# Cuttix

Quick Start Guide

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# INTRODUCTION

This is a short document describing the initial steps you must take to start using Cuttix - Sheet Layout Optimization Software. This document is not intended to be a full software manual. It is meant just to get you started on the right track. For all topics not covered in this document we rely on common sense as we strive to create a user-friendly software that does not need hundreds of pages of manuals. We think our software is intuitive and easy to use. In the event that you still need help or simply want to comment or voice your opinion or suggestion, please do not hesitate to contact our Support.

# SYSTEM REQUIREMENTS

Cuttix has the following simple system requirements:

- Microsoft Windows operating systems including Windows XP, Windows Vista or Windows 7.
- Minimum 1 GB of RAM
- At least 5 MB of free disk space for the initial installation
- Display size set to minimum 1024x768
- Microsoft .NET Framework 3.5 Service Pack 1

Microsoft .NET Framework 3.5 Service Pack 1 is **required** for both Windows XP and Windows Vista operating systems while Windows 7 comes preinstalled. Cuttix installation takes care of .NET Framework installation on systems that need it. Please bear in mind that .NET Framework installation takes between 30 and 60 minutes to install and some additional time to download. In total this time varies a lot depending on your computer and Internet connection speeds.

# INSTALLATION AND DOWNLOAD

Cuttix is activation based software. In order to run Cuttix as either an existing customer or in evaluation mode you need to obtain an *activation code* from us. A sample activation code for Cuttix looks like this:

#### H7mfC5LBjm1MyWuj05DIPDCuZXAglVTGVTT5zaRtJoI=

You may obtain an activation code by either purchasing Cuttix software or by requesting a free full-featured 15-day evaluation.

Each purchase is designated a single activation code which can be used to activate (unlock) Cuttix on as many computers as there are licenses purchased. To purchase Cuttix please visit <u>Cuttix purchase page</u>.

Evaluation activation code can only be used to activate (unlock) a single computer for a period of 15 days. During this period the program is fully functional allowing you to test all of its features and decide if you want to purchase. To request a free 15-day evaluation please visit <u>Cuttix evaluation request page</u>.

In order to download your copy of Cuttix please go to <u>Cuttix download page</u>. You will need to paste you activation code in the designated field in order to begin a file download. If you want to evaluate the program you must first request an evaluation activation code which is sent to your email Inbox in minutes with further instructions. If you already purchased Cuttix you should use the activation code as received upon purchase. By preventing direct downloads we can always serve you the exact version of the program that works with your particular activation code.

#### DIGITAL SIGNATURES

All of our software as well as all setup installers are digitally signed using Authenticode signing standard. This allows you to verify the software's authenticity and the fact that it was not tampered in any way before it was allowed to run on your computer.

Here is an example of a web browser warning you that the software you are trying to run is digitally signed and that you may safely run it - if you trust the digital signature.

Open File	- Security Warning
Do you	u want to run this file?
	Name:I\Temp\Temp1_cuttix-1.0.694.10020.zip\setup.exe Publisher: <u>GUNSH d.o.o.</u> Type: Application From: C:\Users\gunsh\AppData\Local\Temp\Temp1_cut <u>R</u> un Cancel
•	While files from the Internet can be useful, this file type can potentially harm your computer. Only run software from publishers you trust. What's the risk?

### INSTALLATION

To begin Cuttix installation open the downloaded ZIP archive (all supported Windows operating systems have built-in support for working with ZIP files).

Double-click SETUP.EXE and allow it to run by dismissing the "Security Warning" dialog that may show up (as seen on the previous page). Before dismissing please observe that the file is digitally signed by "**GUNSH d.o.o.**". If not properly signed, do not allow the setup to run. We always digitally sign our software.

If you are on a Windows XP or Windows Vista Cuttix Setup may try to install Microsoft .NET Framework. Our setup does not include the full .NET Framework installer so you will need an active Internet connection for the .NET Framework setup to download the required content. Depending on your computer and Internet connection speed the whole .NET Framework installation process might take between 30 and 60 minutes.

If .NET Framework is already present or once it is installed, setup will install Cuttix on your computer. This portion of setup normally takes about 30 seconds.

Once installation completes shortcuts will be placed on both Desktop and Start Menu. Setup will also install Samples folder with several ready-to-use samples. The default working directory will be set to Samples folder for your convenience.

Cuttix setup registers ".cuttix" file association. Double-clicking a file with this extension will automatically open it in Cuttix.

## ACTIVATION

Cuttix is an activation based software product. In order to run Cuttix, the program must be activated. Activation is performed using an activation code and requires an active or passive Internet connection. Activation is the process of validating the purchased license or an evaluation period.

An online purchase or an evaluation request yields in an activation code which looks like this:

#### H7mfC5LBjm1MyWuj05DIPDCuZXAglVTGVTT5zaRtJoI=

Each activation code identifies a single purchase or a single evaluation request. An activation code may be used to activate as many computers as there are associated licenses with a particular purchase. Activation code associated with a purchase activates a computer forever. Evaluation activation codes can be used to activate just a single computer for a period of 15 days.

### ACTIVATION STEPS

To activate Cuttix please follow these simple steps:

1. Display Licensing Wizard (if not displayed automatically)

		Projecta
New New	Recent Projects	
New From Template		25
Open		_
Save		
Save As		
Register		
		Tions Exit

2. Choose "Activate a product using activation code" in the Licensing Wizard

Licensing - Activation		×			
Activate product Activate product using activation code or a lie	cense file.				
Please choose the way you want to activate th	nis product.				
<u>Activate by entering activation code</u>					
You have reveived an activation cod many licenses as were originally purch	e upon purchase. A single activatio code can activ nased.	ate as			
Paste license contents					
hereby activate the product.	ill or from a web browser in plain-text format, yo	ou can			
Browse for a license file					
If you received your license by email or from a web browser as an attachment you can hereby activate the product.					
	Cancel < Back Next >	nish			
Licensing - Choose License Type		×			
Licensing - Choose License Type		×			
Licensing - Choose License Type Choose license type You may choose between enabling a free eva	eluation or activation of a purchased product.				
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3. Choose "Activate Online" if you have permanent Internet connection

Licensing - Activation	x				
Activate product Activate product using activation code.					
You can choose from several activation options.					
<u>A</u> ctivate online					
For this activation type you need to have active Internet access. The program will contact licensing server and request a license. You may activate your activation code exactly as n licenses you originally purchased.	t our many				
O Use web browser					
If this computer is not connected to the Internet, you may want to use a browser from an Internet enabled computer to obtain your license.					
© <u>S</u> end email					
If this computer is not connected to the Internet, you may want to use an email client from Internet enabled computer to obtain your license.	m an				
Please enter your activation code as received upon purchase.					
H7mfC5LBjm1MyWujO5DIPDCuZXAgIVTGVTT5zaRtJoI=					
<u>Cancel</u> < <u>Back</u> <u>Next</u> > <u>Fini</u>	ish				

4. Paste your activation code in the text box below and click Next. Wait a few seconds for the application to activate and exit the Licensing Wizard.

# USING CUTTIX

Cuttix is designed to be intuitive and easy to use. It features a simple and clean user interface with separate grids/tables for data entry for materials, panels and parts.

Classic menus are replaced with a ribbon-style interface which blends classic menus and toolbars into a single entity allowing for easy access to commands.



#### PROJECTS

Cuttix works with projects. Each project is loaded/saved to a XML based file. The project contains everything project related including project options, list of materials, panels and parts and the most recently saved optimized solution.

#### TEMPLATES

Any project can be declared a **template project** and stored in a template folder. If you create many projects having the same base options and/or materials/parts/panels, you might want to create a template project. You may have as many template projects as you want as long as they reside in a designated template folder. The location of a template folder can be changed used global program Options (accessed from the application menu).

If a project is simply created as New, it will inherit default project options. If you want to modify default project options, please open Options from application menu.

#### MATERIAL ENTRY

Cuttix is a multi material layout optimization software. You can optimize projects containing multiple materials. Each panel and part must be assigned a material.

Each material has a mandatory Code (arbitrary string), Width and Height and an optional Description. Material's Width and Height are used in panel entry as default panel dimensions (which can be manually changed).

	4	Code	Width	Height	Description
1	S	STR101	2070	2800	Material STR

# MATERIAL OPTIONS

There is a set of Default Options which are effective for all materials by default unless material specific options are set. Each material has a separate set of Options which govern some basic properties of optimization.

Material options include:

- Horizontal and vertical cut width
- Dimensions required for an off-cut to be considered as usable. If left at [0, 0] all generated off-cuts are always marked as usable.
- Trimming size for a panel
- Choosing between guillotine and free-style optimization types

If any of the specific material options differ from the default options a cross  $\bowtie$  is shown next to it allowing resetting particular option to its default value. See image below:

0	ptions		🗕 🗕 🕂
4	Cut Width		
	Horizontal	1	×
	Vertical	2	×
4	Usable Offcuts		
	Minimum Wid	100	×
	Minimum Heic	100	×
4	Trimming		
	Left	5	$\sim$
	Тор	6	×
	Right	7	×
	Bottom	8	×
4	Cutting Type		
	Use Guillotine		

## MATERIAL FILTER

If your projects contain multiple materials you can enforce a filter according to the selected material in either of the Panels grid, Parts grid or Solution. See image below:

PIN	1230 x 2100 🔹
AI	Materials
N	laterial Filter

#### PANEL ENTRY

Panels for a project are entered in a grid on a Panels tab. Each panel is described by its mandatory Width and Height, Material type and Quantity. Description is optional. Width and Height must be greater than zero. Quantity can be nonzero for a particular panel count or a zero designating an unlimited supply which is shown with an infinity symbol.

#### PART ENTRY

Parts for a project are entered in a grid on a Parts tab. Each part is described by its mandatory Width and Height, Turn, Material type and Quantity. Width, Height and Quantity must be greater than zero. When turn is set, a checkmark  $\checkmark$  is shown designating that this particular part can be optimized by turning it if necessary. Parts with no Turn mark must be optimized exactly as entered.

#### UNITS

Cuttix supports two unit types: metric and US-based. There is an additional [no unit] type which shows no unit information next to either lengths or areas. If you choose metric units for length, available units for area are automatically changed to metric. Similar happens if you choose US-based units.

You can also specify whether to show values with exact or varying number of decimal units and a maximum number of decimal places for lengths and areas respectively.

# Cuttix - Sheet Layout Optimization Software

Additionally, there is a "smart units" option which allows Cuttix to display a particular value in the best possible form. For instance, if smart units is disabled a value of 1000 mm will unconditionally be shown as 1000 mm. If smart units is enabled, 1000 mm will be shown as 1 m, 100 mm will be 1 dm, 15 mm will be 1.5 cm and 12 in will be 1 ft, etc.

Area mm <sup>2</sup> - Area 2			2	Length	Ψ.	mm	Length		
			2	Area	Ŧ	Area mm²			
Smart Units Exact Decimal Pla	laces	mal P	t Decim	Exact	Smart Units				

#### OPTIMIZATION STRATEGIES

Cuttix currently supports two optimization strategies: guillotine and free-style cutting.

- 1. Guillotine cutting is specific in terms of having all cuts strictly from one side to another. For instance, if a panel is cut in half horizontally the two sub-panels must also be cut with side-to-side horizontal or vertical cuts. Each new sub-panel follows the same rule.
- 2. Free-style cutting has no constraints in contrast to guillotine cutting. Free-style cutting tries to achieve the best trade-off when it comes to number of produced layers, cut length, parts and panels used, etc.

#### RUNNING OPTIMIZATION

Optimization can be started anytime if the project is in a valid state. To maintain project in a valid state make sure there are no outstanding data entry errors in any of the Materials, Panels or Parts grids. To begin optimization click Start button or press the appropriate shortcut hot key.

The image below shows program appearance when optimization is in progress. Please note that optimization can be stopped or paused. A progress indicator as well as information about an elapsed and remaining times are shown at the bottom of the window in the status bar area.

Even during optimization you can zoom/pan the currently selected layer and view the statistics of the current best found solution.

Cuttix uses a sophisticated iterative algorithm for finding an optimal layout. Depending on the project size and computing power the process may take from several seconds up to several minutes. Very often the best layouts are found in the first 10% of the optimization process.

# Cuttix - Sheet Layout Optimization Software

			Solution		Circle of 4 * (C:\Program Files (x86)\Gunsh\Cur	uttix\Samples\Circle Of Four.	cuttix) - Cuttix	_ <b>0</b> _ X
Home	Project Report	ting Layout	Optimizati	on				
Start Stop Pa	D Optimal	⊝——₽		7	Show Panel Dimension Color Multiple Colors  Show Details			
Control	Rest Fit Mode	Scale	a	4	Laver Details			
Control	Descritemode	J.Call	-		Layer Details			
Materials   P	anels Parts Sol	ution "						
	-							
Layer Statistics	<b>→</b> ‡	_			1 dm x 1 dm - #1 - m1	*	Material Statistics	<b>→</b> ₽
<ul> <li>Misc</li> <li>Cut Length</li> <li>Panels</li> <li>Used Parts</li> <li>Offcuts</li> <li>Unusable</li> <li>Usable</li> <li>Repeat</li> <li>Count</li> <li>Vield</li> <li>Hard</li> <li>Hard Area</li> <li>Regular</li> <li>Regular Area</li> </ul>	2,4 dm 2 pcs 4 pcs 0 pcs 1 pcs 2 pcs 96,00 % 96 cm <sup>2</sup> 100,00 % 1 dm <sup>2</sup>	# 6 # 4	1 cm x 4 cm 1 cm x 6 cm		#1 4 cm x 6 cm	E	<ul> <li>Misc         <ul> <li>Cut Length                 Layers                 Panels</li> <li>Offcuts                 Unusable                 Usable</li> </ul> </li> <li>Parts         <ul> <li>Total</li> <li>Unused</li> <li>Used</li> <li>Yield</li> <li>Hard</li> <li>Hard Area</li> </ul> </li> </ul>	1,2 m 2 pcs 5 pcs 0 pcs 2 pcs 23 pcs 0 pcs 23 pcs 98,40 % 4,92 dm <sup>2</sup>
X Stop		Elapsed Ti	me: <b>00:00:08</b>	Ren	6 cm x 4 cm naining Time: 00:00:24	- Mater	Regular Regular Area Material Statistics	100,00 % 5 dm <sup>2</sup>

### REPORTS

Reporting is an integral part of Cuttix. There are several built-in report profiles which can be fully customized (available in Professional Edition only). You can make copies of existing report profiles or you can create a report profile from scratch.



After choosing the desired report and clicking Generate button the report is shown in a separate window. Each change in the report profile requires you to repaginate the report to see the changes in effect.



# EDITIONS

Ready

Cuttix currently comes in two editions:

- Standard
- Professional

Standard edition has the following features:

- Superb Layout Algorithm
- Guillotine Cutting
- Free-style Cutting
- Built-in Reports
- Project Statistics
- Priority ONE business day email support

Professional edition supports everything the standard edition offers. Additionally it offers the following features:

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Cuttix - Sheet Layout Optimization Software

- Multi-core (multi-CPU) support
- Report Customization
- Multiple material support with per-material options

# SUPPORT

We provide 24/7 email support for both existing and new customers. Our normal initial response times are one business day for existing and two business days for new customers and general inquiries. We usually initially respond within a few hours from the support request.

You may contact Support using an online form or directly by sending an email to support@gunsh.com.

# UPGRADES

Cuttix upgrade policy entitles existing customers to all minor upgrades. Additionally, all existing customers are entitled to a discounted upgrade price for a major upgrade for a period of ONE year from the date of the previous purchase. After the period of ONE year after the initial purchase customers may upgrade at regular prices. If existing customers want to receive priority support after a period of ONE year after the initial purchase, customers must purchase additional support extension separately which also entitles them to major upgrade discounts.

Our upgrade policy is subject to change at our own discretion without notice. We reserve the right to change any part of the upgrade policy at any time.

# THE COMPANY

Gunsh d.o.o. is a software company from Novi Sad, Serbia. We strive to produce high quality software. We are Certified Microsoft Partners with ISV Competency.

Our postal address is:

**Gunsh d.o.o.** 21000 Novi Sad Cika Stevina 3 Serbia

http://gunsh.com support@gunsh.com



# **DOCUMENT REVISIONS**

Date	Revision	Change Description
26.01.2010.	1.0.0	Initial revision
23.03.2010	1.0.1	Added MS logos and fixed some text