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GETTING STARTED

1. What is FLProtection®?

FLProtection® is a certificate-based software license protection platform that supports USB Dongle and Network certification simultaneously. FLProtection® uses RSA2048 and AES256 to encrypt software, protects memory and your software license from crackers with powerful anti-debugging techniques.

2. Product Contents

Check if the following contents are included in the product box. If there are any missing, please contact the retailer where you purchased the product. Actual products and accessories may differ from the illustrations in this user's manual.

- FLProtection® USB Dongle
- FLProtection® USB Dongle cover
- User's Manual (PDF)

3. System Requirements

Device / Software	Minimum Requirements	Recommended
Operating System	Windows 7	Windows 10
System Memory	4GB	8GB
CPU	Sandy Bridge i3	Skylake i5
USB Port	USB 2.0 or over	USB 2.0 or over
Free Storage Space	50MB	1GB



4. Installation

Go to <u>https://resource.fourthlogic.co.kr/flprotection/flprotectionsetuplatest.zip</u> to download the latest FLProtection® installation file.

icense Agreement			
Please read the following importa	nt information before continuing.		(
Please read the following License continuing with the installation.	Agreement. You must accept the terms of th	is agreement before	
Software End User License Agree	ement		^
Important: This End User License	Agreement ("EULA") is a legal agreement be	tween the user	
(individual or organization) and F	ourth Logic Incorporated which is the manufa	acturer the software	-
products ("Software product" or	"Software") identified by the product identific	ation card or recognition	1
label attached to this EULA. The	software product includes computer software	e, related media, related	
documents, and "online" or elect	ronic manual. When installing, copying, downl	loading, backing up,	
accessing or using the software p	product, the user must accept the terms of u	se in the EULA; if the	
	of use in EULA, the user may not be licensed t		•
- 201 : 165 (17 20 - 10 MAN 201 - 11 11 20 80 A - 16 4 50 AA	e the software product, the user cannot insta	ll, copy, download,	
backup, access or use this softw	are product.		
Software Product License			
The Software product is protecte	ed hv intellectual property rights as well as co	nvrights, program	Y
I accept the agreement			
○ I do not accept the agreemen			

Launch the FLProtection® installation program. Read the license agreement carefully and agree to the License Agreement and click the "Next" button to proceed with the installation.

Setup - FLProtection 2.1.28.1	32 <u> </u>		×
Select Additional Tasks		2	
Which additional tasks should be performed?		(
Select the additional tasks you would like Setup to perform while installing FLPro	otection, then die	:k Next.	
Additional shortcuts:			
Create a desktop shortcut			
	iř		2
Back	Next	Car	ncel

After setting the shortcut, click the "Next" button to proceed with the installation.





Ready to Install		
Setup is now ready to begin installing FLProtection on your comput	ter.	R.
Click Install to continue with the installation.		

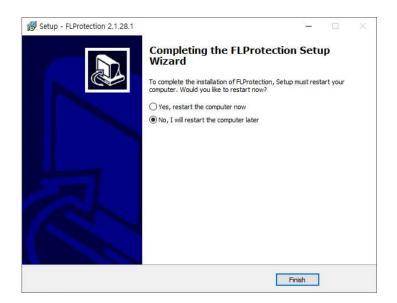
Click "Install" to proceed with the installation.

	ring to Install ip is preparing to install FLProtection on your computer.	a
0	The following applications are using files that need to be updated by Setup. It is recomm you allow Setup to automatically close these applications. After the installation has comp will attempt to restart the applications.	
	FL Protection Security Service (x64)	^
	K	>
	Automatically close the applications	
	O Do not close the applications	

If FLProtection® is running, select "Automatiocally close the applications" in the next window and click the "Next" button to close FLProtection® and proceed with the installation.





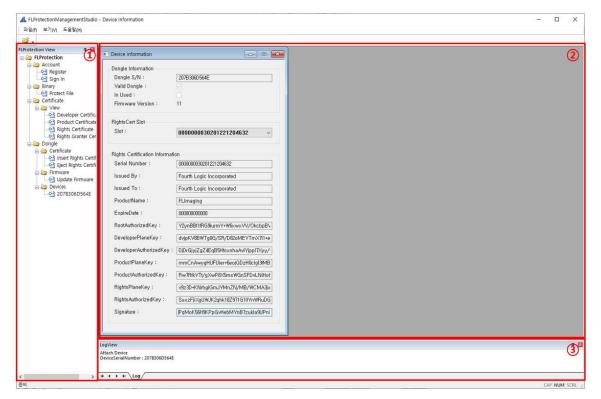


When the installation is successfully completed, select whether to restart the computer to complete the installation (not necessary).



FLPROTECTION® FEATURES

1. FLProtection® User Interface



The composition of FLProtection® user interface is as follows.

① Menu Tree

You can use each FLProtection® function by selecting a menu item in the Menu Tree.

2 Main Window

In the Main Window, windows related to the function selected in the Menu Tree are displayed.

③ Log View

You can check the log of FLProtection® in Log View.





2. User registration



Double-click Account > Register in the Menu Tree to open the Register window.

Register	C Ξ Σ
UserID :	
Password :	
Password Confirm:	
Name :	
Email :	
	Register

Enter User ID, Password, Confirm Password, Name, Email in the Register window and click the **"Register"** button to register.





3. Signing in



Double-click Account > Sign In in the Menu Tree to open the Sign in window.

Sign In		
ID :	23	
Password :		
Sign In	Sign Out	Change Password
Sign in Status		
Login ID :		
Security Level :		

Enter your User ID and Password in the Sign In window and click the "Sign In" button to sign in.

Sign In				
ID :	123			
Password :	••	•		
Sign In		Sign O	ut	Change Password
Sign in Status				
Login ID :		123		
Security Lev	/el :	1		

If signing in is successful, **Login ID** and **Security Level** are displayed in the Sign in Status below, and the "Sign Out" and "Change Password" buttons are activated. You can sign out by clicking the "Sign Out" button or change the password by clicking the "Change Password" button.





4. Protecting a software

Protecting a software requires a **Developer Certificate** and a **Product Certificate**, and can be performed only when a **Security Level 3 or higher account** is signed in.

Sign in with a Security Level 3 or higher account.

FLProtection View	ą.	×
E-C FLProtection		
Account		
- 🕶 Register		
Sign In		
Binary		
Protect File		

Double-click Binary > Protect File in the Menu Tree to open the Protect File window.

Certificate			
Developer Cert :	C:₩UserDownloa	id₩TestManual1,fldc]
Product Cert :	C:₩UserDownloa	id₩jkjk,flpc]
Executable File :	C:₩UserDownloa	d₩DII1,dII]
Enable Memory [)ump: 🔲	Protect	
Enable Memory [)ump: 🗌	Protect	

Click the "..." button to the right of the "**Developer Cert**" and enter the file path of the Developer Certificate file(*.fldc).

Click the "..." button to the right of the "**Product Cert**" and enter the file path of the Product Certificate file (*.flpc).

Click the "..." button to the right of the "**Excutable File**" and enter the path of the program to be protected. Programs to be protected must not be code signed.

You can select whether or not to enable creating a dump file by checking or unchecking the **"Enable Memory Dump"** check box.

When the "Protect" button is activated, press the button to perform program protection.

-Executable Information	on		
Architecture :	×64	Code Signed :	
Protected :		Valid :	

You can check whether the program is code signed, protected, or valid through the contents of the **"Excutable Information"** group box.



Certificate Information	000000000000000000000000000000000000000
Serial Number :	0000000441210217165005
Issued By :	Fourth Logic Incorporated
Issued To :	jkjk
ProductName :	jkjk
RootAuthorizedKey :	Y2ynBBf1fRG9iurmY+W6xwxVV/Okcb
DeveloperPlaneKey :	RF9g83MiMydEb3DkJC/Df3aVtCWxe8
DeveloperAuthorizedKey :	cx101K9Z25IR9xmcY30zqWUd3tSQB"
ProductPlaneKey :	voDTpYGJDTWw+J3W0i7r3AqbMFcU\
ProductAuthorizedKey :	u7gtMr8L5gOwLjHa0AeD5SOqaGa6aw
Signature :	IA8vvtg48Puao6ZtxARpuhhaXiD8kyWf(

You can check the contents related to the certificate of the currently encrypted program through the contents of the "Certificate Information" group box.

When the program encryption process is completed successfully, "Protected" and "Valid" items are checked.

Note: When signing an EV(Extended Validation) code to a program, you must sign the EV code after encrypting the program with FLProtection®.

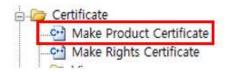




5. Generating Product Certificates

Generating Product Certificates requires a **Developer Certificate**, and can be performed only when a **Security Level 3 or higher account** is signed in.

Sign in with a Security Level 3 or higher account.



When signing into an account with Security Level 3 or higher, the **Certificate** > **Make Product Certificate** menu item appears in the Menu Tree. Double-click on the **Make Product Certificate** menu item to open the Make Product Certificate window.

DeveloperCert		
DeveloperCert File:	C:₩UserDownload₩TestManual1,fldc	m
ProductCert		
ProductCert File:	C:\UserDownload\Test Product,flpc	
ProductName :	Test Product	Generate

Click the "..." button to the right of the "**DeveloperCert File**" and enter the file path of the Developer Certificate (*.fldc).

Click the "..." button to the right of the "**ProductCert File**" and enter the file path of the Product Certificate that will be created (*.flpc).

Enter the Product Certificate name in the Edit box and click the "**Product Certification**" button to create a Product Certificate.

After entering the product name, click the "Generate" button to generate a Product Certificate.

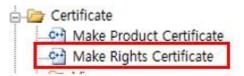




6. Generating Rights Certificates

Generating Rights Certificates requires a **Developer Certificate**, a **Product Certificate** and a **Rights Granter Certificate**, and can be performed only when a **Security Level 3 or higher account** is signed in.

Sign in with a Security Level 3 or higher account.



When signed in with a Security Level 3 or higher account, the **Certificate** > **Make Rights Certificate** menu item appears in the Menu Tree. Double-click the **Make Rights Certificate** menu item to open the Make Rights Certificate window.

Required Cert		
DeveloperCert File:	Firmware₩EWARM₩FLUSBPrototype₩Exe₩12,fldc	
ProductCert File :	C:₩Back-end₩FLProtectionDongleFirmware₩EWA	
RightsGranter File :	C:\Back-end\FLProtectionDongleFirmware\EWA	
RightsCert		
RightsCert File :	C:₩Back-end₩FLProtectionDongleFirmware₩EWA	
Expiration Date :	00000000000 Genera	

Enter the path of the Developer Certificate (*.fldc), Product Certificate (*.flpc), and Rights Granter Certificate (*.flrgc) by clicking the "..." button to the right of each lists.

Click the "..." button to the right of the "**RightsCert File**" item and enter the file path of the Product Certificate that will be created (*.flrc).

Set the Expire Date at the "**Expired Date**" item. The format is YYYYMMDDHHmm, for example, if the Expiration Date is January 2, 2021 at 1:40 PM, enter 202101021340. If the Expiration Date is 00000000000, it is set permanent.

Click the "Generate" button to generate a Rights Certificate (*.flrc). When the creation of the Rights Granter Certificate is complete, the Rights Granter Certificate

used at this time cannot be reused. Once the Rights Certificate is generated, the extension of the used Rights Granter Certificate is changed to ***.used**.

When using a program protected by FLProtection® with network certification, the Rights Certificate must be in the same folder as the protected program to run the program.





FLProtecti	on Security S	ervice	×
	e will be bou u like to conti	nd to this PC. nue?	
r			- 55

When using network certification, the first time you use a program protected by

FLProtection®, you will be asked if you want to bind the Rights Certificate to your PC. If you proceed, the right certificate will be bound to the PC. If you do not, the protected program will not run.

FLProtection		Х
COULD NOT Please check y	FIND LICENSES our licenses.	
	확인	

When running a program protected by FLProtection®, if the certificate cannot be found, the following pop-up window is displayed. In this case, you must check the certificates, Dongle, and the operating status of the FLProtection® service.



7. Insert R/C(Rights Certificate) into Dongle

If the Dongle is not connected to PC, connect it.



Double-click the **Dongle Certificate Insert Rights Certificate** menu item in the Menu Tree to open the Insert Rights Certificate window.

RightsCert		
RightsCert File:	C:\UserDownload\yu1,flrc	
Dongle		
Dongle Serial Number :	207B306D564E ~	Insert

Click the "..." button to the right of the "**RightsCert File**" item and enter the path to the Rights Certificate (*.flrc).

Select the Dongle's Serial Number to insert the right certificate.

Click the "Insert" button to insert the right certificate into the Dongle.

Note: Network certification is not possible with the certificate inserted into the Dongle. Note 2: Only up to 10 certificates can be inserted into the Dongle.





8. Eject Rights Certificate from Dongle

If the Dongle is not connected to PC, connect it.



Double-click the **Dongle Certificate Eject Rights Certificate** menu item in the Menu Tree to open the Eject Rights Certificate window.

Selected Dongle :	2074317F554D	
RightsCert File :	8₩source₩repos₩Project7₩x64₩Debug₩T	est,flrc
SerialNo Of RightsCert :	000000501210217220112 ~	Eiect

Select the Dongle Serial Number of which you want to remove the right certificate.

Click the "..." button to the right of the "**RightsCert File**" item and specify the file path to save the Rights Certificate to be extracted.

Select the serial number of the right certificate to be ejected.

Click the "Eject" button to extract the Rights Certificate in Dongle.



9. Dongle Firmware Update

Go to <u>https://resource.fourthlogic.co.kr/flprotection/flprotectionfirmwarelatest.zip</u> to download the latest Dongle firmware update file.

If Dongle is not connected to PC, connect it.



Double-click the **Dongle** > **Firmware Update** menu item in the Menu Tree to open the Firmware Update window.

Insert Update File		
Firmware File:	C:₩UserDowi	nloadWFLProtection Dongle
Firmware Version :	11	FirmwareUpdate
Dongle		
Dongle Serial Numbe	er : 207B306	D564E 🗸

Click the "..." button to the right of the "Firmware File" in the Firmware Update window and enter the path to the firmware update file (*.out).

After selecting the Serial Number of the Dongle to be updated, click the **"FirmwareUpdate"** button to update the firmware.

Note: Do not disconnect the Dongle or exit FLProtection® during the firmware update. It is a major cause of device failure, and A/S is not possible in this case.

FLProtectionSecurityStudio	×
FirmwareUpdate Success Please Detach Dongle	
확인	

After the firmware update is complete, press the OK button on the pop-up window to close the window, disconnect and reconnect the Dongle to the PC again to complete the firmware update.





10. Certificate Verification



You can check the certificate by selecting the type of certificate you want to check from the sub-items of **Certificate** > **View** in the Menu Tree.

Enter the file path of the certificate (*.fldc, *.flpc, *.flrgc, *.flrc) to check the contents of the certificate.

The contents that can be checked in each certificate are as follows.

- Developer Certificate

Developer Certification File	Path
DevloperCert File:	C:\UserDownload\TestManual1,fldc
Valid DeveloperCert :	
Developer Certification Info	rmation
Serial Number :	0000000448210217184221
Issued By :	Fourth Logic Incorporated
Issued To :	TestManual1
RootAuthorizedKey :	Y2ynBBf1fRG9iurmY+W6xwxVV/OkcbpBV5ij2XFaLSY=
DeveloperPlaneKey :	3NyXtifGhRu7yXHKFLd6n+am7n7FjNmU9ubKYXQKRew=
DeveloperAuthorizedKey	qixhTCKEpQJPaQ0br2lySdEAukgVNAoyothHJ9ytkc8=
Signature :	ds7YS3FUilumWZfm4MepD2JSU6d0csiR4xB2VwSBQKI=

Contents	Description
Valid DeveloperCert	Checked if the Developer Certificate is valid.
Serial Number	Serial Numberof the Developer Certificate.
Issued By	The organization that issued the Developer Certificate.
Issued To	The organization that the Developer Certificate is issued to.
RootAuthorizedKey	Root certificate identification authentication key.
DeveloperPlaneKey	Plaintext key of the Developer Certificate.
DeveloperAuthorizedKey	Identification authentication key of the Developer Certificate.
Signature	Signature of the Developer Certificate.





- Product Certificate

Product Certification FilePath) ·
ProductCert File :	C:₩UserDownload₩jkjk,flpc
Valid ProductCert :	
Product Certification Informa	tion
Serial Number :	0000000441210217165005
Issued By :	Fourth Logic Incorporated
Issued To :	jkjk
ProductName :	likjk
RootAuthorizedKey :	Y2ynBBf1fRG9iurmY+W6xwxVV/OkcbpBV5ij2XFaLSY=
DeveloperPlaneKey :	RF9g83MiMydEb3DkJC/Df3aVtCWxe8JnyHUaqc0IEB0=
DeveloperAuthorizedKey :	cx101K9Z25IR9xmcV30zqWUd3tSQB70q6EHE2i8HKeQ=
ProductPlaneKey :	voDTpYGJDTWw+J3W0i7r3AqbMFcUVuOJgn+hDTpIW04=
ProductAuthorizedKey :	u7gtMr8L5gOwLjHa0AeD5SOqaGa6aw47Zg2QoSmRdKE=
Signature :	IA8vvtg48Puao6ZtxARpuhhaXiD8kyWfOvMrMODCdhg=

Contents	Description
Valid ProductCert	Checked if the Product Certificate is valid.
Serial Number	Serial Numberof the Product Certificate.
Issued By	The organization that issued the Product Certificate.
Issued To	The organization that the Product Certificate is issued to.
ProductName	Name of the product.
RootAuthorizedKey	Root certificate identification authentication key.
DeveloperPlaneKey	Plaintext key of the Developer Certificate.
DeveloperAuthorizedKey	Identification authentication key of the Developer Certificate.
ProductPlaneKey	Plaintext key of the Product Certificate.
ProductAuthorizedKey	Identification authentication key of the Product Certificate.
Signature	Signature of the Product Certificate.



- Rights Certificate

Rights Certification FilePath	
RighsCert File:	C:\#Back-end\#FLProtectionDongleFirmware\#E\#A
Valid RightsCert :	Usable Network :
Rights Certification Information	on
Serial Number :	0000000512210218084701
Issued By :	Fourth Logic Incorporated
Issued To :	test
ProductName :	test
Expiration Date :	00000000000
RootAuthorizedKey :	Y2ynBBf1fRG9iurmY+W6xwxVV/OkcbpBV5ij2XFaLSY=
DeveloperPlaneKey :	T8u76qp1iHWS5Y+/kV05Dk0o5Nb1GpaVmFEltQst28I=
DeveloperAuthorizedKey :	NX1MzAz45eZupW4rfwNkmTfjFu/LfEzh0H70e6R7Elo=
ProductPlaneKey :	vcH+rucAFr7NGcgGRPBSGKGLRHbybTMRFZjf62enMyg=
ProductAuthorizedKey :	cWojoIWOAeXTXDOvq0mxPCxhEbE11bHKeq5zeClcPJg=
RightsPlaneKey :	RMNyEq0K1TdVJFmeTS9m2Kdvnp+yURP3sUB75E32+lk=
RightsAuthorizedKey :	D3AcS3MHqCaEBiT+qRtvil+3zR1hyzS60K07ZTAjLks=
Signature :	H+w8olxVsUdb+qH+xCITm+ZaBtUMBZbfOKp1SUHYyS0=

Contents	Description
Valid RightsCert	Checked if the Rights Certificate is valid.
Usable Network	Checks whether network certification is available.
Serial Number	Serial Numberof the Rights Certificate.
Issued By	The organization that issued the Rights Certificate.
Issued To	The organization that the Rights Granter is issued to.
ProductName	Name of the product.
ExpireDate	Expire date of the Rights Certificate.
RootAuthorizedKey	Root Certificate identification authentication key.
DeveloperPlaneKey	Plaintext key of the Developer Certificate.
DeveloperAuthorizedKey	Identification authentication key of the Developer Certificate.
ProductPlaneKey	Plaintext key of the Product Certificate.
ProductAuthorizedKey	Identification authentication key of the Product Certificate.
RightsPlaneKey	Plaintext key of the Rights Granter Certificate.
RightsAuthorizedKey	Identification authentication key of the Rights Granter Certificate.
Signature	Signature of the Rights Certificate.



- Rights Granter Certificate

Rights Granter FilePath —	
RightsGranter File:	C:\UserDownload\TestManual1,flrgc
Valid RightsGranter :	Used :
Rights Granter Information	1
Serial Number :	0000000449210217184302
Issued By :	Fourth Logic Incorporated
Issued To :	TestManual1
RootAuthorizedKey :	Y2ynBBf1fRG9iurmY+W6xwxVV/OkcbpBV5ij2XFaLSY=
RightsGranterKey :	PMIuv38RPIBWBq1QU+fnpX/6w9hvyn5rBtNsICenLro=
Signature :	kJ5ZsRwhfMgtanASjCTloEzxh1+Ug4RpgV3SMetVVO0=

Contents	Description
Valid RightsGranter	Checked if the Rights Granter Certificate is valid.
Serial Number	Serial Numberof the Rights Granter Certificate.
Issued By	The organization that issued the Rights Granter Certificate.
Issued To	The organization that the Rights Granter Certificate is issued to.
RootAuthorizedKey	Root certificate identification authentication key.
RightsGranterKey	Identification authentication key of the Rights Granter Certificate.
Signature	Signature of the Rights Granter Certificate.





11. Dongle Verification

If the Dongle is not connected to PC, connect it.



You can check the Dongle by selecting the serial number of the Dongle you want to check from the sub-item of **Dongle** > **Devices** in the Menu Tree.

The contents that can be checked in each Dongle are as follows.

Device Information	
Dongle Information	
Dongle S/N :	207B306D564E
Valid Dongle :	
In Use :	
Firmware Version :	16
Dongle Led Status :	#0 : Blink ~
Rights Certificate Slot	
Slot :	#1:000000539210218151203 ~
Serial Number : Issued By :	0000000539210218151203
Serial Number :	0000000539210218151203
Issued By :	Fourth Logic Incorporated
Issued To :	Test Inc
Product Name :	Test Product
Expiration Date :	00000000000
Root Authorized Key :	Y2ynBBf1fRG9iurmY+W6xwxVV/OkcbpBV
Developer Plane Key :	gmDunJ54gvFwmbHHMV+YzME0dI+u/0vi
Developer Authorized Key :	XPnm4mu0Yukp4eVTTZWof8QGF854XXU
Product Plane Key :	kEhtFp5b0xfRDIaaZg1MttfpPkY3rCRx00T
Product Authorized Key :	q3y4lCmw5ey116m80YJaAAp0lbhh+mf2yo
Rights Plane Key :	M//q+jz5LA+etufaNVQ8S0yxuTG+GBrYya
Rights Authorized Key :	9KAtMkdZ9trGfamInJCNFNmZTiMBGwht
Signature :	Ea+k5JDi/xzbKGmazJMKVV0+rdgnT0tQl



Contents	Description
Valid Dongle	Checked if the Dongle is valid.
In Use	Checked if the Dongle is currently in use.
Firmware Version	Version of the Firmware installed.
Dongle LED Status	LED Status of the Dongle. Blinking, keep on, keep off status are avaliable.
Slot	Serial Number of the Rights Certificate inserted.
Serial Number	Serial Number of the Rights Certificate of the slot.
Issued By	The organization that issued the Rights Certificate.
Issued To	The organization that the Rights Certificate is issued to.
ProductName	Name of the product.
ExpireDate	Expire date of the Rights Certificate.
RootAuthorizedKey	Root Certificate identification authentication key.
DeveloperPlaneKey	Plaintext key of the Developer Certificate.
DeveloperAuthorizedKey	Identification authentication key of the Developer Certificate.
ProductPlaneKey	Plaintext key of the Product Certificate.
ProductAuthorizedKey	Identification authentication key of the Product Certificate.
RightsPlaneKey	Plaintext key of the Rights Granter Certificate.
RightsAuthorizedKey	Identification authentication key of the Rights Granter Certificate.
Signature	Signature of the Rights Certificate.



CERTIFICATES

1. Develover Certificate

- The Developer Certificate is a certificate provided to the developer of the program to be protected.

- You can generate Product Certificates for products to be protected using Developer Certificates.

- The extension of the Developer Certificate is *.fldc.

2. Product Certificate

- The Product Certificate is the certificate provided to the program to be protected.
- The program can be encrypted using the Developer Certificate and Product Certificate.
- The extension of the Product Certificate is ***.flpc**.

3. Rights Granter Certificate

- The Rights Granter Certificate (RGC) is a one-time certificate designed to entitle users of encrypted programs to use.

- You can use Developer Certificates, Product Certificates, and RGCs to generate Rights

Certificates that enable you to use the program.

- The extension of the RGC is ***.flrgc**.

- Once the Rights Certificate is generated, the RGC used to generate the Rights Certificate cannot be reused. The RGC used to create the Rights Certificate is renamed *.used.

- The certificate for granting rights is provided by FourthLogic Inc.

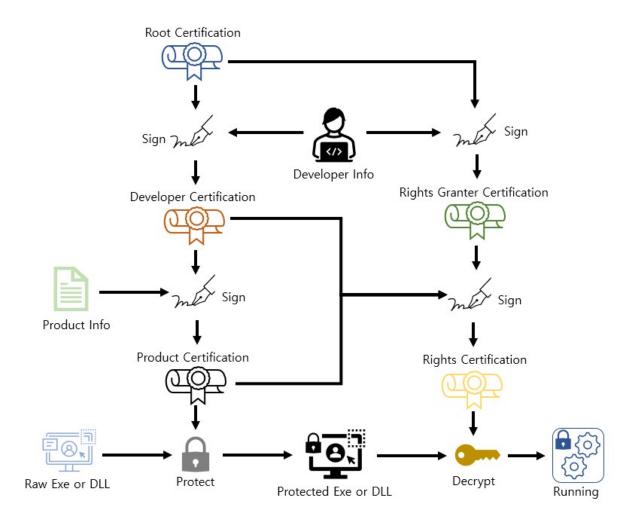
4. Rights Certificate

- The Certificate of Rights is a certificate that gives you the right to use programs protected by FLProtection®.

- You can use FLProtection®-protected programs on a PC with a Rights Certificate or on a PC connected to a Dongle.

- The Product Certificate has the extension *.flrc.









DONGLE SPECIFICATION

1. Overall Structure

The structure of Dongle is designed with a USB port at the bottom and an indicator light at the top. When the Dongle is connected to the PC, you can check the current FLProtection® status according to the color of the indicator at the top.



2. LED State Specification

You can check the current FLProtection® status according to the Dongle indicator status. The following is a table of FLProtection® status by indicator color.

Indicator color	State
Blue	Displays the Dongle standby status.
Yellow	Indicates that a protected program is running.
Red or Faded	Indicates that there is an error in the Dongle or FLProtection® is not installed.
Purple	Indicates that Dongle firmware is being updated.
Blue Light Blinking rapidly	Indicates that Dongle firmware update is being completed.





3. Changing Dongle LED Status

You can change the LED Status of the Dongle. The steps are the following.



In the Menu Tree, select the serial number of the Dongle you want to check from the subitem of **Dongle** > **Devices** to open the Device Information window.

Dongle Information		
Dongle S/N :	207B306D564E	
Valid Dongle :		
In Use :		
Firmware Version :	16	
Dongle Led Status :	#0 : Blink	~

Select the status of the Dongle indicator from the Dongle LED status item.





FLPROTECTION® STEP BY STEP

1. Protecting a software

Protecting a software requires a **Developer Certificate** and a **Product Certificate**, and can be performed only when a **Security Level 3 or higher account** is signed in. The process of creating a protected program is as follows.

Run the FLProtection® software.

Sign In		
ID :		
Password :	•••••	•••
Sign In	Sign Out	Change Password
	Find User ID & Passy	word
Sign in Status		

Log in with your FLProtection® Security Level 3 or higher account.

DeveloperCert File :		on Test₩Test Inc.fldc	
ProductCert ProductCert File : ProductName :	C:₩UserDownload₩Protectio		nerate
Name	Date modified	Туре	Size
Test Inc.fldc	2021. 2. 18. 오후 4:47 2021. 2. 18. 오후 4:47	FLDC File FLPC File	1 KE 1 KE

After selecting **Certificate** > **Make Product Certificate**, enter the path to the Developer Certificate, path to the Product Certificate to be generated, and the product name. Then click the "**Generate**" button to proceed with the Product Certificate generation process.

By this process, a Product Certificate is created in the path with the name specified in **"ProductCert File"**.



Certificate					
Developer Cert:	C:₩User	Download\Protection Test\Te:			
Product Cert :	C:₩User	Download₩Protection Test₩Te:			
Executable File :	C:\UserDownload\Protection Test\Te:				
Enable Memory Du	Memory Dump :				
Executable Informa	tion				
Architecture :	×64	Code Signed :			
Protected :		Valid : 🖂			
Certificate Informati					
Serial Number :	UN	0000000537210218141612			
Issued By :		Fourth Logic Incorporated			
lssued To :		Test Inc			
ProductName :		Test Product			
RootAuthorizedKey	:	Y2ynBBf1fRG9iurmY+W6xwxVV/Okcb			
DeveloperPlaneKey	:	gmDunJ54gvFwmbHHMV+YzME0dI+u			
DeveloperAuthorize	dKey :	XPnm4mu0Yukp4eVTTZWof8QGF854>			
ProductPlaneKey :		kEhtFp5b0xfRDIaaZg1MttfpPkY3rCRxC			
ProductAuthorizedk	(ey:	q3y4lCmw5ey116m80YJaAAp0lbhh+m1			
Signature :		XiUZLMcGsPBgmw0i/owdwm9vFWF			

After selecting the **Binary** > **Protect File** item, enter the Developer Certificate path, Product Certificate path, and program path to be protected, and then click the "**Protect**" button to proceed with the protection progress. When the program protection process is completed successfully, "**Protected**" and "**Valid**" items are checked.

Note: When signing an EV(Extended Validation) code to a program, you must sign the EV code after encrypting the program with FLProtection®.





2. Generating Rights Certificates

To run the program protected in step [1.Protecting a software], the **Rights Certificate** is required.

Generating Rights Certificates requires a **Developer Certificate**, a **Product Certificate**, a **Rights Granter Certificate**, and can be performed only when a **Security Level 3 or higher account** is signed in. The process of generating a Rights Certificate is as follows.

Run the FLProtection® software.

Sign In		
ID :		
Password :	•••••	•••
Sign In	Sign Out	Change Password
F	ind User ID & Passv	word
Sign in Status		
Login ID :		

Log in with your FLProtection® Security Level 3 or higher account.

	Make Rights Certification			
	Required Cert			
	DeveloperCert File :	C:₩UserDownload₩Protection Test₩	Test Inc,fldc	
	ProductCert File :	C:₩UserDownload₩Protection Test₩	Test Product,	
RightsGranter File:		C:₩UserDownload₩Protection Test₩	Test1,flrgc	
	RightsCert			
	RightsCert File :	C:₩UserDownload₩Protection Test₩	Test Product	
	Expired Date :	00000000000	Generate	
Name		Date modified	Туре	Size
		Date modified	ype	SILC
] Test Inc.fldc		2021. 2. 18. 오후 4:47	FLDC File	1 KB
Test Product Rig	hts Cert.flrc	2021. 2. 18. 오후 4:47	FLRC File	1 KB
Test Product.flp		2021. 2. 18. 오후 4:47	FLPC File	1 KB
Test1.flrgc.used		2021. 2. 18. 오후 4:47	USED File	1 KB

After selecting the **Certificate** > **Make Rights Certificate** item, enter the Developer Certificate path, Product Certificate path, Rights Granter Certificate path, the Rights Certificate path to be generated, and the expiration date, click the "Generate" button to proceed with the Rights Certificate generation.

After this process, a Rights Certificate is created in the path with the name specified in **"RightsCert File**", and the extension of the Rights Granter Certificate is changed to *.used.





3. Running a protected software

With the Rights Certificate created in **[2. Generating Rights Certificates]**, the program protected by **[1. Protecting a software]** can be run.

There are two methods of execution, either through network authentication or by inserting a certificate into the Dongle.

1) Running through Network Certification

Name	Date modified	Туре
🗟 DLL1.dll	2021. 2. 18. 오후 4:47	Application exten
BB DLL1.lib	2021. 2. 18. 오후 4:47	Object File Library
📧 Test Program - Copy.exe	2021. 2. 18. 오후 4:47	Application
Test Product rights Cert.flrc	2021. 2. 18. 오후 5:33	FLRC File

In order to run the program protected through Network Certification, move the Rights Certificate into the same path of the protected program.

FLProtec	tion Security S	ervice	<u>~</u>
	nse will be bou ou like to conti		
	- 19	-	-16
	2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1		

Run the protected program. Before the program runs you will be asked if you want to bind the Rights Certificate to your PC. Click "Yes" in the pop-up window to bind the Rights Certificate to the PC. After this step, the program will be running.

If you proceed with this process, the right certificate will be bound to your PC, and you will not be able to run programs protected with this Right Certificate on other computers.

2) Running through the Certificate inserted into the Dongle

To insert the certificate into the Dongle, you need the Dongle and the Rights Certificate. To insert a certificate in Dongle, follow the steps below.

Run FLProtection $\ensuremath{\mathbb{R}}$ to insert the certificate into the Dongle and connect the Dongle with your PC.





Insert Rights Certification				
RightsCert RightsCert File:	C:₩UserDownload₩	Protection Test₩Test	t Product Rights	Ce
Dongle Dongle Serial Number :	207B306D564E	~	Insert	
Test Inc.fldc		2021. 2. 18. 오	2후 4:47	FLDC File
Test Product Rights Cert.fl	rc.used	2021. 2. 18. 오	후 4:47	USED File
Test Product.flpc		2021. 2. 18. 9	후 4:47	FLPC File

After selecting the **Dongle** > **Certificate** > **Insert Rights Certificate** item, enter the Rights Certificate path and Dongle serial number and click the "Insert" button to insert the Rights Certificate into the Dongle.

If you proceed with this process, the extension of the Right Certificate file inserted in Dongle will be changed to *.used.

ongle Information	
Dongle S/N :	207B306D564E
Valid Dongle :	$\overline{\checkmark}$
In Used :	
Firmware Version :	12
RightsCert Slot	
Slot :	0000000539210218151203 ~
Rights Certification Informati Serial Number :	on
	000000539210218151203
Issued By :	Fourth Logic Incorporated
Issued To :	Test Inc
ProductName :	Test Product
ExpireDate :	00000000000
RootAuthorizedKey :	Y2ynBBf1fRG9iurmY+W6xwxVV/OkcbpBV
DeveloperPlaneKey :	gmDunJ54gvFwmbHHMV+YzME0dI+u/0v
DeveloperAuthorizedKey :	XPnm4mu0Yukp4eVTTZWof8QGF854XXU
ProductPlaneKey :	kEhtFp5b0xfRDIaaZg1MttfpPkY3rCRxOOT
ProductAuthorizedKey :	q3y4lCmw5ey1l6m80YJaAAp0lbhh+mf2yo
RightsPlaneKey :	M//q+jz5LA+etufaNVQ8S0yxuTG+GBrYya
RightsAuthorizedKey :	9KAtMkdZ9trGfamInJCNFNmZTiMBGwhb
Signature :	Ea+k5JDi/xzbKGmazJMKVV0+rdgnT0tQF

By selecting the Dongle with the Rights Certificate inserted in **Dongle** >**Device**, then selecting the inserted Rights Certificate serial number in the "Slot" item, you can check the contents of the Right Certificate.

Run the protected program with the PC and Dongle connected. If the PC and Dongle are disconnected, the protected program cannot be executed.



TROUBLESHOOTING

- 1. When the Indicator is Red
 - 1) Disconnect and reconnect the PC and Dongle. Check the light to see if the blue light is on.
 - 2) If the red light keeps on, check that the FLProtection® service is running in Task Manager.

File Option	2							
Processes	Performance	App history	Startup	Users	Details	Services		
Name			PID	Descrip	tion		Status	Group
🕞 Fax				Fax			Stopped	
G fhsvc				File Hist	tory Servi	ce	Stopped	Local
Sk FLProte	ctionSecuritySe	rviceX64	4892	FL Prote	ection Se	curity	Running	
Section FoxitPha	antomPDFUpda	ateService	5176	Foxit Pl	nantomP	DF U	Running	
G FoxitRea	aderUpdateServ	ice	4236	Foxit Re	ader Upo	late S	Running	
G fdPHost	t		4004	Functio	n Discov	ery Pr	Running	Local
G FDResPu	ub		2888	Functio	n Discov	ery R	Running	Local

- 3) If the red light keeps on, install the Dongle firmware update to the latest version.
- 4) If the red light keeps on, re-install the FLProtection®.
- 5) If the problem is not solved by the above, turn off the power to the PC and turn it on again to check the operation after booting.

If the problem is not solved by the above, please contact FourthLogic Inc. technical support(+82) 31-463-6902).

2. When the Dongle Indicator has faded

If the problem is not solved after taking the measures of [1. When the Indicator is Red], there is a high probability of a hardware problem. Please re-check the operations after checking your PC hardware conditions.

If the problem is not solved by the above, please contact FourthLogic Inc. technical support (+82) 31-463-6902).

