

LIVE - I.C.E & L7S 드라이브

2020년 7월 LS메카피온 ㈜

1

목차

1. 프로그램 설치 2. 통신연결 3. 기본파라미터 설정 4. 위치운전파라미터 설정 5. 조그운전 6. 파라미터 백업 7. 파라미터 불러오기

LIVE-I.C.E 설치

언어 선택

▶ 아래와 같이 3가지 파일 있음

1) 먼저, PL2303 Driver installer를 설치함. 설치시 아래의 사항 반드시 확인

2) PL2303 설치 후, LIVE-I.C.E 설치 함.

- パリ上帝					
- 도면	제목	LIVE-I.C.Eu2.7 (L7S/L7N	통신프로그램)	작성일	2015-07-31
- <mark>소프트웨어</mark> - Motion Controller 분야	작성자	관리자		조회	10052
AQ	파일	🖺 LIVE-I.C.E_L7_u2.7.zip 🕻	PL2303_Prolific_DriverInstaller.zip	🖺 LIVEH.C.E_L7S	S_메뉴얼.pdf
/S 및 견적절차		UVEH.C.Eu2.7			
- A/S 접수 및 절차 - 견적접수 및 절차		- L7S Drive 전버전에 대하여 호 (※ L7S OS Ver 1.28 파라메터 ! P0-26 성정 강 변경 호 사용	환 가능. 데이터를 Ver1.29에 적용하실 경우, 브탁드립니다)		
술문의·교육신청 절차	내용	- L7N Drive v0.07이상부터 적용	· 가능.		
공지사항		주의) 1. 프로그램(DeH.C.E) 설치 윈도우 사양에 따라 설치하 1) 윈도우 10 전용 : PL2303. 2) 윈도우 XP/7 ,8 : PL2303.	전에 첨부된 "PL2308_DriverInstaller 디 셔야 합니다. driveInstall_v1190.zip 설치 driveInstall_v1417.zip 설치	ŀ운로드 후	

■ 프로그램 설치방법 동영상

피온	⊘ LS메카피온	×				-	
	자료실	>	n			1	
	- 카다르그						
	- 패뉴얼						
	- 가이드북		2				
	- 도면		제목	LIVE-I.C.Eu2.7 (L7S/L7N 통신프로그램)	작성일	2015-07-31	
	- <mark>소프트웨어</mark> - Motion Controller 분야		작성자	관리자	조회	10095	
	FAQ		파일	🖺 LIVE-I.C.E.L.7_u2.7.zip 🛛 🖺 PL2303_Prolific_DriverInstaller.zip	LIVE-I.C.E_L7S	_메뉴얼.pdf	
	A/S 및 견적절차			ШVE-I.С.Е.ш2.7			
	- A/S 접수 및 절차			- L7S Drive 전버전에 대하여 호환 가능.			
	- 견적접수 및 절차			(※ L7S OS Ver 1.28 파라메터 데이터를 Ver1.29에 적용하실 경우, P0-26 설정 값 변경 후 사용 부탁드립니다)			
	기술문의·교육신청 절차						
	공지사항		내용	- L/N DIVE WUUM 상부터 작용 가능.			
				주의)			
				1. 프로그램(LiveH.C.E) 설치 전에 첨부된 "PL2303_DriverInstaller 다습 윈도우 사양에 따라 설치하셔야 합니다.	원로드 후		
				1) 윈도우 10 전용 : PL2308_driveInstall_v1190.zip 설치 2) 윈도우 XP/7 ,8 : PL2308_driveInstall_v1417.zip 설치			
			목록				

통신 연결

통신 연결

Drive Select -> Communication Setting -> Connection -> Monitor Start



3)



4)

SELIVE-I.C.E_L7S Ver 2.7

File	Communica	tion	Para	meter	Monitor	Operat	ion	Alarm	Help	OS
1	🔒 🕑 💿		B.	B 🖋	1 🖓 🕐	🔶 🖾		a (<u>)</u> 🔁 🤇	9
Servo S	atus						100	a x		

5)

See LIVE-I.C.E_L7S Ver 2.7 File Communication Parameter Monitor Operation Alarm Help OS Image: I

통신 연결

▶ 모니터 시작시 접점 신호가 On이 됨, 서보상태의 체크박스 체크시 상태 값이 나타남

Name	Value		
Servo On			
Speed1			
Speed2			
Speed3		Servis Output	
Alarm Reset			
Direction		Name	Value
CCW Limit		Alarm	
CW Limit		Ready	
Emergency		Zero Speed	
Stop		Brake	
Electric Gear 1		In Position	
Electric Gear 2		Torque Limit	
P Control		Velocity Limit	
Gain 2		In Speed	
Pulse Clear		Warning	
Torque Limit			

Set LIVE-I.C.E_L7S Ver 2.7

File Communication Paramete	r Monitor Ope	ration Ala
🗋 🖹 🕑 💽 🗳 🖉	%a -&3 💽 🚸 l 🕻	n (in (in
Servo Status		👻 #
✓ Name	Value	Unit
Current Speed	0	rpm
Command Speed	0	rpm
Feedback Pulse	280	pulse
Command Pulse	0	pulse
Pulse Error	0	pulse
Pulse Frequency	0.0	Kpps
Current Torque	0.0	%
Command Torque	0.0	%
Accumulated OverLoad Rate	0.0	%
Maximum Load	0.0	%
Torque Limit	0.0	%
DC Link Voltage	297.0	V
Input Status	448	-
Output Status	14	-
ABS Single Turn	280	pulse
ABS Single Turn[deg]	8.4	degree

■ 통신 연결 동영상 화면



기본파라미터 설정

■ 기본 파라미터 설정

파라미터 편집창 열기

LIVE-I.C.E_L7S Ver 2.7

File Communication	Parameter	Monitor	Operation	Alarm	Help	OS
<u> </u>	🖉 Param	eter Editing	MA T Tog	6	1 <mark>9</mark> 8)

▶ Systeņ 클릭

arameter Editing							
Parameter Set Object Num Pov Object Num Ser Object Num ALL Status	ver OFF-ON vo OFF WAYS	Vrite Write	All Re	ad	P.Lod P.UnLo	c EXIT	
Parameter Num	Name	Value	Default	Unit	Min. Value	Max. Value	Ŀ
St-00	Operation Status	2412	-		0	0	
St-01	Current Speed	0	0	rpm	-10000	10000	1
St-02	Command Speed	0	0	rpm	-10000	10000	1
St-03	Feedback Pulse	280	0	pulse	-1073741824	1073741823	
St-04	Command Pulse	0	0	pulse	-1073741824	1073741823	
St-05	Pulse Error	0	0	pulse	-1073741824	1073741823	
St-06	Input Pulse Frequency	0.0	0.0	Kpps	-1000.0	1000.0	
St-07	Current Torque	0.0	0.0	%	-300.0	300.0	
St-08	Command Torque	0.0	0.0	%	-300.0	300.0	7

■ 기본 파라미터 설정

- ▶ 적색은, 서보오프상태에서 파라미터 입력후 전원 재투입시 적용되는 파라미터
- ▶ 청색은, 서보오프상태에서 파라미터 입력후 적용되는 파라미터
- ▶ 흑색은, 서보온상태에서도 적용되는 파라미터

Parameter Set		·						
Object Num	Power OFF→ON			101-24-2	All David	Deved	P.Lock	
Object Num	Servo OFF		All WITE	write	All Read	кеас	P.UnLock	EXIT

▶ 모터 ID, 엔코더 타입, 엔코더 분해능 설정

Status System Cont	rol In/Out SpeedOperation PositionOperation						
Parameter Num	Name	Value	Default	Unit	Min. Value	Max. Value	^
P0-00	Motor ID	716	999	-	0	999	1
P0-01	Encoder Type	3	0	-	0	5	
P0-02	Encoder Resolution	19	3000	ppr	1	30000	

▶ 절대치 엔코더 배터리 미사용시, P0-26을 1로 설정. (배터리 미사용 및 0으로 설정시, AL-35발생)

P0-26 Encoder Function Bit 1 0 - 0 10000

■ 기본 파라미터 설정 동영상

LIVE-I.C.E_L7S Ver 2.7							—	đ	\times
File Communication Parame	ter Monitor Op	eration Alarn	Help OS						
	1 %a - 🕄 🕐 💧		G 🔁 🕸						
Servo Status					 				_
Name	Value	Unit							
Current Speed	0	rpm							
Command Speed	0	rpm							
Feedback Pulse	0	pulse							
Command Pulse	0	pulse							
Pulse Error	0	pulse							
Pulse Frequency	0.0	Kpps							
Current Torque	0.0	%							
Command Torque	0.0	%							
Accumulated OverLoad Rate	0.0	%							
Maximum Load	0.0	%							
Torque Limit	0.0	%							
DC Link Voltage	298.6	V							
Input Status	448	-							
Output Status	14	-							
ABS Single Turn	280	pulse							
ABS Single Turn[deg]	8.4	degree							
Multi Turn Data	0	rev							
Software Version	A0.57.3	-							
FPGA Version	1.9								
Servo Input		×							
Name		Value							
Servo On			Servo Output		★ a ×	Communication Status		5	- a x
Speed1			Name	Value					
Speed2			Alarm	value					
Speed3			Rady						
Alarm Reset			Zara Speed						
Direction			Praka						
CCW Limit									
CW Limit			Torque Limit						
Emergency		and the second distance of the second distanc	Velocity Limit						
Stop			In Speed						
Electric Gear 1			Warping						
Electric Gear 2			1 maning						
P Control								Can hu	NA SCD
			425					LAP NU	AIVI NER

■ 입출력신호 파라미터 변경

► EMG(비상), CCW Limit(정방향 회전금지), CW Limit(역방향 회전금지) 신호 초기값인 B접점->A접점으로 수정

10001

ect Bit		
Digit[1] : Pin6		
1:A	~	
Digit[2] : Pin7		
0: B	~	
0: B		
0: B	~	
Digit[4] : Pin9		
0: B	~	
Digit[5] : Pin 10		
1:A	\sim	

■ 입출력신호 파라미터 변경 동영상

S LIVE-I.C.E_L7S	Ver	2.7
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D \times

File Communication Parameter	er Monitor Ope	ration Al
	%a - 🕄 🕐 🚺 🕻	D (T) (B) (
Servo Status		→ 0 ×
Name	Value	Unit
Current Speed	0	rpm
Command Speed	0	rpm
Feedback Pulse	0	pulse
Command Pulse	0	pulse
Pulse Error	0	pulse
Pulse Frequency	0.0	Kpps
Current Torque	0.0	%
Command Torque	0.0	%
Accumulated OverLoad Rate	0.0	%
Maximum Load	0.0	%
Torque Limit	0.0	%
DC Link Voltage	298.6	V
☑ Input Status	448	-
Output Status	14	-
ABS Single Turn	0	pulse
ABS Single Turn[deg]	0.0	degree
Servo Input		- 4 ×
Name		Value
Servo On		
Speed1		
Speed2		
Speed3		
Alarm Reset		
Direction		
COW LIMIT		
Emergency		
Ston		
Electric Gear 1		
Electric Gear 2		
P Control		
Gain 2		
Pulse Clear		
Torque Limit		
Ready		

CAP NUM SCR

위치 운전 파라미터 설정

■ 위치운전 파라미터 설정

▶ 위치 운전모드 설정

P0-04	RS-422 BaudRate	Operation Mode
P0-05	System ID	Select bit
P0-06	Power Fail Mode	Select Dic
P0-07	RST Check Time	Digit[1] : Operation Mode
P0-08	Start Up Parameter	1: Speed mpde 🛛 🗸
P0-09	Regeneraion Derating	0: Torque mode
P0-10	Regeneration Brake Resisto	2: Position mode
P0-11	Regeneration Brake Capacity	3: Speed/Position mode 4: Torque/Speed mode
P0-12	Overload Check Base	5: Torque/Position mode 100

▶ 입력펄스로직 설정

Status System Cont	rol In/Out SpeedOperation	PositionOperation					
Parameter Num	Name		Value	Defa			
P4-00	Pulse Input Logic		4				
P4-01	Electric Gear Numerator 1	1000	1(
P4-02	Electric Gear Numerator 2	1000	1(
P4-03	Electric Gear Numerator 3	1000	1(
P4-04	Electric Gear Numerator 4	Pulse Input Logic					
P4-05	Electric Gear Denominator	1 Colort hit					
P4-06	Electric Gear Denominator	2 Select bit	Sector				
P4-07	Electric Gear Denominator :	ctric Gear Denominator 3					
P4-08	Electric Gear Denominator	4 : CW+CCW ((Negative Logic) V				
P4-09	Electric Gear Mode	1					
P4-10	Electric Gear Num. Offset	Apply	Cancel				
P4-11	Following Error Range						

▶ 전자기어비 설정

Parameter Num	Name	Value
P4-00	Pulse Input Logic	4
P4-01	Electric Gear Numerator 1	524288
P4-02	Electric Gear Numerator 2	1000
P4-03	Electric Gear Numerator 3	1000
P4-04	Electric Gear Numerator 4	1000
P4-05	Electric Gear Denominator 1	10000

■ 위치운전 파라미터 설정 동영상

LIVE-I.C.E_L7S Ver 2.7

- 0 X

File Communication Parameter	r Monitor C	Operation Alar	m Help OS									
	Va - Ri 🕐 🚸	1 🗰 🖽 🗃 1	۵ 🔁 🚯									
				Parameter Editing								
Name	Value	Unit	-	Parameter Set								
Current Speed		rpm		Object Num Pov	wer OFF-ON				P.Loc	k		
Command Speed		rpm		Object Num Ser	vo OFF	All Write Write	All Re	ead	Read P.UnLo	EXIT		
Feedback Pulse		pulse		Object Num ALL	WAYS				- Incompany		8 - C.	
Command Pulse		pulse		Chat - Suctom Card								
Pulse Error		pulse		Status System Cont	rol In/Out SpeedOperation PositionOperatio	on						
Pulse Frequency		Kpps		Parameter Num	Name	Value	Default	Unit	Min. Value	Max. Value		
Current Torque		%		P0-00	Motor ID	716	999	-	0	999		
Command Torque		%		P0-01	Encoder Type	3	0	-	0	5		
Accumulated OverLoad Rate		%		P0-02	Encoder Resolution	19	3000	ppr	1	30000		
Maximum Load		%		P0-03	Operation Mode	1	1	-	0	5		
Torque Limit		%		P0-04	RS-422 BaudRate	0	0	bps	0	3		
DC Link Voltage		V		P0-05	System ID	0	0	1.	0	99		
Input Status		-		P0-06	Power Fail Mode	00000	0000000	-	0600000	0b11111		
Output Status		-		P0-07	RST Check Time	20	20	ms	0	5000		
ABS Single Turn		pulse		P0-08	Start Up Parameter	0	0	-	0	26		
ABS Single Turn[deg]		degree		P0-09	Regeneration Derating	100	100	%	1	200		
ervo Input		* # X	1	P0-10	Regeneration Brake Resistor	0	0	ohm	0	1000		
Name		Value		P0-11	Regeneration Brake Capacity	0	0	W	0	30000		
anio On		Value		P0-12	Overload Check Base	100	100	%	10	100		
and the second s				P0-13	Overload Warning Level	50	50	%	10	100		
Speed?				P0-14	Encoder Out Numerator	12000	12000		-2097152	2097152		
peed2			J	P0-15	PWM OFF Delay	10	10	ms	0	1000		
Vorm Reast			Servo Output	P0-16	DB Control Mode	0	0x0	-	0x0	0x3		
Viraction				P0-17	Function Select Bit	00000	0000000	-	0600000	0b11111		
CWLimit			Alarm	P0-18	DAC Mode	3210	0x3210	-	0x000x0	0xFFFF	1.0	
DOW Limit			Ready	P0-19	DAC Offset 1	0	0	UnitV	-1000	1000	100	
			Zero Speed	P0-20	DAC Offset 2	0	0	Unit/V	-1000	1000		
Non			Brake	P0-21	DAC Offset 3	0	0	Unit/V	-1000	1000		
lectric Geor 1			In Position	P0-22	DAC Offset 4	0	0	Unit/V	-1000	1000		
Jectric Gear 2			Torque Limit				_		-			
Control			Velocity Limit								21/	
Condition			In Speed									
Pulse Clear			Warning									
Torque Limit			1									
inder Ellin												C 11

조그운전

조그 운전

Elve-I.C.E_L/S Ver 2.7	mater Manites	On	aratian	Alarm	Hale	0
The Communication Para	meter Monitor	90	Marjua	I Test Op	peration	0
Servo Status		23	Gain A	uto Tuni	ng	
🗹 Name	Value	Unit		t 🗍		
Current Speed	1	0	1	rpm		
Command Speed		0		rpm		
Feedback Pulse	-256	530	pu	Ilse		
Command Pulse		0 pi		Ilse		
Pulse Error		0	pl	Ise		
Pulse Frequency		0.0	K	pps		
Current Torque	1	0.0		:A/		

Current Torous





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■ 조그 운전 동영상

Se LIVE-I.C.E_L7S Ver 2.7							—	đ	\times
File Communication Parameter	er Monitor Ope	eration Alarr	n Help OS						
1 8 0 0 8 8 0	%0 - 🕄 🕐 🚱 🗌	😄 🗂 🕮	∰ 🔁 ⊗						
Servo Status									
Name	Value	Unit	-						
Current Speed	0	rpm							
Command Speed	0	rpm							
Feedback Pulse	-25630	pulse							
Command Pulse	0	pulse							
Pulse Error	0	pulse							
Pulse Frequency	0.0	Kpps							
Current Torque	0.0	%							
Command Torque	0.0	%							
Accumulated OverLoad Rate	0.0	%							
Maximum Load	22.2	%							
Torque Limit	300.0	%							
DC Link Voltage	300.8	V							
Input Status	0	-							
Output Status	14	-							
ABS Single Turn	8469	pulse		3					
ABS Single Turn[deg]	254.0	degree							
Servo Input									
Name		Value							
Servo On									
Speed1									
Speed2									
Speed3			Course Ordered		_ = ~	Committee Caller		_	
Alarm Reset			seno output		* * ^	Communication status			
Direction			Name	Value					
CCW Limit			Alarm						
CW Limit			Ready						
Emergency			Zero Speed						
Stop			Brake						
Electric Gear 1			In Position						
Electric Gear 2			Torque Limit						
P Control			Velocity Limit						
Gain 2			In Speed						
Pulse Clear			Warning						
Torque Limit									
Ready								CAP NI	IM SCR

파라미터 백업

■ 파라미터 백업

Parameter Set

 Object Num
 Power OFF ---ON

 Object Num
 Servo OFF

 Object Num
 ALLWAYS

 \mathbf{x}

100	
1	

,		All Write
	1.2	

All Read	Read

P.Lock

P.UnLock

EXIT

Status System Control In/Out SpeedOperation PositionOperation

Parameter Num	Name	Value	Default	Unit	Min. Value	Max. Value
St-00	Operation Status	2400	-	•	0	0
St-01	Current Speed	0	0	rpm	-10000	10000
St-02	Command Speed	0	0	rpm	-10000	10000
St-03	Feedback Pulse	-40834	0	pulse	-1073741824	1073741823
St-04	Command Pulse	0	0	pulse	-1073741824	1073741823
St-05	Pulse Error	0	0	pulse	-1073741824	1073741823
St-06	Input Pulse Frequency	0.0	0.0	Kops	-1000.0	1000.0

Write

irameter Editing



■ 파라미터 저장 동영상

S LIVE-I.C.E_L7S Ver 2.7						-	٥	×
File Communication Param	er Monitor Ope	eration Alar	n Help OS					
IBOOBBO	90 RI (A)	ന്നതി	<u>(</u>), (□) ⊗					
Servo Status		- U X						
Name	Value	Unit	2					
Current Sneed	0	rnm						
Command Sneed	0	rom						
Eaedback Pulse	-40934	nulea						
	-40034	pulse						
	0	pulse						
	0.0	Knne						
	0.0	04						
	0.0	04						
Accumulated Overl and Pate	0.0							
Maximum Load	22.4	70						
	22.4	70						
	207.9	70						
	257.0	v						
Cutout Status	14	-						
ARS Single Turp	14 5066	pulse						
ABS Single Turp[dea]	5200	dearee						
	157.9	degree	-					
Servo input								
Name		Value						
Servo On								
Speed1								
Speed2								
Speed3			Servo Output	→ 0 ×	Communication Status			ц×
Alarm Reset			Nama					
Direction			value value					
CCW Limit			Alarm					
CW Limit			Ready					
Emergency			Zero Speed					
Stop								
Electric Gear 1								
Electric Gear 2								
P Control								
Gain 2			In Speed					
Pulse Clear			warning					
Torque Limit								

CAP NUM SCR

파라미터 불러오기

■ 파라미터 불러오기

VE-I.C.E_L7S Ver 2.7



▶ 연결하고, <u>모니터 시작은 절대 클릭하지 말것</u>

Parameter Se		and the first sector of the se									
Object Num Object Num Object Num	Power OFF ON Servo OFF ALLWAYS	All Write Write									
Pa	ameter Editing		arameter Editing								
Status Sy:	Parameter Set Object Num Object Num O	내 PC > 바탕 화면 >	Parameter Set Object Num Pow Object Num Ser Object Num ALL	ver OFF OFF	Write	All Re	ad				
51-01	□ Paramater 구성 ▼ 새 몰더	ystem motori 구성 ▼ 새 쫌더									
51-02	St-00	이르	Status System Control In/Out SpeedOperation PositionOperation								
St-03	St-01		Parameter Num	Name	Value	Default	Unit				
	□ St-02	·····································	St-00	Operation Status	2400	-	1				
	St-03 > 3D 개체		St-01	Current Speed	0	0	rpm				
	St-05		St-02	Command Speed	0	0	rpm				
	□ St-06 > ♣ 다운로드		□ St-03	Feedback Pulse	-40834	0	pulse				
	St-07 > H 동영상	· · · · · · · · · · · · · · · · · · ·	St-04	Command Pulse	0	0	pulse				
	St-09 자지	The second se	St-05	Pulse Error	0	0	pulse				
	St-10		St-06	Input Pulse Frequency	0.0	0.0	Knns				
	St-11 · · · · · · · · · · · · · · · · · ·		St-07	Current Torque	0.0	0.0	0%				
	St-12 · · · · · · · · · · · · · · · · · · ·			Command Torque	0.0	0.0	04				
		<	Det 00	Assumulated Quark and Pate	0.0	0.0	70				
	St-15	』이름(N): ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓		Accumulated OverLoad Rate	0.0	0.0	70				
	St-10	0171//	51-10	maximum Load	22.4	0.0	%				
	St-18	5/10	II ISt-11	Torque Limit	300.0	-	0%				

■ 파라미터 불러오기 동영상

SELIVE-I.C.E_L7S Ver 2.7						—	D	\times
File Communication Parameter	er Monitor O	peration Alar	n Help OS					
	Sa -Si 🕦 🚸	686	🚇 🖻 🛛					
Name	Value	Unit	-					
Current Speed		rpm						
Command Speed		rpm						
Feedback Pulse		pulse						
Command Pulse		pulse						
Pulse Error		pulse						
Pulse Frequency		Kpps						
Current Torque		%						
Command Torque		%						
Accumulated OverLoad Rate		%						
Maximum Load		%						
Torque Limit		%						
DC Link Voltage		V						
Input Status		-						
Output Status		-						
ABS Single Turn		pulse						
ABS Single Turn[deg]		degree						
Servo Input		▼ # ×						
Name		Value						
Servo On								
Speed1								
Speed2								
Speed3					Annual Contractor Mark			
Alarm Reset			Servo Output	* 4 ×	Communication Status	_		4 X
Direction			Name Value					
CCW Limit			Alarm					
CW Limit			Ready					
Emergency Emergency			Zero Speed					
Stop			Brake					
Electric Gear 1			In Position					
Electric Gear 2			Torque Limit					
P Control			Velocity Limit					
Gain 2			In Speed					
Pulse Clear			Warning					
Torque Limit								

CAP NUM SCR

번호	발행 년월	변경 내용	버젼 번호	비고