

Flash Programmer Start-up Manual

DTS INSIGHT CORPORATION

Revision History

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INTRODUCTION

NEIMPRESS avant Start-up Manual, (hereinafter "this manual") describes basic steps from installing software to starting a programming.

Read this manual carefully before configuring the programming environment by using NETIMPRESS avant.

Display screen images of Windows 10 environment are used in this manual. Display screen image and operating procedures may vary if you are using other environment.



The wording "Programming" in this manual means writing data into a target microcomputer flash memory or an external flash memory connected to the target microcomputer.

Meaning of Icons

The following table describes the meaning of icons used in this manual.



It indicates very important information. Extra care should be taken when operating NETIMPRESS avant.

It indicates useful information and tips for operation.

It indicates references. Please see the referenced chapter of this manual and other manuals, if you needed.

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1. Overview and Features

This chapter describes the overview of NETIMPRESS avant series, composition of the programming environment, and necessary operating procedures for starting the programming.

1.1. Overview of NETIMPRESS avant series

NETIMPRESS avant is an in-circuit programmer that performs high-speed on-board programming of a microcomputer with built-in flash ROM or flash ROM connected to external bus of a microcomputer.



Various devices are supported by inserting dedicated SD card, which contains programming firm data for each microcomputer hereby called as "definition program", into the programmer main unit. Range of supported devices can be expended by adding programming condition as a license to the SD card.

The programmer has the 1000BASE-T interface, therefore it is possible to set up programming conditions and control the programmer by SWX600 (Remote Controller software) on host PC.

Programming conditions saved in the SD card enable stand-alone operation without PC.

An automatically-controlled production line system can be constructed by using SWX610 (Remote Controller software).

	• SD card is to contain programming firmware data for microcomputer. Programming for each device can be supported by inserting the SD card into the programmer.
	• Range of programmed devices is expanded by adding a definition license.
	 SD card is empty with definition licenses. Please make sure to add a definition license before operation.
Dedicated SD card	For how to add a definition license, see Chapter4.1"Adding definition license".
	 If definition license supports microcontrollers of same series, a different microcontroller can be supported by changing micom pack provided by DTS INSIGHT.
	For more details about micom pack, see Chapter 4.4 "Downloading each setting file".



Make sure to use dedicated SD card provided by DTS INSIGHT. If you used other SD cards, it might result in failure.

1.2. Communication environments

Ethernet standard TCP/IP is used for communication between a host PC and NETIMPRESS avant. Appropriate interface on the host PC is necessary. If there are no interfaces on the host PC, please build additional interfaces.

(The terminal on the programmer is governed by and construed under standards of 10BASE-T /100BASE-TX/1000BASE-T)

1.3. How to Start Programming

This chapter describes basic steps from installing software to starting a programming.

For more detailed setting procedure, see each referenced manual.



2. Check the Hardware/Software component (For **Basic configuration**)

2.1. Hardware

- NETIMPRESS avant main unit (Model name: AFX100)
- Dedicated AC code •
- Dedicated SD card (model name: AFM700)
- Probe cable (model code: PHX400 or PHX410) •

It depends on a target system environment.

Host PC •

Windows OS(Windows7 32bit · 64bit / Windows 10 32bit · 64bit) are run.

Ethernet cable

Make sure to use dedicated AC cable sold separately by DTS INSIGHT.

2.2. Software

SWX600 (Remote Controller)

It is used for downloading files, executing device functions, and setting parameters.

📅 Folder / File List — 🗆 🗙	SWX600 Version 1.00 Current IMPRESS Module				– X
Find All View View : All Files and Folders	MCU TYPE	Definition Program	License MICOM	PACK No.	Communication
	License Information Host Communication	File Transfer Basic Operation	Configuration Parameter Table 1	Version Parameter Table 2	Execute YMN OK
	Ethernet Setting		Memo		Exit
	a. IP Address b. Port Number	192.168.0.1 1000	memo Communication Check		SWX600 Version 1.00 Probe Select Info

• AZ481 (KEY file generator)

it is used for generating a KEY file (file for checking the security of device), and creating a YSM file (file for checking SUM value of object).



3. Setting up the Software

3.1. Installing the software

The following software are used for configuring the programming environment.

- SWX600 (Remote controller)
- AZ481 (KEY file generator)

Software is available on our home page.

Download them from the link below.

https://support.dts-insight.co.jp/en/product/support_netimpress/download/

					_	JP EN
Our insight, your value		Support Ho	me F	Product list 🗸 [Logout	은 My page
upport TOP > NETIMPRESS support	> Download					
Menu	NETIM	PRESS Suppor	t			
> Download	Deventeerd					
> Upload data	Download					
> Search MicomPack / Definition Program	Search by k	eyword				
FAQ 🕑	Keyword					Search
> Inquiry / Repairment C Request	Category					
	Software for F	PC Manual / Startup Guide				
	Product series	5				
	NETIMPRESS a	avant / acorde NETIMPRESS nex	t / G-NET	TIMPRESS NETIN	PRESS air	
	Software	for PC				
	🕰 User and pro	oduct registration is required to down	load doc	uments marked with	\ .	
	Product series	MODEL	Rev	Files for Download	DATE	Notes
	NETIMPRESS avant / acorde	SWX600	1.32	SWX600_132_64bit.zip	2024/02/29	Remote Control Software (Windows 7/10/11 64bit)
	NETIMPRESS avant / acorde	5WX600	1.32	SWX600_132_32bit.zip	2024/02/29	Remote Control Software (Windows7/10 32bit)
	NETIMPRESS avant / acorde	SWX680	1.05	SWX680_105.zip 🛓	2020/04/16	IP Address setting tool for NETIMPRESS acorde
	NETIMPRESS avant / acorde	AZ481	2.20	az481_220.zip 🛓	2017/03/30	KEY File Generator
	NETIMPRESS	AZ486	1.02	az486_102.zip 🛓	2017/05/24	YBO File Generator



In this manual, SWX600(Ver.1.00) is used. Display screen image may vary if other version is used.

The software is ZIP file. Install the software after extracting it in a folder on host PC. After the completion of installation, an icon is created on the Windows [Start] menu – <All programs> - <DTS INSIGHT Tools>.

For more details about supported OS and other installation conditions for each software, refer to "SWX600 Software Manual" (SWX600mnE*nn*.pdf) and "Instruction manual of AZ481 Key file generator file creation tool" (AZ481mnE*nn*.pdf). (*nn* stands for a revision of manual.)

3.1.1. How to install SWX600 (Remote Controller)

(1) Double-click the downloaded installer (SWX600_*nnn*_64bit.zip) (*nnn* varies depending on the version) to extract installation.



(2) Double-click the downloaded installer (setup.exe) to start installation.

📕 🕑 🔜 🖛	Extract	SWX600_109_64bit		- 0	×
File Home Share View	Compressed Folder Tools				~ ()
_			Extract all		
	Extract To				
\leftarrow \rightarrow \checkmark \uparrow \square \rightarrow This PC \rightarrow OS	S(C:) > Temp > SWX600_109	_64bit.zip > SWX600_109_64bit	~ Ö	Search S	,P
3D Objects	Name	Туре	Compressed size	Passw	ord
Desktop	DotNetFX461 setup.exe	File folder Application	2	51 KB No	
 Downloads Music Pictures Videos 	SWX600_setup.msi	Windows Installer Package	9	02 KB No	
😰 OS (C:) 🗸 🗸	<				>
3 items					



The installation has not finished yet as of this step. Follow the steps below to install the software.

(3) Follow the installer's diretionst to install SWX600(Remote Controller).



録 SWX600		-	×	
Confirm Installation			Ę	
The installer is ready to install SWX600 on your computer.				
Click "Next" to start the installation.				
				Click to start installing SW600
Cancel	< <u>B</u> ack	1	<u>vl</u> ext >	Б

(4) The install has finished when the following dialog appears.

# SWX600 — □ ×	
Installation Complete	
SWX600 has been successfully installed.	
Click "Close" to exit.	
Please use Windows Update to check for any critical updates to the .NET Framework.	Complete the installation
	7
Cancel < Back Qose	

3.1.2. Installing AZ481 (Key file generator)

(1) Download AZ481 (KEY file generator) fron our website.

https://support.dts-insight.co.jp/en/product/support_netimpress/download/

Software for PC Subsection Structure Structur							
Product series	MODEL	Rev	Files for Download	DATE	Notes		
NETIMPRESS avant / acorde	SWX600	1.32	SWX600_132_64bit.zip	2024/02/29	Remote Control Software (Windows 7/10/11 64bit)		
NETIMPRESS avant / acorde	SWX600	1.32	SWX600_132_32bit.zip	2024/02/29	Remote Control Software (Windows7/10 32bit)		
NETIMPRESS avant / acorde	SWX680	1.05	SWX680_105.zip 🛓	2020/04/16	IP Address setting tool for NETIMPRESS acorde		
NETIMPRESS avant / acorde	AZ481	2.20	az481_220.zip 🛃	2017/03/30	KEY File Generator		

(2) Extract downloaded ZIP file (az481_nnn.zip) (nnn varies depending on the version).

🖳 🔽 📃 🗢	Extract	az481_220.zip		-		×
File Home Share View	Compressed Folder Tools					^ 🕐
■ Pictures License information 20191008_AFX220改版回路回他	Documents wireshark(実機_改版後) 日本語版 Extract To	マニュアル作成_AFX200系 未_startup appsrc マ	Extract all	6	Search az.	٥
 > * Quick access > OneDrive > This PC > * Network 	Name az481_220	Type File folder	Compresse	d size	Passwo	ord
1 item	¢					>



🔒 🔁 📘 🖛	Extract	az481_220		-			×
File Home Share View	Compressed Folder Tools						^ 🕐
 Pictures License information 20191008_AFX220改版回路図他 	Documents wireshark(実機_改版後) 日本語版 Extract To	マニュアル作成_AFX200系 未_startup appsrc マ	Extract all				
\leftarrow \rightarrow \checkmark \uparrow \square \rightarrow This PC \rightarrow C	0S (C:) > Temp > az481_220.zij	p > az481_220		√ Č	Sear	rch az	P
 ★ Quick access ▲ OneDrive ➡ This PC ➡ Network 	Name az481.CAB AZ481mnE03.pdf AZ481mnJ05.pdf setup.exe SETUP.LST	Type Cabinet File Adobe Acrobat Document Adobe Acrobat Document Application LST File	Compress	ed size 1,587 350 590 66 1	KB KB KB KB	Passwo No No No No	ord
	<						>
5 items						E	==

(3) Open the extracted folder and double-click the installer (setup.exe) to start the installation.

The installation has not finished yet as of this step. Follow the steps below to install the software.

(4) Install AZ481 (Key file generator) by following the instruction of installer

KEY File Generator Setup
Welcome to the KEY File Generator installation program. Setup cannot install system files or update shared files if they are in use. Before proceeding, we recommend that you close any applications you may be running.
Start Installation
OK Exit Setup
₩ KEY File Generator Set Install ×
Begin the installation by cline button below. Dick this button to install KEY File Generator software to the specified destination directory.
Directory: C¥Program Files (x86)¥KEY File Generator¥ Change Directory
Exit Setup Designate the installation destination (Normally default setting is adequate.)
B KEY File Generator - Choose Program Group X Setup will add items to the group shown in the Program Group box. You can enter a new group name or select one from the
Program Group: (Normally default setting is adequate.)
Existing Groups:
DTS INSIGHT Tools Maintenance
Qontinue Cancel

(5) Installation is completed when the following dialog box is displayed.



3.2. Setting up Ethernet Connection

3.2.1. Setting up IP address to Programmer Main Unit

Set up an IP address to the programmer main unit in order to control it via Ethernet by a PC. * If incorrect key is pressed, press "QUIT" key once and then set up from (2) again.



NETIMPRESS avant does not support DHCP. Assign fixed IP address.

(1) Power on the programmer after insert dedicated SD cad to the programmer main unit and connect dedicated AC code.



Please make sure that the SD card is correctly inserted after powering it off, if "initialize SD CARD INIT /ETHER INIT" keep appearing on LCD of the programmer after powering it on. IP address cannot be set if dedicated SD car is not inserted.

(2) Follow the steps below to press the keys on the programmer.



(3) Enter IP address and port number to be set the Programmer by pressing \mathbf{A} , $\mathbf{\nabla}$, \mathbf{b} , \mathbf{A} .

IP ADDRESS <u>192</u> .168. 0. 2
PORT 1000 h
QUIT:Back SET:Exec ▼▲:Change ◆:Cursor

(4) Press SET to execute IP address setting.

Do not overlap the programmer's IP address with host PC or device connected to the same network.

3.2.2. Connection to PC (SWX600: Remote Controller Setting)

Follow the steps below to set up environments to control NETIMPRESS avant by the Remote Controller AZ490.

- (1) Connect host PC and the programmer by Ethernet cable (10BASE-T, 100BASE-TX/1000BASE-T)
- (2) Start SWX600 (Remote Controller) by host PC.[Start] menu <All programs> <DTS INSIGHT Tools>
- (3) Enter IP address and port number which are set the programmer on "Host Communication" tab. Click "**Communication Check**" button after entering them.

Current IMPRESS Module Communication CM UNDEFINED Communication Host Communication Basic Operation Parameter Table 1 Parameter Table 2 Cancel Exit SWX600 Version 1.00 Probe Select Info PROBE1	SWX SWX600 Version 1.00				– 🗆 X
MCU TYPE Definition Program License MICOM PACK No. CM UNDEFINED Execute YMN License Information File Transfer Configuration Version Host Communication Basic Operation Parameter Table 1 Parameter Table 2 OK Ethernet Setting Memo Exit Exit SWX600 Version b. Port Number 1000 Communication Communication 1.00 Probe Select Info PROBE1 PROBE1 Context	Current IMPRESS Module				Communication
CM UNDEFINED Execute YMN License Information File Transfer Configuration Version Host Communication Basic Operation Parameter Table 1 Parameter Table 2 OK Ethernet Setting Memo Exit Exit Exit a. IP Address 192.168.0.xxx memo 1.00 1.00 b. Port Number 1000 Communication 1.00 Probe Select Info PROBE1 Intervention Intervention Intervention Intervention	MCU TYPE	Definition Program	License MICOM I	PACK No.	Offeck
License Information File Transfer Configuration Version Host Communication Basic Operation Parameter Table 1 Parameter Table 2 Ethernet Setting Memo Exit Exit a. IP Address 192.168.0.xxx memo 1.00 b. Port Number 1000 Communication Check Probe Select Info	CM UNDEFINED				Execute YMN
Host Communication Basic Operation Parameter Table 1 Parameter Table 2 OK Ethernet Setting Memo Exit Exit a. IP Address 192.168.0.xxx memo 1.00 b. Port Number 1000 Communication Check Probe Select Info PROBE1 Info Info	License Information	File Transfer	Configuration	Version	
Ethernet Setting Memo a. IP Address 192.168.0.xxx b. Port Number 1000 Communication 1.00 Probe Select Info PROBE1	Host Communication	Basic Operation	Parameter Table 1	Parameter Table 2	ОК
Ethernet Setting Memo a. IP Address 192.168.0.xxx b. Port Number 1000 Communication Check 1.00 Probe Select Info PROBE1					Cancel
a. IP Address 192.168.0.xxx memo SWX600 Version b. Port Number 1000 Communication Check Probe Select Info PROBE1	Ethernet Setting		Memo		Exit
b. Port Number 1000 Communication Check Probe Select Info PROBE1	a. IP Address	192.168.0.xxx	memo		SWX600 Version
Probe Select Info PROBE1	b. Port Number	1000	Communication		1.00
PROBE1			Check		Probe Select Info
					PROBE1

(4) The communication between host PC and the programmer is established, and the programmer is controlled by host PC.



If the following dialog window appears due to communication error, the communication between PC and the programmer is not established. Make sure the status of connection and Ethernet setting.

Commun	ication	×
8	Can not Connected to NETIMPRESS. Press reset key on NETIMPRESS and correct the irreagal value in Host Configuration window.	
	ОК]

3.2.3. Confirmation points of Ethernet Connection Error

Is Ethernet cable correctly connected to both of host PC and the programmer?	 Make sure Ethernet cable is connected to connectors of host PC and the programmer. Make sure the cable is connected to Ethernet hub as well if Ethernet hub is used.
Is IP address set correctly?	 Make sure IP address of the programmer is correctly entered. Refer to"3.2.1. Setting up IP address to Programmer Main Unit" of this manual. Make sure the programmer's IP address does not overlap with host PC's or any other devices'. If host PC's IP address is automatically assigned (DHCP), NETIMPRESS avant cannot be connected. Certainly set IP address. Configure correct IP addresses of host PC and NETIMPRESS avant according to subnet mask setting. If subnet mask is 255.255.255.0, high 24 bits should be same value of host PC and NETIMPRESS avant.
Is port number set correctly?	 Make sure the programmer's port number is correctly entered. If the number has not to be set, enter default value "1000", Refer to "3.2.1. Setting up IP address to Programmer Main Unit" of this manual.
Subnet mask	 The default subnet mask value of the programmer is "255.255.255.0". The subnet mask should be same as host PC. If any changes are necessary, refer to "2.12.2. SUBNET MASK" of "NETIMPRESS avant OPERATION MANUAL" (NETIMPRESS_avant_stand-alone_smnenn.pdf).

4. Setting up the programming environment

4.1. Adding definition license

A definition license for each definition program has to be added into dedicated SD card in order to use a definition program for a target MCU.

This license file (.LCT file) can be downloaded if you register your information on our website by referring to the license sheet provided when you purchased the definition program.

•	• The file name of probe logic license is "licence model name_serial number_SD serial number.LCT"
Definition license file	 e.g. FCX839-S2_U191Y1234NL_UAB12345FS.LCT The license file can be downloaded if you register your information on our website. https://support.dts-insight.co.jp/en/ (the License file is sent by e-mail after the registration.)

4.1.1. How to acquire the license file

(1) Prepare a License sheet and dedicated SD card in hand.

The blue frame below will be necessary information for Product registration.

License Sheet

NET	IMPRESS avant.
VET	IMPRESS acorde
NETIMPRI	ESS avant/acorde Software Authorization
	2019/01/15
MODEL	FRX803
CONTENTS	License for Programmer
S/N	U191Y0007NL
Check Code	123
This license sheet is regu reason. Please keep this a 本証書に、ライセンスの発 使意してください。	en for when itsning a literase and assing for the activitied support. Ho will not measure the share for whether N Proc. 村をかうこのふかって、も見れる前に名前をなります。しかなな目的にないでした時日はないのなますがでくたけに

Dedicated SD Card



(2) Access product support website, log in and proceed to My Page.

(If you have not yet registered as a user, please register as a new user and then log in.) URL: <u>https://support.dts-insight.co.jp/en/</u>



(3) Click the "Product registration / License issuance" button on your My Page (if you are registering only one product) or the "Bulk product registration / Bulk license issuance" button (if you are registering multiple products at once) to proceed to the product registration form.

Our insight, your value	Support Home Product li	JP EN St ∨ B²Logout
Support TOP > My page		
My page		
Check / update user	List of your registered	Product registration
Click here to check or update your	You can refer to the service status of your	Product registration > License issuance
registration information.	registered products.	Bulk product registration > Bulk license issuance
Check / update user information >	Refer to registered products	* For more information on how to register, please click <u>here</u> .

(4) Enter information on the license sheet (Model, S/N, and Check Code), serial No. of SD card,on the Product Registration page, and press the "confirm" button. Confirm that there is no mistake in the confirmation screen display content, and register product.



Bulk registration using CSV file is useful when multiple licenses need to be registered.

Sample of a CSV file for batch registration with a text editor

• Format of the CSV file for bulk registration. (Multiple product categories can be mixed in the CSV file.)

Product Category	Format
NETIMPRESS main unit	Product model,Serial Number,,,,,,
Programmer license	Product model,Serial Number,,, SD Card Serial number,,,Check code
Micom Pack	Product model,Serial Number,,,,,, Check code
Probe logic license	Product model,Serial Number,,,,NETIMPRESS main unit Serial number,, Check code
PC software	Product model,Serial Number,,,,,, Check code

*Please pay attention to the position and number of commas.

How to specify a CSV file on the products registration page

(5)The registration has been completed, an e-mail attached license file is sent.

From: DTS INSIGHT Customer Support <web_server@dts-insight.co.jp> Date: 2025年xx月xx日(Mon) 10:10 Subject: Product / License registration completed To: <xxxxxxx@dts-insight.co.jp>

Thank you for registering our products. It has been completed.

If you registered the software products which needs license file, the license files are attached on this mail as well. If license information for multiple products is combined into one file, the file name will only contain the representative product model number and serial number.

Product and Serial No.
 [Product]: NETIMPRESS avant / acorde
 [Model]: FCX839-S2
 [Serial No.]: U194Y0001NL

This email is for sending only. We can't respond if you reply to this email.

DTS INSIGHT Customer Support

4.1.2. Adding definition license into dedicated SD card

- (1) Save license file (.LCT) to a local folder of host PC.
- (2) Start SWX600 (remote controller) and connect NETIMPRESS avant.
- (3) Click "License Information" tab and open a window for selecting license file by "Add License" button.

	sample	e.YIM		Communicatio
ТҮРЕ	Definition Program L	icense N	IICOM PACK No.	Evenute VAN
CM UNDEFINED				Execute YMIN
lost Communication	Basic Operation	Parameter Table	e 1 Parameter Table	2
License Information	File Transfer	Configuration	Version	OK
SD Serial No. UUC12001FS	AFX Serial N UUB270	10. 02FP		Cancel
Definition Program Licens	e / Probe Logic Licence			Exit
License List		Ad	d License	SWX600 Version
License				1.07
	Serial No. Expi	.re?	Add License	
	Serial No. Expl	.re?	Add License	Probe Select Info
	Serial No. Expl	re?	Add License	Probe Select Info PROBE1
	Serial No. Expi	.re?	Add License Read License	Probe Select Info PROBE1
	Serial No. Expl	re?	Add License Read License ve License	Probe Select Info PROBE1
	Seriai No. Expi	re?	Add License Read License ve License Save To Text File	Probe Select Info PROBE1
	Seriai No. Expi	.re?	Add License Read License ve License Save To Text File	Probe Select Info PROBE1

(4) Select license file which is prepared in (1).

SWX License File Select			×	
\leftarrow \rightarrow \checkmark \Uparrow PC \Rightarrow TIH0253500A (C:) \Rightarrow tmp	✓ ひ tmpの検索		Q	
整理 ▼ 新しいフォルダー		== •	?	
▲ クイック アクセス へ 名前 へ	更新日時	種類		
■ デスクトップ ★ U111P9999AL_FRX830.LCT	2019/03/12 17:39	LCT ファイル		
➡ ダウンロード 🖈				
Ch	oose License file	(xxxxx.LC	CT)	
		+ L CT + L CD)		
ノアイル2音(12): U111P9999AL_FRX830.LCT	License Files	^.LCI;^.LCP)	~	Click "OK" button to
	開<(<u>∪</u>)	+772	V	complete
			$\overline{}$	complete

(5) Confirmation dialog opened by clicking "Load License File and Add License" button. License is added to dedicated SD card by clicking "OK" button.

Serial number of SD card and added definition licenses can be confirmed by stand-alone operation with keys on the programmer.

- Showing added licenses: MENU→ P.8 → "READ LICENSE"
- Showing serial number of inserted SD card: $MENU \rightarrow P.8 \rightarrow SERIAL NUMBER$

4.2. Adding probe logic license

PHX400 and PHX410 are available as probe cable for NETIMPRESS avant. PHX is a multiple interface cable which support various interface. It supports serial and SPI in default, and supported interfaces are expanded by adding probe logic license to NETIMPRESS avant.

PHX410 supports CAN and CAN-FD.

,,

Adding probe logic license is same as "4.1. Adding definition license

	Extension of probe logic license is LCP
	 The file name of probe logic license is "license model_serial number_AFX serial number.LCP"
l icense file	e.g.PLX420_U191U1234NL_KAB12345FP.LCP
License me	• The license file can be downloaded if you register your information on our website.
	https://support.dts-insight.co.jp/en/
	(The license file is sent by e-mail after the registration.)

4.3. Creating YIM folder

Setting of programmed object and programming environment is saves as YIM folder (extension .YIM) in dedicated SD card.

After definition license is added, configure programming environment by creating YIM folder.

	•	Extension of YIM folder is .YIM.
YIM folder	•	Programming environment of the SD card is saved as a YIM folder. More than one environment can be saved in the SD card and environment can be switched by selecting YIM folder.

For more details about YIM folder, refer to "7. YIM folder."

- (1) Select "AFM700" in "Folder / File List" window of SWX600 (remote controller).
- (2) Select "File Transfer" tab and click "Create YIM Folder" button. A window for naming a YIM folder appears. Enter YIM folder name and then click "OK" button.

YIM folder is also created by right-click on Folder / File List window and selecting "Create" button.

(3) Created YIM folder is listed in "Folder / File List" window.

Select the YIM folder, click "Select YIM folder" in the main window.

A window appears and asks YIM folder. Select YIM folder and click "Select" button.

YIM folder is also selected by double-clicking YIM folder in "Folder / File List" window.

(4) Selected YIM folder in (3) is set as current folder, and name of the YIM folder is shown on the top of main window of SWX600 (remote controller).

	SAMPLI	E.YIM		Communication Check
CU TYPE	Definition Program	cense MICON	I PACK No.	
CM UNDEFINED				Execute YMN
Host Communication License Information	Basic Operation File Transfer	Parameter Table 1 Configuration	Parameter Table 2 Version	ОК
IMPRESS Folder	Object Data To and From Buffe	er RAM To an	meter Table Id From AFM700	Cancel
Create YIM folder	Save Object	ct Data	Save Parameter	SWX600 Version
Delete YIM folder	Download Dat	a Check		1.00
Copy YIM folder	Object Data Forma	at To an	ition Program nd From AFM700	Probe Select Info PROBE1
Load YIM folder	MOTOROLAS 🗸	Lo	ad Definition Program	
Save YIM folder	Clear Bu	Jffer Sa	ve Definition Program	
Log File	Bundle File To and From DOS	S Area		
Save Log File	Copy File ((Load)		
Save All Log Files	Copy File ((Save)		
Delete Log File	Delete Bund	dle File		
Delete All Log Files	Delete All Bun	dle Files		

	•	When loading files is executed, the files are downloaded to this YIM folder.
Current folder	•	When device functions are executed, programming environment is in this YIM folder.

4.4. Downloading each setting file

Files for setting programming environment are downloaded to current folder.

Prepare definition program (extension .CM) and files of micom pack. Micom pack is downloaded from our web site.

https://support.dts-insight.co.jp/en/product/support_netimpress/micom/

https://support.dts-insight.co.jp/en/mypage/usages/

	•	Files for setting programming environment. Each supported device has micom pack for it.
	•	Download it from our website.
Micom pack	•	Downloaded micom pack is a compressed file (ZIP format). Extract the file by double-clicking it.
	•	Micom pack includes several files, such as parameter file (extension .PRM), manual, writing control program (extension .BTP), and readme file. (Contents differ depending on device.)

4.4.1. Downloading definition program

Definition Program is downloaded by clicking "Load Definition Program" in "Definition Program" group of "File Transfer" tab.

Definition Program	•	Extension is .CM.
Deminion rogram	•	It can be downloaded from our website.

	SAMPLE	YIM		Communica
F	Definition Program Lic	ense MICO	M PACK No.	Check
				Execute YM
t Communication	Basic Operation	Parameter Table 1	Parameter Tab	ole 2
ense Information	File Transfer	Configuration	Version	ОК
RESS Folder	Object Data To and From Buffe	r RAM To ar	meter Table nd From AFM700	Cancel
Select YIM folder	Load Object	Data	Load Parameter	Exit
Create YIM folder	Save Object	t Data	Save Parameter	SWX600 Versi
Delete YIM folder	🗹 Download Data	Check		1.00
Copy YIM folder	Object Data Forma	t Defin	ifion Brogrom nd From AFM700	Probe Select I PROBE1
Load YIM folder	MOTOROLAS 🗸	Lo	ad Definition Program	D
Save YIM folder	Clear But	ffer	ave benning rog ram	
File Control Module	Select			×
Sa ← → ~ ↑	< temp > CM	~ 7	CMの検索	Q
Save 整理 ▼ 新しい	フォルダー		C=	: • 🔟 🕜
Del 名前	^	更新日時	種類	サイズ
Delet V1700FRX830_0	3.CM	2018/12/04 20:54	CM ファイル	196 KB
	ファイル名(N): V1700Ff	RX830_03.CM	✓ Control Module F	iles(*.cm) ~
Delet V1700FRX830_0	33.CM ファイルを(N): V1700FI	2018/12/04 20:54	CM ファイル CM ファイル	ïles(*.c

4.4.2. Downloading a parameter file

Parameter file is downloaded by clicking "Load Parameter" button in "Parameter Table" group of "File transfer" tab.

	•	Extension is .PRM.
Parameter File	•	It is included in micom pack.
	•	It is a parameter table file including device information of target system.

SWX600 Version 1.04				- 🗆 X		
Current IMPRESS Module				Communication		
	obj_rh850f1l.YIM					
MCU TYPE 701202	Definition Program L	icense Mi 830	COM PACK No. FRX830M14	Execute YMN		
Host Communication	Basic Operation	Parameter Table	1 Parameter Ta	ble 2		
License Information	File Transfer	Configuration	Version	OK		
IMPRESS Folder	Object Data To and From Buff	er RAM T	arameter Table o and Fr <u>om AFM7</u> 00	Cancel		
Select YIM folder	Load Obje	ct Data	Load Parameter	Desit		
Create YIM folder	Save Obje	ct Data	Save Parameter	SWX600 Version		
Delete YIM folder	Download Dat	a Check		1.04		
Parameter File Select				× Probe Select Info		
← → • ↑ 🔒 « te	mp → prm	∨ Ö pr	mの検索	PROBE1		
整理 ▼ 新しいフォルダー				0		
F+1X7	名前	^	更新日時	種類		
📰 ピクチャ	V1700M14RX830.	prm	2019/02/19 13:58	PRM ファ		
📑 ਪੱਜੋਸ						
♪ ミュージック						
TIH0253500A (C:)	<			>		
ファイノ	レ名(N): V1700M14RX830.	prm V P	RM Files(*.prm)	~		
			開く(O) キャン	セル		

4.4.3. Downloading bundle files

Downloading necessary bundle files by clicking "Copy File (Load)" button in "Bundle File" group of "File Transfer" tab. KEY file, AMK file, and BTP files are the major bundle files.

Bundle file	 Collective term of the files for setting the programming environment. Definition program file, parameter file, and programming object are not included in the bundle file. The files that users created by software provided by us are included. e.g. KEY file
KEY file	 Extension is .KEY. This is a file for security check of the device. The file is created by using AZ481 (KEY file generator). For more details about KEY file, refer to "8. KEY file" of this manual.
AMK file	 Extension is .AMK. This is included in micom pack. Master KEY file for security check of the device.
BTP file	 Extension is .BTP. This is included in the Micom pack. This file is writing control program.

■ 開<			×
← → × ↑ 🔒 « temp > MP	∽ ©	MPの検索	م
整理 ▼ 新しいフォルダー			- 🔳 🕐
名前	更新日時	種類	サイズ
MO2R830.YDD	2008/08/09 10:20	YDD ファイル	1 KB
ファイル名(N): YM02	R830.YDD		~
	(開<(<u>O</u>)	キャンセル

4.4.4. Setting Parameters

In "4.4.2 Downloading a parameter file", downloaded parameter file is the initial settings configured by us. Changing the setting may be necessary based on target system.

Set parameter on "Parameter table 1" tab.

Mainly, MCU clock frequency, detection level of the target power (TVcc threshold), communication bound rate, and so on are set on this tab.

urrent IMPRESS Module	SAM	PLE.YIM			Communicatio Check
ICU TYPE	Definition Progra	m License	MICOM	PACK No.	
701033	FF	RX830		FRX830M02	Execute YMN
License Information	File Transfer		ingeretion	Version	
Host Communication	Basic Operation	Param	neter Table 1	Parameter Table 2	ОК
MCU Type 701033		Data Comm	unication		Cancel
TVcc Threshold	2.7 [V]	Interface	CSI	\sim	
MCU Clock Frequency	8.0 [MHz]	Baud Rate	5M	√ bps	Exit
MCU Operation Mode	0000				SWX600 Version
WDT Clock Period	2 [ms]				1.00
BufferRAM Initialize Mode	KEEP ~				Probe Select Info
SUM Check Mode	8/8bit ~				PROBE1
ROM Block Configuration	Setting				
Flash ROM Area					
First Address	0000000				
Last Address	000FFFFF				
Buffer Area					
First Address	0000000				
Last Address	000FFFFF				
RAM DISK Area					
First Address	0000000				
Ram Disk Size	00000000				

For more details about parameter table, refer to definition program manual and micom pack manual.

4.4.5. Downloading object file to be programmed

Click "Clear Buffer" button in "Object Data" group on "File Transfer."

Click OK button on confirmation window.

	SAMPLE.	YIM		Check
U TYPE	Definition Program Lice	ense MICOM	PACK No.	
701033	FRX83	0	FRX830M02	Execute YMN
Host Communication	Basic Operation	Parameter Table 1	Parameter Table 2	
License Information	File Transfer	Configuration	Version	OK
IMPRESS Folder	Object Data To and From Buffer	RAM To an	neter Table d From AFM700	Cancel
Select YIM folder	Load Object [Data	Load Parameter	Exit
Create YIM folder	Save Object Data Save Parameter			SWX600 Version
Delete YIM folder	🗹 Download Data (1.00		
Copy YIM folder	Object Data Format To and From AFM700			Probe Select Info PROBE1
Load YIM folder	MOTOROLAS V	Loa	ad Definition Program	
Save YIM folder	Clear Buffe	er Sa	ve Definition Program	
Log File	Bundle File	Area	~	
Save Log File	Copy File (Lo	pad)	on X	
Save All Log Files	Copy File (Save)			
Delete Log File	Delete Bundle	File		
Delete All Log Files	Delete All Bundl	e Files	OK キャンセル	

Object file to be programmed is downloaded by clicking "Load Object Data" button in "Object Data" on "Load Object Data." Object Data is loaded to buffer memory of SD card by executing downloading object file.

	SAMPL	E.YIM		Communicatio Check
J TYPE	Definition Program L	icense MICOI	M PACK No.	
701033	FRX	830	FRX830M02	Execute YMN
Host Communication	Basic Operation	Parameter Table 1	Parameter Table 2	
License Information	File Transfer	Configuration	Version	OK
IMPRESS Folder	Object Data	er RAM To a	meter Table nd From AFM700	Cancel
Select YIM folder	Load Obje	ct Data	Load Parameter	Exit
Create YIM folder	Save Obje	ci Data	Save Parameter	SWX600 Version
Delete YIM folder	Download Dat	ta Check		1.00
Copy YIM folder	Object Data Form	File name (Data Load	from HD)	Probe Select Info
Load YIM folder	MOTOROLA S	Download File Info	······	
Save YIM folder	Clear B	Folder Path C:\temp	DIOBJI	
Log File	Bundle File To and From DO	File Name TEST1	000.S	Select
Save Log File	Copy File			
Save All Log Files	Copy File			
Delete Log File	Delete Bun		ОК	Cancel
Delete All Log Files	Delete All Bur	ndle Files		

Setting of programming environment is completed.

	•	Data to be programmed to device is saved in buffer memory.
Buffer memory	•	Downloaded object file is converted to binary data, and the data is saved in buffer memory.
	•	The data is no deleted after the programmer is powered off because buffer memory is on SD card.

4.5. Connecting to Target System

This chapter explains the typical connection example between target system and NETIMPRESS avant.

Connection may vary depending on programming environment.

Check definition program and Micom pack manuals for more details.

Manuals of main unit, probe cable, definition program and micom pack are available on our web site.

https://support.dts-insight.co.jp/en/product/support_netimpress/download/

https://support.dts-insight.co.jp/en/product/support_netimpress/micom/

https://support.dts-insight.co.jp/en/mypage/usages/

• Types of probe

Connect the programmer main unit to tartget board by using a suitable probe suitable for your prgramming environment.

PHX400	Standard probe Target connector: Dsub 25pin Standard interface: serial, SPI,JTAG,SWD,BDM Various interfaces can be supported by adding probe logic license. Addable probe logic license: PLX420, PLX430, PLX440, PLX460
PHX410	CAN/CAN-FD probe Target connector: Dsub 9pin Standard interface:CAN、CAN-FD Addable probe logic license: -

Wire Connection

Connect probe and target system referring to "Connecting to a Target system and Connector."

e.g. Micom pack RX830M00 supporting RH850/F1L of Renesas

• Connection of the programmer and target system

Checking the type of the target probe and the wire connection, connect the main unit and target system

Caution about powering on/off flow.

- Powering on: The programmer is powered on, and then the target system is powered on.
- Powering off: The target system is powered off, and then the programmer is powered on.

5. Programming

5.1. Programming Procedure

- Connect the programmer and target system. Making sure the connection is correct, power the programmer on.
- Startup SWX600 (remote controller) after connecting host PC and the programmer. If the setting of SWX600 is completed, "Communication Check" is automatically executed, and the host PC and the programmer is connected.

Check Ethernet setting again according to"3.2 Setting up Ethernet Connection" if Ethernet connection is not established.

3. Select YIM Folder.

Select YIM folder that the programming environment is set, and then click "Select YIM folder" button in "IMPRESS Folder" on "File Transfer" Tab and "Select" button.

🗱 Folder / File List	- 🗆 🛛	SWX600 Version 1.00				– 🗆 🗙
		Current IMPRESS Module				Communication
View : All Files and Folders	Find All View					Check
		CM UNDEFINED	Definition Program	License MICOM	I PACK No.	Execute YMN
SAMPLE.YIM		Host Communication	Basic Operation	Parameter Table 1	Parameter Table 2	
		License Information	File Transfer	Configuration	Version	OK
		IMPRESS Folder	Object Data	Paran	mataz Tabla	Cancel
		Select YIM folder	🖳 Module Name	-		Exit
		Create Hill forcier	SAMPLE.YIM			SWX600 Version
		Delete YIM folder				1.00
		Copy YIM folder				Probe Select Info PROBE1
		Load YIM folder			m	
		Save YIM folder		\frown	m	
		Log File	I o and From DO	US Area	Cancel	
		Save Log File	Copy File	e (Load)		
		Save All Log Files	Copy File	e (Save)		
		Delete Log File	Delete Bu	ndle File		
		Delete All Log Files	Delete All Bi	undle Files		
		1				

4. Power on target system.

Caution about powering on/off flow.

- Powering on: The programmer is powered on, and then the target system is powered on.
- Powering off: The target system is powered off, and then the programmer is powered on.

5. Execute Programming

Programming is executed by each device function button in "Device Function" group on "Basic Operation" tab. E.P.R is normally executed. E.P.R stands for Erase, Program and Read Verify.

Device function can have different meaning depending on definition program. For more details about device function, refer to definition program manual.

SWX 600 Version 1.00			- 🗆 ×
Current IMPRESS Module			Communication
МСШ ТҮРЕ	Definition Program License		Спеск
701033	FRX830	FRX830M02	Execute YMN
License Information Host Communication	File Transfer Confi Basic Operation Parame	guration Version eter Table 1 Parameter Table 2	ОК
Device Function Target Address	File Operation	File Delete File	Cancel
First Address	Current File	File Delete All File	Exit
	TESTIOUD.S		SWX600 Version
Verify Mode FULL READ $ \lor $	File List		1.00
ERASE BLANK	YM02R830.YDD		Probe Select Info
PROGRAM READ			
E.P.R COPY	Device FUNCTION	× NC	
Buffer Area First Address 00000000 Last Address 0000FFFFF		2	
Clear Buffer Store Block But	fer SUM	++>>zル	-
EDIT Address	SET +	+]

- 6. End SWX600 (remote controller) by clicking close box of SXW600 after programming is completed.
- 7. Power off target system and the programmer.

Caution about powering on/off flow.

- Powering on: The programmer is powered on, and then the target system is powered on.
- Powering off: The target system is powered off, and then the programmer is powered on.

6. Screen of SWX600(Remote Controller)

Downloading files, setting programming environment, and executing device function by using SWX600(remote controller).

SWX600 is configured by 8 tabs.

- Host interface Configuration: setting connection between SWX600 and the programmer
- Basic Operation: executing device functions
- Parameter Table 1: setting parameter
- Parameter Table 2: setting parameter (Password is required.)
- License Information: setting license
- File Transfer: downloading files
- Configuration: Setting NETIMPRESS main unit itself and updating NETIMPRESS main unit system
- Version: each version information

This chapter explains the following screens used frequently.

Basic Operation, Parameter Table 1, File Transfer

For other functions and details of the operation, see [SWX600 NETIMPRESS avant Software manual] (SWX600mnEnn.pdf).

6.1. Basic Operation (Device Function screen)

	1 SAMPLE.YIM		Co	mmunication Check
CU TYPE	Definition Program License	MICOM PACK No.		
701033	FRX830	FRX83	0M02	xecute YMN
License Information Host Communication	File Transfer Cor Basic Operation Paran	niguration neter Table 1 Para	Version meter Table 2	OK
Device Function Target Address	File Operation	e File	Delete All Sile	Cancel
First Address 0000000 Last Address 000FFFF	0 Current File	Delete The	Delete All File	Exit
Maria Maria	TESI1000.S		SWX	(600 Version
Verity Mode FULL READ	File List			1.00
ERASE BLANK	IM02R830.1DD		Prot	e Select Info
PROGRAM READ				PROBE1
E.P.R COPY				
Buffer Area First Address 0000000	•			
Last Address 000FFFF	F			
Clear Buffer Store Block E	Buffer SUM		-	
EDIT Address				
END Data /			-	

You can execute device functions on Basic Operation Screen.

(1) Current IMPRESS Module

YIM folder name currently selected is shown here. (In this example, SAMPLE.YIM is selected.)

(2) Device Function

The device functions are executed.

(3) Current File

The name of object file which is loaded in buffer memory currently. Displays the file name of the object specified by Load Object Data on the Object Data To and From Buffer RAM screen on the 「File Transfer」 tab.

Displays the file name of the object specified by Load Object Data

(4) File list

It shows bundle files in YIM folder currently selected. You can find indicated file by Copy File(Load), "Bundle File to and From DOS Area" in File Transfer tab.

6.2. Parameter Table 1 (Parameter Setting Screen)

	SAN	IPLE.YIM		Communicatio Check
ICU TYPE	Definition Progra	am License MICOM F	ACK No.	
701033	(5) F	RX830	FRX830M02	Execute YMN
License Information Host Communication	File Transfer Basic Operation	Configuration 8 Parameter Table 1	Version Parameter Table 2	ОК
MCU Type 701033 TVcc Threshold	2.7 M 6	Data Communication Interface CSI	~	Cancel
MCU Clock Frequency	8.0 [MHz] 7	Baud Rate 5M	√ bps	Exit
MCU Operation Mode	0000			SWX600 Version
WDT Clock Period	2 [ms]			- Droke Calent Infe
SUM Check Mode	8/8bit ~			PROBE1
ROM Block Configuration	Setting			
Flash ROM Area				
First Address	0000000			
Last Address	000FFFFF			
Buffer Area				
First Address	0000000			
Last Address	OOOFFFFF			
RAM DISK Area				
First Address	0000000			
Ram Disk Size	00000000			

You can set programming according to your environment on Parameter Table 1 screen.

(5) MCU TYPE

By default it shows device name etc. The name set up at this MCU TYPE is shown at LCD top of programmer main unit.(reference shows 701033.)

(6) TVcc Threshold

When executing device function, NETIMPRESS avant uses this value as the threshold to check if the target power is turn on or not. Normally, set the value to about 90% of the target power voltage

(7) MCU Clock Frequency

Set operating Clock frequency of target here. (0~99.9[MHz])

Please see your definition program manual for parameter detail.

(8) Data Communication

Configure the communication setting between a device and the programmer. Set the communication method and baud rate.

6.3. File Transfer (File Transfer Screen)

You can execute in File Transfer tab as follows: adding license, transfer of necessary file for programing environment setting, and creating, selecting, copy, deleting of YIM folder.

	SAMPLE.	.YIM		Communicati
CU TYPE	Definition Program Lice	ense MICOM	I PACK No.	
701033	FRX83	30	FRX830M02	Execute YM
Host Communication	Basic Operation	Parameter Table 1	Parameter Table 2	
License Information	File Transfer	Configuration	Version	OK
IMPRESS Folder	Object Data To and From Buffer	RAM To an	neter Table d From AFM700	Cancel
Select YIM folder	Load Object I	Data	Load Parameter	Exit
Create YIM folder	Save Object	Data	Save Parameter	SWX600 Versio
Delete YIM folder	Download Data	Check		1.00
Copy YIM folder		Defini	tion Program	Probe Select In
Load YIM folder	MOTOROLAS V	Lo	ad Definition Program	PROBEI
Save YIM folder	Clear Buff	ler Sa	ve Definition Program	
Log File	Bundle File	Area		
Save Log File	Copy File (Lo	oad)		
Save All Log Files	Copy File (S	ave)		
Delete Log File	Delete Bundle	e File		
Delete All Log Files	Delete All Bund	le Files		

(9) IMPRESS Folder

The buttons are used for operating YIM folder selected in Folder/File List Window.

Folder/File List is displayed in new window.

(10) File Transfer

Object Data:

It is used to transfer to buffer memory of object to program, and to save data in buffer memory

to host PC.

Bundle File:

It is used to transfer bundle file to programmer and save in host PC.

Parameter Table:

it is used to transfer parameter file to programmer and save in host PC.

Control Module:

It is used to transfer definition program file to programmer and save in host PC.

7. YIM Folder

7.1. YIM Folder Structure

YM Folder controls Programming object of SD card and programming environment.

- (1) You can create YIM Folder in SD card plurally and switch YIM folder as current by functional operation
- (2) You can configure BTP File(*.BTP),User OBJ(*.KEY、*.YSM etc,) in YIM folder.
- (3) You can configure each Buffer file (BUF.SYS), Definition program file(CM.SYS) every created YIM folder.

Please do not change and erase BUF.SYS & CM.SYS file. In case any change and erase, it has possibilities to occur unsuccessfully programming

You can check the file composition by SWX600 (remote controller), but can not refer read-only area.

Please refer "4.3 YIM folder " in this manual for detail to create YIM folder .

7.2. Managing the programming environment

Created YIM folder in the SD card can be stored in the host PC by using SWX600(remote controller). You can re-create the same programming environment by transferring the saved YIM folder to another working environment.

This chapter explains how to save the YIM folder, and how to load it.

Same definition programming license is required in the destination SD card if you want to share the same programming environment with more than one SD card by transferring YIM folder.

7.2.1. How to save YIM folder (Operation for the original folder)

🎫 Folder / File List — 🗆 🛛	SWX600 Version 1.00				– 🗆 X
	Current IMPRESS Module				Communication
Find All View		SAMPLE	E.YIM		Check
View : All Files and Folders	MCU TYPE	Definition Program Li	cense MICON	PACK No.	Execute VMN
E-S ASMT00	701033	FRAG	30	FRA83UWUZ	Execute milly
	Host Communication	Basic Operation	Parameter Table 1	Parameter Table 2	
	License Information	File Transfer	Configuration	Version	ОК
	IMPRESS Folder	Object Data To and From Buffe	r RAM To an	neter Table d From AFM700	Cancel
	Select YIM folder	Load Object	t Data	Load Parameter	Exit
	Create YIM folder				SWX600 Version
	Delete YIM folder		M	>> Parsonal Computer	1.00
	Copy YIM folder	Ot		Save Folder Select	Probe Select Info PROBE1
	Load VIM folder	M			-
	Save YIM folder				
	Les File	Folder Name	SAMPLE.YIM		
	Log File	To Save Folder	Path C:\temp		
	Save Log File				
	Save All Log Files		ОК	Cancel	
	Delete Log File				
	Delete All Log Files	Delete All Bun	dle Files		

7.2.2. How to load YIM folder (Operation for the destination SD card)

SWX600 Version 1.00					- 🗆 🗙
Current IMPRESS Module					Communication
	SAMPLE	E.YIM			Check
MCU TYPE	Definition Program Li	cense	MICOM PAG	CK No.	
701033	FRX8	30		FRX830M02	Execute YMN
Host Communication	Basic Operation	Parameter Tab	ole 1	Parameter Table 2	
License Information	File Transfer	Configuration	n	Version	OK
IMPRESS Folder	Chiest Data	YIM Folder Load)	Doromata	r Tabla	Cancel
Select YIM folder	Download F	older			Exit
Create YIM folder	Folder Path	C:\temp\SAMPI	LE.YIM		SWX600 Version
Delete YIM folder				Select	1.00
Copy YIM folder		_		\sim	Probe Select Info
Load YIM folder	Di		OK	Cancel	
Save YIM tolder					
Log File	Bundle File To and From DOS	Area			
Save Log File	Copy File (Load)			
Save All Log Files	Copy File (Save)			
Delete Log File	Delete Bund	lle File			
Delete All Log Files	Delete All Bun	dle Files			

8. KEY file

Some MCU has a security feature.

With the basic security feature, an encrypted data (ID code), embedded in the MCU, is sent from the programmer when the programmer accessing (read/write) the MCU, and the access will be failed if the data is not matched. Therefore the flash memory can be accessed only when the programming contents are obvious. By this way, it can prevent the wrong data programming and reading.

NETIMPRESS avant creates KEY file with an encrypted data (ID code) for passing the security at programming.

	•	This is a file for checking the security by issuing the ID code to device automatically when the programmer executed the target function.
KEY file	•	Security ID address, ID size and ID data value are stored.
	•	KEY file has to be in the YIM folder. Download this file by using AZ990 (air Connect) as a bundle-file.

For details on how to download the bundle-file, see Chapter 4.4.

Specification of security varies depending on the MCU. For details, see the manuals of definition program and Micom pack.

8.1. Creating KEY file

Create the KEY file by using AZ481 (KEY file generator).

(1) Start up AZ481 (KEY file generator).

n Key	File Generat	:or																		
File(F)	AddressSi	ze(A)	Option(O)	He	р(Н)															
			File:			<u>K</u>	E	YI	Fil	e	Ge	ne	era	to	<u>r</u>					-
No.	Address	Size	Туре	00	01	02	03	04	05	06	D a 07	nta 08	09	0A	0B	0C	0D	0E	0F	Title
1			HEX -																	
2			HEX -	·]																
3			HEX -																	
4			HEX -																	
5			HEX -																	
6			HEX -																	
7			HEX -	·]																
8			HEX -																	
9			HEX -																	
10			HEX -																	
				•															Þ	

(2) Input the security ID address, ID size and ID data value.

							K	E	Y]	Fil	e (Ge	ne	ra	to	r								
Seci	urity ID a	ddre	ss	e:																				
No	ddress	Size	Тур	e	00	01	02	03	04	05	06	D a 07	nta 08	09	0A	0B	0C	0D	0E	0F		Tit	tle	
1	0000608B	8	HEX	-	1E	C2	13	97	1A	15	B4	43												
2			HEX	-																				
3	②ID si	ze	┢	•			3	ID	dat	a v	alue	•	F											
5			HEX	-																				
6			HEX	•																				
7			HEX	-	\square]	Th		vo1	1100	0.5%			n 1a					
8			HEX	-	\square][1 110	se	var	ues		d day	am	pie		w000	0060	0D	
9			HEX	-	\square				1		1	1. ว	L T		izo	y a	uure	288		. 0	huto	0000	DOD	
10			UPV	_	\square						1	2.	1	0.8	ize					. 0	Jyie			

(3) Save KEY file. (From the menu bar [File] menu, select <File Save>.)

Select the KEY file (*.KEY) as a file type, and then specify a path for saving the KEY file.

Set the file name of KEY file, and then click the Save button.

Note that YSM file name has to be the same name with a user object file.

9. Check the SUM value in the buffer of YSM file

By saving the SUM value of buffer memory in YSM file, you can check the SUM value of the user object whenever you execute the device function. By using this function, you can prevent the programming of incorrect object data when the buffer memory of programming object was corrupted accidentally.

9.1. YSM file

Create the YSM file you saved the SUM value of buffer memory, and then place it in YIM folder.

After the device function is completed, the programmer automatically compares the SUM value in the YSM folder with the SUM value at when the device function was executed. If the values are not matched, it will result in an error (YSM CHECK ERROR).

Download the YSM file by using SWX600(Remote controller) as a bundle-file.

For details on how to download the bundle-file, see Chapter 4.4.

9.2. Creating YSM file

This chapter explains how to create the YSM file.

- (1) Start up AZ481 (KEY file generator).
- (2) Create the YSM file by following the steps below.

Select [Address Sort Off] from Option on the menu bar.

Enter the data.(Normally, enter the lines of No.1 and No.2)

ile(F)	AddressSi	ze(A)	Option(O) Addr	ess ess	Helj So So	D(H) P(H) P(T On(N) P(F) File Generator
N		<u></u>	File:]		(2)Enter the data of SUM value. Enter in line No.1.Address= 00000000 (Fixed) Size=1 (Size of SUM value. If it is 1byte, enter 1, enter 2 for 2byte.) Data=SUM value (SUM value Calculate SUM value by using "Buffer SUM" of Basic Operation of AZ400)
140.	Address	Size	Туре		D	
1	00000000	1	HEX ·	•	47	
2	00000000	1	HEX	•	01	
3			HEX ·	-	Г	
4			HEX	•		(3)Enter the check flag for check/do not check the SAM value.
5			HEX ·	-		Address= 00000000 (Fixed)
6			HEX	•		Size=1 (Fixed)
7			HEX	•		Data="01" or "00" (If you do the SUM value check, enter 01, enter 00 if you do not check the SUM value)
8			HEX	•		
9			HEX	-		
10			HEX	•		
	Addamas Cant (245			. []	

(3) Save YSM file. (From the menu bar [File] menu, select <File Save>.)

Select the YSM file (*.YSM) as a file type, and then specify a path for saving the YSM file.

Set the file name of YSM file, and then click the Save button.

File Sav	e(S)				K	E	YI	fil	e (Ge	ne	ra	to	<u>r</u>							
Extract End(X)	KEY Data(E	:)	I																		
No. Add	ress Size	Туре		01	02	02	04	05	06	Da	ta 08	00	0.4	0P	00	00	OF	. 01	. [Ti
1 0000	608B 8	HEX 🔻	1E	C2	13	97	1A	15	B4	43	08	09									
2		HEX -	i	1		┢	┢								┢	┢	┢	┢	Ť		
3		HEX -	i	ŀ	1	ľ	F				H			1	F	F	ŀ		Τ'n		
4		HEX -	1				Ē				\square				Ē		T		Τ'n		
5		HEX -]	1															٦ĥ		
6		HEX 🔻]																ĪΓ		
7		HEX -																			
8		HEX -																			
9		HEX 💌]																		
10		HEX -	Ļ																		
		emp 🕨	_											•	47					8== .	
	ganize +	Nam	ne			^					Date	e mod	lified		Tvi	oe -				0 '	•
							No ite	ms m	atch	your s	earch										
			_	Sele	ct t	he	patl	1 fo	r sa	ivin	g tl	ne Y	YSI	Иf	ile,	ano	d ei	nte	r th	e	

The SUM value check function which uses YSM file can also check the data in a certain area of buffer memory. You can also check the versions of the user object file by using this function.

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10. EXT Keys & CSB File

NETIMPRESS avant has two EXT keys: EXT1 and EXT2.

You can execute multiple commands sequentially by pre-assigning a command sequence to the keys. (Up to 16 sequential executable commands can be assigned.)

A CSB file is required to assign command sequences.

The name of the CSB file is arbitrary, but please save it with an extension (.CSB). Only one CSB file can be placed in the root directory of the SD card.

10.1.1. CSB File format

The format of CSB is as follows. Place the ',' between commands. Use a single-byte character for ",".

 $\underline{LK1, count, cmd1, cmd2, \dots, cmd16; comment}_{(1) (2)}$ (3)

(1) KEY No. code (3 bytes)

LK1 = Assignment to EXT1 key.

LK2 = Assignment to EXT2 key.

(2) count (2 bytes)

Enter how many commands are executed in a command sequence. Decimal notation is used. Therefore after "09" will be "10", and the Maximum is 16. For unused keys, set "00".

(3) cmd1, cmd2, ..., cmd16:

Enter a command code of the command what you want to execute. Refer the list below.

Command definition list.

Command code	Description
F0(XXXXXXXX YYYYYYY)	Device function area setting (XXXXXXX: First address, YYYYYYY: Last address) *These settings can be omitted. When omitted them, the area will be the entire flash ROM area.
F1(XXXXXXXX YYYYYYY ZZ)	Block store (With this command, you can program any same data into specified range in buffer memory.) (XXXXXXX: First address, YYYYYYYY: Last address, ZZ: data) These settings can be omitted. When omitted, the area will be the entire flash ROM area and data will be 00.
F2	Buffer memory clear
FF1(XXXXXXXX.YYY)	Load file (XXXXXXXXXYY): name of loading file)
FF5(XXXXXXXX YYYYYYY)	Transfer address setting (XXXXXXX: First address, YYYYYYY: Last address) These settings can be omitted. When omitted, the address becomes the entire flash ROM area.
D9	Blank (Device function)
DC	Erase (Device function)
DD	Program (Device function)
DE	Read (Device function)
DF	E.P.R. (Device function)
FB0(XXXXXXXX.YIM)	Switching current YIM folders (XXXXXXXXYIM: YIM folder name)
FBD(XXXXXXXX.YMN)	Execution of current YMN file (XXXXXXXXYMN: name of YMN file to be executed.)

Maximum number of commands in CSB fail is 16 commands.

(4) Command delimiter ";" (1 byte)

Shows the command delimiter between (3) and (5).

(5) Comment (Any characters + CRLF)

Describe a comment when you want to give a comment to the command. When you do not need a comment, you can finish at (4).

Make sure to write Newline (CRLF) code at the end of the line when you describe a comment.

10.1.2. Example of Creating CBS File

Example 1. (Standard attached sample Test.csb)

A Test.csb file is attached to each definition program. The description contents of this CSB file are shown below.

[Description] LK1,01,DF;EPR LK2,01,DD;Program [Execution Sequence] EXT1 key = Executing E.P.R., EXT2 key = Executing Program *Precondition: YIM folder should be selected.

Example 2 :

[Description]

LK1,01,FB0(SAMPLE.yim);CHANGE YIM

LK2,01,DF;E.P.R

[Execution Sequence]

EXT1 key = Loading specified YIM folder, EXT2 key = Executing E.P.R.

When you press "EXT1" key, "SAMPLE.YIM" is downloaded as Current IMPRESS Module.

When you press "EXT2" key, EPR is performed to the target with the contents of "SAMPLE.YIM".

Example 3 :

[Description]

LK1,04,FB0(SAMPLE_1.yim),DF,FB0(SAMPLE_2.yim),DF;2file sequence EPR

LK2.01.DC;Erase

[Execution Sequence]

EXT1 key = Continuous programming of two YIM folders, EXT2 key = Executing Erase

When you press "EXT1" key, "SAMPLE.YIM" is downloaded as Current IMPRESS Module, and EPR is performed to the target with the contents of it.

Then, "SAMPLE_2.YIM" is loaded as Current IMPRESS Module, and EPR is performed to the target with the contents of it.

When press "EXT2" key, the flash memory of the target will be executed Erase.

[Usage example]

You can program into both an internal flash and external flash, when the circuit board whose flash microcomputer is connected with the external flash memory.

11. YCM File

YCM file is a file to do the following settings automatically when starting up NETIMPRESS avant.

Ethernet settings (IP address, port, subnet mask, gateway address setting)

VCC terminal (5V) output control setting

The above settings can be changed by NETIMPRESS avant operation. See the manual "NETIMPRESS avant operation manual" for operation procedure.

11.1. YCM File Format

YCM file can be created by text file format. Enter a command code of the command what you want to execute by text editor. Refer the list below.

The name of the YCM file is arbitrary (Kana and some symbols are not available), but please save it with an extension (.YCM).

Only one YCM file can be placed in the root directory of the SD card.

Command Code	Description
[ETHER NET]	Ethernet settings (IP address, port, subnet mask or gateway
	address) require this command.
ADDRESS=xxx.xxx.xxx.xxx	Used setting IP address.
	*Enter a number between 0 and 255 in the "xxx" field.
PORT=xxxx	Used to set port number.
	*Enter a number between 0 and 65535 in the "xxx" field.
SUBNET MASK=xxx.xxx.xxx.xxx	Used to set subnet mask.
	*Enter a number between 0 and 255 in the "xxx" field.
GATEWAY=xxx.xxx.xxx.xxx	Used to set gateway.
	*Enter a number between 0 and 255 in the "xxx" field.
VCCOUTON	Turn on 5V output of the VCC terminal
VCCOUTOFF	Turn off 5V output of the VCC terminal

Command definition list

(Continued on next page)

Do not describe anything other than what is defined above.

Only one command should be described per line of text file.

Each line of text file must be left-justified.

Blank lines may be inserted between commands.

Commands can be written in any order. However, to configure any of Ethernet settings, the command "[ETHER NET]" must be described first.

11.2. Creating YCM file

Example 1.) When only setting up all items of Ether net

- (Text File)-

```
[ETHER NET]
```

ADDRESS=192.168.0.1

PORT=1000

SUBNET MASK=255.255.255.0

GATEWAY=0.0.0.0

[Setting Detail] Set IP address: 192.168.0.1 Set Port Number: 1000 Set subnet mask: 255.255.255.0 Set gateway: 0.0.0.0

Example 2) When setting some items of Ethernet and controlling output of VCC terminal

- (Text File)-

[ETHER NET] ADDRESS=192.168.0.1 SUBNET MASK=255.255.255.0

VCCOUTON

[Setting Detail] Set IP address: 192.168.0.1 Set subnet mask: 255.255.255.0 5V is output from VCC terminal.

11.3. How to use YCM file

a. Create YCM file in advance.

Please refer to Chapters 11.1~11.2 of this manual for information on how to create YCM file.

- b. Copy YCM file to the root directory of the SD card.
 Only one YCM file may exist.
 If the file is copied to a location other than the root directory, it will not be recognized correctly.
- c. Insert the SD card into NETIMPRESS avant main unit and turn the power ON.
- d. The LCD will display "YCM DATA SET ?", press the [SET] key if you want to set the data with the contents YCM file, or press the [QUIT] key if you do not want to set the data.

Commands for VCC control processing are executed automatically regardless of the key pressed.

a. IP address and other information will be displayed on the top screen after startup.

Then Ethernet setup is completed.

After the Ethernet settings are completed, you can communicate with the software for writer control: Remote Controller (SWX600).

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Ethernet settings and VCC terminal control settings can also be changed by operating the main unit. Please refer to the separate "NETIMPRESS avant Operation Manual" for the operation method.

12. Glossary

Words & Terms	Description
SD card	Insert this dedicated SD card into NETIMPRESS avant main unit. This dedicated SD card is necessary for operating the main unit. By installing object files and other necessary files into a YIM folder in a SD card, you can operate NETIMPRESS avant as a stand-alone.
Buffer memory	NETIMPRESS avant has a buffer memory whose memory map is same as the programming target MCU in the each YIM folder of dedicated SD card. When the flash memory programming, data in the buffer memory is programmed into MCU.SWX600 can load / save an object file in the buffer memory, edit the buffer memory, etc.
Definition program	MCU-specific program to communicate each MCU. This is placed in the each YIM folder of the dedicated SD card. Some parts of the definition program are consisted from parameter. You can change it by using a remote controller SWX600. (To use the definition program, you need to install definition license in each dedicated SD card.)
Probe logic license	AFX is provided with probe cables, PHX400 and PHX. PHX400 supports serial and SPI by default. You can expand supported interface by adding a probe logic license.
Object file	This is the program / data file for programing into the flash memory of microcomputer by the user. NETIMPRESS supports the binary, intel HEX, and Motorola S format.
Programming control	Software for rewriting the flash memory on MCU.
program	NETIMPRESS air communicates with a boot program of MCU, and downloads data to RAM of MCU. The programming control program (extension .BTP) has to be in the YIM folder in the SD card.
WCP	This is an abbreviation of Write Control Program.
BTP file	It means a programming control program file (extension .BTP).
Current file	Current file means a file name of currently loaded object data. File name of the current file is set when downloading the object.
AMK file	AMK file is a file for sending a specific ID code, which does not vary depending on the object data, to MCU which has a security function. AMK file is included with the Micom-pack. The file format is Motorola S, which comes with an encrypted address and dummy data (FF). The data can be changed by using a file generator (AZ481).

NETIMPRESS avant START-UP MANUAL

DTS INSIGHT CORPORATION

URL: https://support.dts-insight.co.jp/en/product/support_netimpress/

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