

A_HMI_V0300 Introduction

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*This document is subject to change without notice.

1. Indroduction

The A_HMI is a PC software that can setup parameters, monitor operation data or control the BLDC drive. One can connect the PC to the drive thorugh RS-232 / Bluetooth / RS-485 (depends on the drive).

A+HMI requires the Microsoft Visual C++ 2010 Express (a legal free software provided my Microsoft) pre-instatlled in order tto work properly.

A HMI V0300 Download.

2. Interface

2.1. A: Action Menu

- File: To open (to upload to the drive) or save a parameter setting file.
- View: Display the drive information (Part number / fw version / Serial No.)
- Tool: Open the Multi-Drive / Multi-Drive Lite control panel.
- Advance: Advance setup, password input to enter advanced mode, reset buttons including: Parameter reset, IO reset, Error code reset, Warning reset, COMM reset.
- Langurage: Select the interface language (Not all drive model support other languages).

2.2. B: General Tool Bar

- Connection. Click to open the comport to connect to the drive (usually Connect Settings is required for the first time).
- X Disconnection. Click to close the comport to disconnect to the drive.
- ③ A_HMI V3 00 Beta21

 File View Tool Advance Language (語重) Help A

 Parameter Monitor Diagnosis

 C

 Image: C
 </
- Net IO control panel. Can use to control the ON/OFF status of each Net IO input.
- Connect Settings. Set the comport number, baudrate, data bits, pariy, stop bit, protocol (Modbus ASCII or RTU) and RS485 mode, ID.
- R Alarm Reset. Reset the alarm of the drive.
- Configuration Parameter. Click to make the parameter effective.

2.3. C: Page Tab

- Parameter: Parameter display and setup page.
- Monitor: Display dynamic data, monitor data and alarm record.
- Diagnosis: Display a summary of drive setup and status (for debug and test).

2.4. D: Data Display Area

• Display data depends on the page tab selection.

2.5. E: Parameter Brief

• Display the brief description of the selected parameter.

2.6. E: Connection Status

- Ready: Comport is not open yet.
- Fine: The connection to the drive is normal.
- Timeout: The drive has no response.
- Frame Error: The received message LRC or CRC is incorrect.
- CMD Deny: The command cannot be executed properly.

COM3

115200

8

1

None

•

Ok

Connect Settings

Serial Port Port Name

Baud Rate

Data Bits

Stop Bit(s)

Communication

Protocol:

R\$485

Slave ID:

Parity

3. Connection

Step 1: Click the • (Connection Setting) to set the comport and other communication settings. The right image shows the default setup for most cases when using RS232 (except the Port Number which is depsends on your device).

When using RS485, click the RS485 check box and set the Slave ID corresponding to the drive (Note: the protocol of most drive using RS485 is Modbus RTU).

 Click 《 (Connection) to connect to the drive. An ComPort Openned window will show up. Close that window. The connection status will display "Fine" if the connection is succesful.



4. Drive Parameter Access

4.1. Page Navigation

• Use the scroll to navigate the parameter(data) display page.

4.2. To Modify a Parameter

- Step1: Double click the parameter to open the setting window.
- Step2: Enter the value to setup.
- Step3: Press "enter" or click ok.
- Step4: Click to make parameter effective.

Note: Some parameters take effect immediently without the configuration and some would need to repower to drive to be effective. Please reference to the drive's manual for details.

4.3. To Save Parameter

Click the File->Save As... to save the current parameter setting into a file (.PEL2).

4.4. To Upload a Parameter Setting

Click te File->Open File to open a parameter file (.PEL2) Click the "Export To Drive" to upload the setting the the drive.

4.5. To Update single Parameter

After open a parameter file, one can double click on a parameter to update a single parameter to that setting independently.

4.6. Compare parameter

After open a parameter file, one can compare the the current drive setting to the parameter file with the "Compare With Drive" button. The different setting will be marked as yellow background.



C:\Users\gear.feng\Documents\WeChat Files\gearboyfeng\Files\1129.PEL2								
Address	ID	Parameter	Value	Def	Max	Min	Ram	
Motor								
0100h	01-01:	Hall Sequence	1	1	1	0	1	Ξ.
0101h	01-02:	Motor Poles	8	8	10	2	8	
0102h	01-03:	Motor No Load Full Spd	4188	4188	65535	0	4188	
0103h	01-04:	CW View	0	0	1	0	0	
0104h	01-05:	-	0	0	0	0	0	
0105h	01-06:	Rated Power	1000	1000	1000	0	1000	
0106h	01-07:	-	0	0	1000	0	0	
0107h	01-08:	-	0	0	1	0	0	
0108h	01-09:	-	128	128	255	0	128	
0109h	01-10:	-	0	0	65535	0	0	
010Ah	01-11:	-	0	0	65535	0	0	
010Bh	01-12:	-	10	10	65535	0	10	
010Ch	01-13:	-	35	35	65535	0	35	
010Dh	01-14:	Encoder resolution	2500	2500	65535	0	2500	
010Eh	01-15:	-	240	240	65535	0	240	
010Fh	01-16:	-	190	190	65535	0	190	
Gener	al							
0200h	02-01:	SC/CC Mode	0	0	1	0	0	
0201h	02-02:	Startup Output	0	0	300	0	0	Compare With Drive
0202h	02-03:	Command Source	1	4	7	0	1	
0203h	02-04:	Analog Input Range	0	0	1	0	0	
0204h	02-05:	Analog Input Gain	708	708	10000	0	708	Export To Drive
0205h	02-06:	Analog Input Offset	10	10	200	0	10	

X

10

Ò

R

F

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Watch Item

Oynamic

Monitor

History

Data Logger

Start

PageO

User

Alar

5. Monitor Data

5.1. A. Data Display

Display the data depends on the watch item selected.

5.2. B. Dynami Data

Click the radial button to display dyanamic data (drive and motor status). The page of data can be selected in the dropdown list.

5.3. C. Monitor Data

Click the radial button to display monitor data (drive and motor status). The page of data can be selected in the dropdown list. Note: Not all drive support monitor data.

5.4. D. Hitory Data

Click the radial button to display Alarm or COMM error history.

5.5. E. Data Logger

Click to log the current display data into a text file. (Press again to finish logging).

🙆 A_HMI V3.00 Beta2.1

Parameter Monitor Diagnosis

Data01

Data02

Data03

Data04

Data05

Data06

Data07

Data08

Data09

Data10

Data11

Data12

Data13

Data14

Data15

Data16

Item

Motor State

Overload Flag

Motor Speed

Alarm Status

Motor Direction

Command Speed

Cur. CMD Speed

Direct Input Status

Output Power

Input Voltage

Output Current Output Duty

Limit Status

Output Curent Avg Tq Limit Current

Speed CMD Votlage

Tool Advance Language(語言)

Α

Help

Value

0

0

0

0

0

0

0

0

0

17

5700

106

2376

Description

Unit: RPM

Unit: RPM

Unit: RPM

Unit: 0.01A Unit: 0.1%

Unit: 0.01A

Unit: 0.01A

Unit : 0.01V

Unit: W

0 = Stop, 1 = Starting, 2 = Running, 3

0=No Alarm, 1=OCP, 2=OverLoad, 3.. 0 = CW, 1 = CCW

Each number represents an input statu. Unit: 0.01V

Each number represents a limit functio.

0 = Normal, 1 = Overloaded

File View

Address Index

0000h

0001b

0002h

0003h

0004h

0005h

0006h

0007h

0008h 0009h

000Ah

000Bh

000Cb

000Dh

OOOEb

000Fh

5.6. Draw Monitor Data Graph

Click on the data in the display area to open a data grahp of that data. The x-axis is the number of samples of the data. The graph can be paused or be saved.



6. Diagnosis

A summary page of the drive steup and status including the IO status. Which is convenient for setup and debugging.

Note: Not all drive supports this function.

File View Tool A	dvance Language (語言	i) Help		
Parameter Monitor Diagnos	as			
Item	Source / Parameter	State / Value / Function	Description	<u>^</u>
Motor State				
Motor Statte	NA	5 Fault	Indicate motor operation status	
Alarm Status	Alarm Status NA		Error Code	
Monitor Data				
Input Voltage	B+ input voltage	2374	Unit: 0.01 V	
Output Current	NA	15	Unit: 0.01A	
Motor Speed	Motor feedback signal	0	Unit: RPM	
OP Data				E
Control Mode Param 08-01		0 Speed	0 = Speed, 1 = Duty, 2 = Position	
Speed Setting Type Param 02-10		3 Multi-Drive Lite	Speed setting method	
Command Source Param 02-03		1	Operation command source	
Digital Num.	tigital Num. IO input		M2 x 4 + M1 x 2 + M0	
Command Speed	ommand Speed Multi-Drive Lite CMD		Unit: RPM	
Duty Ouptut NA		0	Unit: 0.1%	
ACC Time Param 04-01		10	Unit: 0.1s	
DEC Time	EC Time Param 04-09		Unit: 0.1s	
Tq Limit Current	Limit Current Param 07-01		Unit: 0.01 A	
IO State				
Direct Input X1	Param 06-01	OFF 1 S/S(SC)/FWD(CC)	Status Func	
Direct Input X2 Param 06-02		OFF 2 CCW/CW(SC)/RE	Status Func	
Direct Input X3	ect Input X3 Param 06-03		Status Func	
Direct Input X4	Param 06-04	OFF 8 ALM-RST	Status Func	
Direct Input XH	Param 06-05	OFF 10 M0	Status Func	*
Description				

7. Other Function (Tool)

7.1. Multi-Drive

A control panel to send mtuli-drive command and receive communication BUS message. Click Tool->Multi-Drive to open the panel.

Note: Not all drive supports Multi-Drive.

- A: Set the command to send.
- B: Click to send the command.
- C: Command message sent.
- D: Data received from the BUS.

Multi-Drive V1.01					×			
Step 0 : Fixed Items Step 1 : Drive Count	Step 2 : Individual Drive	Commands						
ID FC SubID Num	SubID	Echo CMD		Data 1	Data 2			
00 101 01 👻	Driver 1 1	▼ 0 = IStop (立即停止)	•	0	0			
	Driver 2 🔺	✓ 0 = IStop (立即停止)	-	0	0			
注:	Driver 3 🔒 👘	✓ 0 = IStop (立即停止)	Ŧ	0	0			
1. Echo = Set if drive reply message or not	Driver 4 🔺	✓ 0 = IStop (立即停止)	Ŧ	0	0			
(No Echo CMD = CMD + 100)	Driver 5 🍝	✓ 0=IStop(立即停止)	-	0	0			
2. Data1, Data2 should be 0 for the CMD below	Driver 6 🍝	✓ 0=IStop(立即停止)	-	0	0			
IStop, JGO, Free, SVON, SVOFF, NULL	Driver 7 7	☑ 0 = IStop (立即停止)	-	0	0			
3. Data1 = 0, Data2 = Speed for CMD below	Driver 8 8 🔺	✓ 0=IStop(立即停止)	-	0	0			
JGF, JGR, JGS, JG								
4. Data1 = PosH, Data2 = PosL for the CMD below B								
IMR, MR, MA, CS, CMR, CMA		D			Send			
傳送 (Sent Data)		接收 (Received Data)						
	Clear	-			Clear			

7.2. Multi-Drive Lite

A control panel to send mtuli-drive Lite command and receive communication BUS message.

Note: Not all drive supports Multi-Drive Lite.

- A: Set the command to send.
- B: Click to send the command.
- C: Command message sent.
- D: Data received from the BUS.

sporn	xed Items	Step 1 : Drive Co	ount Step 2 : Ir	Step 2 : Individual Drive Commands						
ID	FC	SubID Num	L	S	ubID	CMD		Data	Echo	
00	65	01 •	 Driver 1 	1	▲ ▼	0 = IStop (立即停止)	•	0	0	
			Driver 2	2	A V	0 = IStop (立即停止)	Ŧ	0	0	
			Driver 3	3	×	0=IStop(立即停止)	Ŧ	0	0	
			Driver 4	4	A.V	0=IStop(立即停止)	Ŧ	0	0	
			Driver 5	5	A. V	0=IStop(立即停止)	Ŧ	0	0	
			Driver 6	6	A V	0=IStop(立即停止)	Ŧ	0	0	
			Driver 7	7	A.	0 = IStop (立即停止)	Ŧ	0	0	
			Driver 8	8	A	0=IStop (立即停止)	-	0		
						D			B Send	
專送 (Sent Data) 度收 (Received Data)										

修訂紀錄

REV	Date	Remark
1.0	20181211	1 st Release.
2.0	20190604	Update A_HMI_V0300 download path.

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