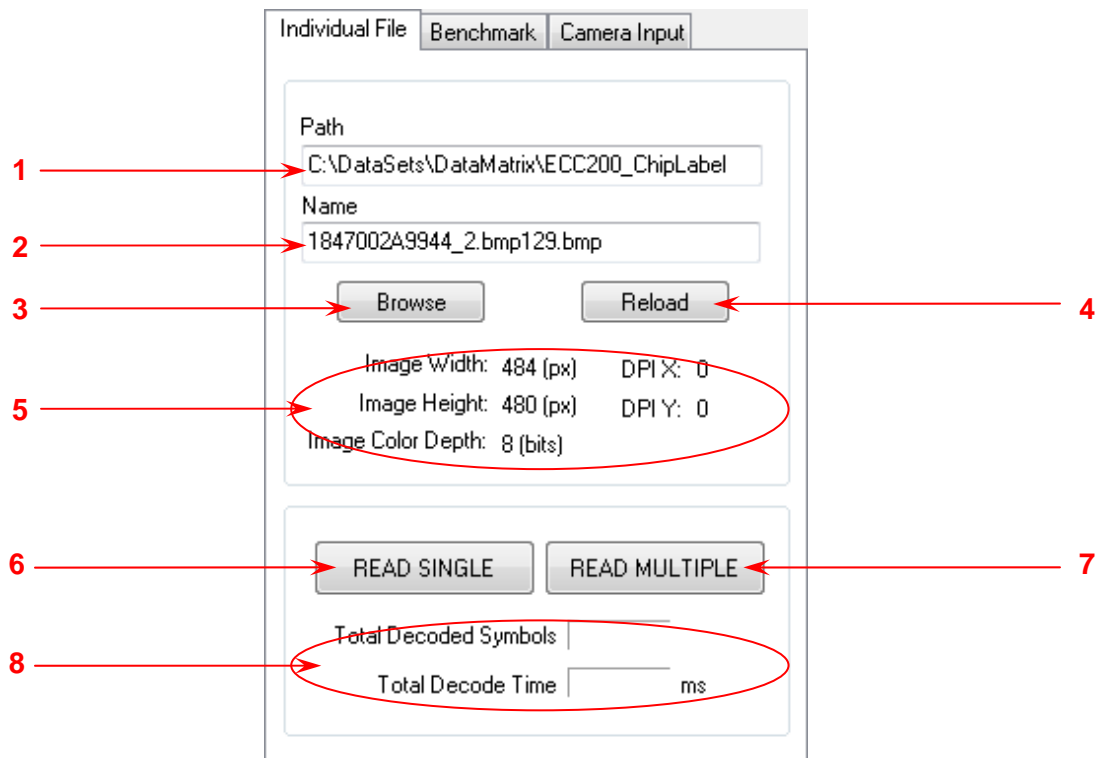
This control element defines an application mode and holds the selection of current mode parameters

- **Individual File**
- **Benchmark**
- **Camera Input**

The detailed description of these modes is located below.

2.3.1. Individual File

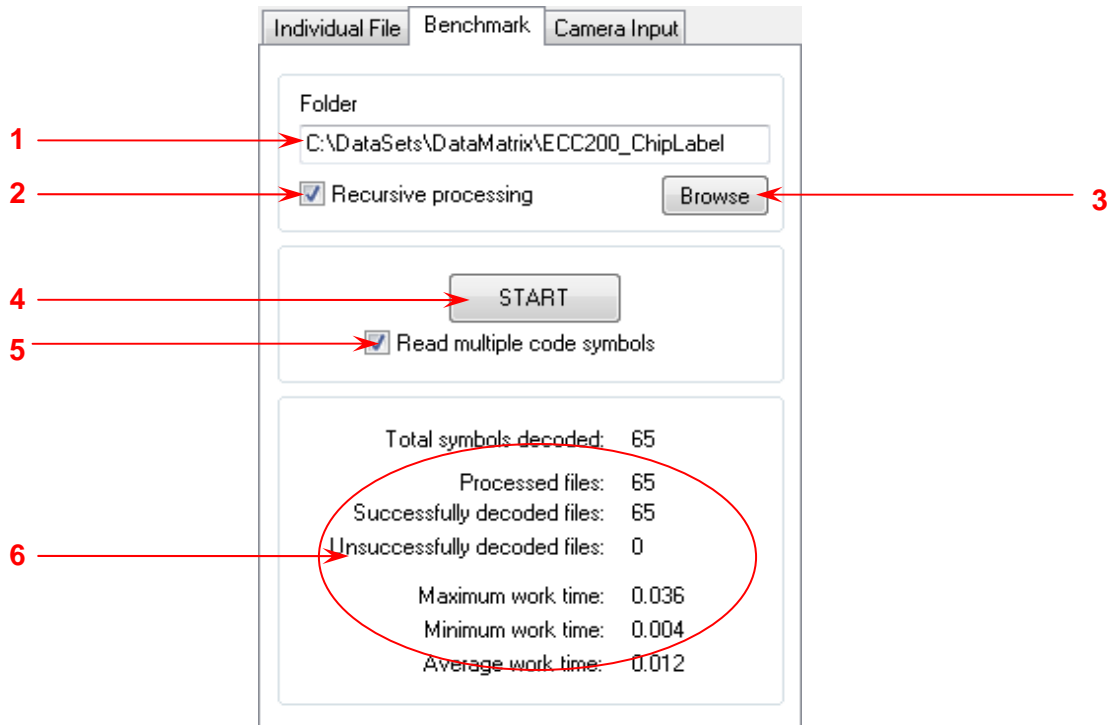
The given mode is intended for work with single file. Types of barcodes are set in Code Toolbar (see item 2.2.) Represented parameters and log file keeping are set in Options Dialog (see item 2.5.)



Individual file dialog elements		
1	Path	Displays the path to file
2	File Name	Displays the file name
3	Browse	Allows to choose a file by means of standard dialog
4	Reload	Allows to reload the image from a file (path and name of a file are displayed)
5	Image Width, Height, ColorDepth, DPI X, DPI Y	Display width, height, color depth and DPI X/Y of image
6	READ SINGLE	Starts a single barcode symbol reading
7	READ MULTIPLE	Starts a multiple barcode symbols reading
8	Total Decoded Symbols, Total Decode Time	The number of read symbols and total time of reading in milliseconds

2.3.2. Benchmark

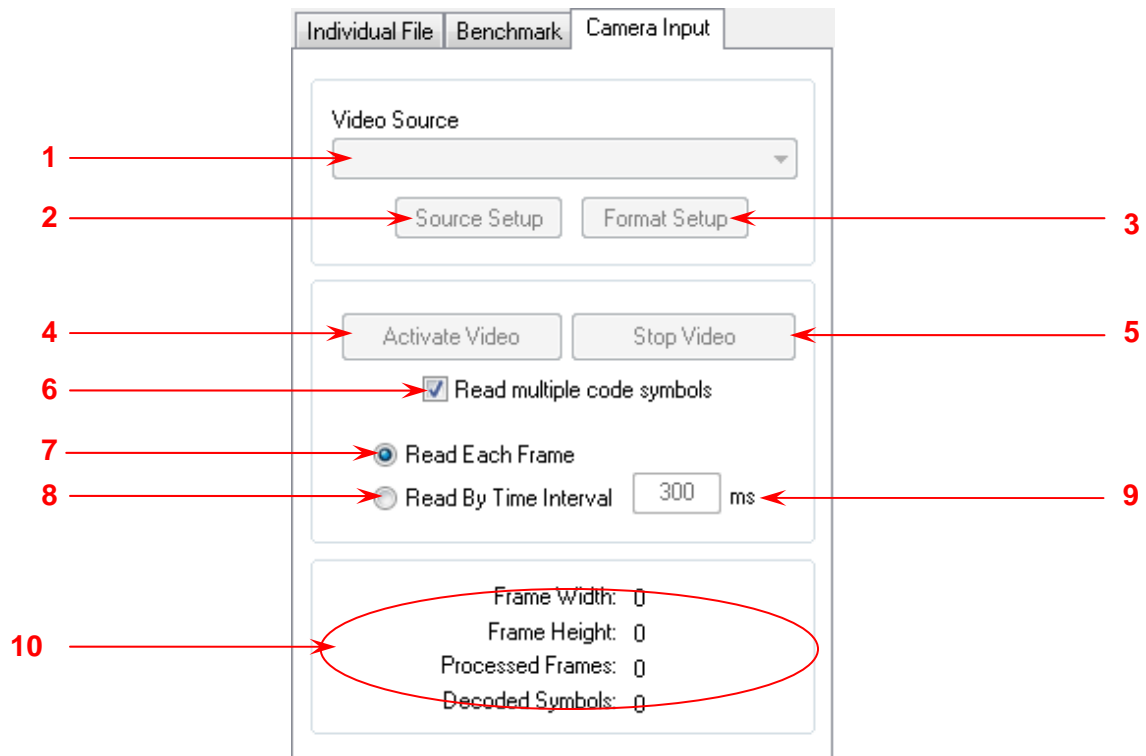
The given mode is intended for carrying out of testing on the set directory (and its subdirectories) with representing of the general statistics. Types of barcodes are set in Code Toolbar (see item 2.2.) Represented parameters and log file keeping are set in Options Dialog (see item 2.4.)



Benchmark dialog elements		
1	Folder	Displays current folder
2	Recursive search in Subdirectories	Processing of the set directory (and its subdirectories)
3	Browse	Allows to choose some folder by means of standard dialog
4	START	Starts a barcode symbol reading of all files in selected folder (and it's subfolders if corresponding flag is set)
5	Read multiple code symbols	Allows to set the multiple barcode symbols reading mode
6	Statistics	Information collected during reading process

2.3.3. Camera Input

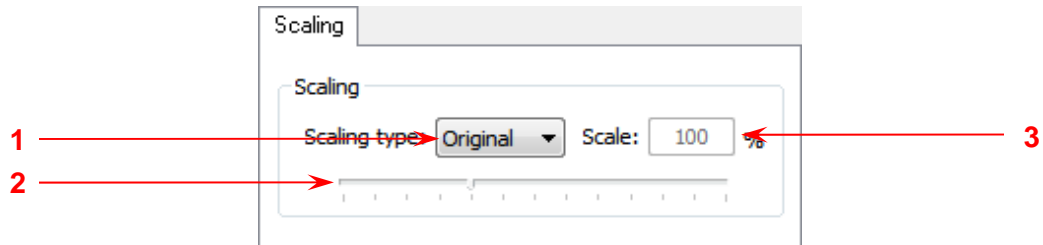
The given mode is intended for work with devices of video capture. Types of barcodes are set in Code Toolbar (see item 2.2.) Represented parameters and log file keeping are set in Options Dialog (see item 2.5.)



Camera Input dialog elements		
1	Video Source	Allows to choose the video source
2	Source Setup	Allows to call specific settings for current video source. Default state of buttons is disabled. It will be switched after Video Source activation.
3	Format Setup	
4	Activate Video Source	Activates chosen Video Source
5	Stop Video Source	Deactivates current Video Source
6	Read multiple code symbols	Allows to set the multiple barcode symbols reading mode
7	Read Each Frame	Forces barcode reading for each available frame
8	Read By Time Interval	Forces barcode reading for each given time interval
9	Time Interval Field	Time interval between the recurrent attempts of reading
10	Statistics	Information collected during reading process

2.4. Scaling Dialog

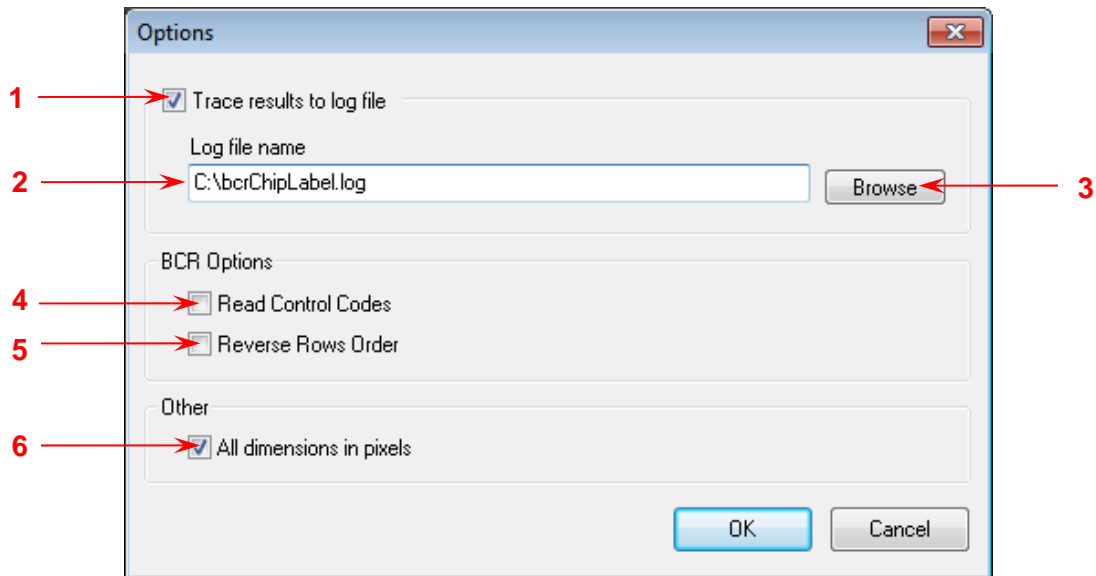
The given dialog is intended for control of image scale in all work modes.



Scaling elements		
1	Scaling Type	Allows to choose the type of scaling: Original, Fitted, Manual.
2	Scale Slider	Slider allows to set an image scale in an admissible range.
3	Scale field	Allows to set a scaling by direct editing

2.5. Options Dialog

The given dialog is intended for basic program settings.



Options dialog elements		
1	Trace results to log file	Enables logging mode
2	Log file name	This field sets log file name and path
3	Browse	Allows to choose a log file by means of standard dialog
4	Read Control Codes	That checkbox is used only for Code 128 yet. If that checkbox is switched on Control Codes characters (FNC1,FNC2,FNC3,FNC4) that are appeared while a Code 128 symbol is decoded would be placed into output data string as following special data character values: <ol style="list-style-type: none"> 1) output 0x1D instead of FNC1, 2) output 0x81 instead of FNC2, 3) output 0x82 instead of FNC3, 4) output 0x83 instead of FNC4. If that checkbox is switched off Control Codes characters are ignored and not be placed into output data string.
5	Reverse Rows Order	Defines the reverse order of image rows (Bottom-to-Up) in the input image in memory. If that flag is set the function considers that pixel rows of input image placed from down-to-up. If that flag is not set the function considers that pixel rows of input image placed from up-to-down.
6	All dimensional in pixels	Allows to display all dimensional values in pixels otherwise in millimeters (if DPI values are available).

3. Program features

For viewing of additional information of symbol double click at item with an interesting barcode symbol.

No	Code Type	Value	Pos(X,Y)	Size(W,H)	Time(ms)	FileName
61	DataMatrix	0000018392010001491280AA3700EIF2	162, 158 (px)	100, 102 (px)	8	1847002A9944_2.bmp91.bmp
62	DataMatrix	0000018392010001491280AA3700EIF2	164, 160 (px)	100, 104 (px)	11	1847002A9944_2.bmp93.bmp
63	DataMatrix	0000018392010001491280AA3700EIF2	166, 162 (px)	100, 104 (px)	8	1847002A9944_2.bmp95.bmp
64	DataMatrix	0000018392010001491280AA3700EIF2	166, 164 (px)	102, 104 (px)	9	1847002A9944_2.bmp97.bmp
65	DataMatrix	0000018392010001491280AA3700EIF2	171, 167 (px)	100, 103 (px)	21	1847002A9944_2.bmp99.bmp

Double click

