# The ESI-C CPU Based Control System Users Manual





Elevator Systems Inc 207 Lawrence Ave Inwood , NY 11096

## ESI-C CPU Card Features:

State of the Art Surface Mount Technology.

Multi Layer PCB for rugged reliability.

AMD x86 Compatible CPU core.

Up to 512k Flash of program space.

Up to 512k SRAM.

16k of EEPROM for configuration, user parameters, event logging & statistical data storage.

45 optically isolated inputs with Led indication

21 dry contact outputs with Led indication

3 Optically isolated transistor outputs with led indication

Real Time Clock for date/time stamping of events and statistical information.

Integrated 4\*20 LCD & keypad user interface

High Speed encoder interface with 24bit up/down counter for speed and position control.



#### SEVEN Communication Ports:

One Modem communication port with the full complement of modem signals. Six Communication Ports Software selectable as 485, 422 or RS232. These are used to connect "*EsiNET*" expansion cards for local or distributed control, to communicate with modbus compatible drives and to network with EsiNET intelligent fixtures.

## **LCD Keypad Description:**

A 20 \* 4 character backlit LCD with a 5 position keypad makes up the integrated user interface On all of Elevator Systems ESI-C elevator control systems.

MODE	: Used to change LCD Display Mode.
↓ :	To Scroll Down through various display screens and to adjust parameter settings.
<b>↑</b>	To Scroll Up through various display screens and to adjust parameter settings.
CLR	To Clear current parameter editing and to force a drive reset without time delay
SET	Used to enter parameter settings and adjust operational information.

### **Display Modes:**

- 1. ESI Mon : Main Screen for monitoring current status of elevator
- : Contains Controller Serial Number and Job address 2. Job Info
- : Use arrow to scroll through all system inputs and outputs 3. View I/O
- 4. Internal Flags : View Internal flags status
- 5. Event Log : Scroll through events with time/date stamp
- : To place car calls into system 6. Place Car Call
- : To place hall calls into system 7. Place Hall Call
- 8. Parameters : Scroll through to edit desired parameter
- : Scroll through various setup options 9. Setup

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- 10. Mem View : View ROM, RAM & EE2 memory : Software version information
- 11. System Info
- 12. Future1
- 13. Future2

### 1: ESI MON : ESI Car Monitor Display Mode:



### 5: View Event Log

Use  $\downarrow/\uparrow$  keys to scroll through event log.



To View and edit parameters:

- 1. Use  $\downarrow/\uparrow$  keys to scroll to desired parameter.
- 2. Press **SET** to place into edit mode . The equal sign "=" will blink.
- 3. Use  $\downarrow/\uparrow$  keys to change parameter setting.
- 3. Press **SET** to save changes. The equal sign "=" will stop blinking.
- 4. If **CLR** is pressed prior to saving changes the previous value will be restored.
- 5. **<u>NOTE</u>** Parameter #20 must be set to 3 to enable edit mode.

Para#	Desc	Range	<u>Default</u>	<u>Units</u>	<u>Access</u>	
1	Top Floor	1 to 32			RD ONLY	
2	Bottom Floor	1 to TOPFLR-1			RD ONLY	
3	Selector Type	1 to 8			RD ONLY	
		1 : Stepping of 85/86				
		2 : Direct Read ESI				
		3 : Stepping Cemco				
		5: #81/82				
		6: 81/82 & 84				
		7: Double 85/86				
	O sustan II sus Truces	8: Encoder Interface				
4	Controller Type	1 to 3	-		RD ONLY	
		3 : VV-MG				
5	Door Type	1 to 3			RD ONLY	
	51	1 : Master Door	1			
		2 : Car Door				
		3 : Manual D & G				
6	Dir Lt Outputs	0 : Use 12 & 13			RD ONLY	
7	In Car Key Swe	1 . USE 20 & 21				
1	in Car Key Sws	0 : No In Car Key Sw	-			
		$1:1^{st}$ Fir Only = Inp 1-9				
		2 : All except lobby				
		3 : All Floors				
		$4:2^{10}$ Fir Only = Inp 1-10				
		$6 \cdot 1^{\text{st}} \& 2^{\text{nd}}$ Floors				
		7 : Master Key Input[1-9]				
8	Future					
9	Future					
10	Future					
11	Future					
12	Future					
13	Future					
14	Future					
15	Future					
16	Future					
17	Future					
18	Future		ļ			
19	Config CheckSUM				RD ONLY	
20	Write Enable	0-50	0			
		0: No Write				
	1	1				

Para#	Desc	<u>Range</u>	<u>Default</u>	<u>Units</u>	<u>Access</u>	
21	Operation	1 to 4	1			
		1 : Sel/Col				
		2 : Col at Lobby				
		3 Collective				
22	Lobby Floor	1 to Top Flr	1			
23	Park Floor	0 to Top Flr	0			
		0 = No Parking				
24	Door Nudging Opt	1 to 3	3			
		1 : No Edge TimeOut				
		2 : Buzzer, No Close				
25	Down Gong Double	3 . BUZZ & CIUSE	0			
25	Down Gong Double	1 : $\frac{1}{2}$ via ESI	0			
26	In Car Inspection	0 : Disabled	1			
		1 : Enabled				
27	CX in out of door Zone	0 : Disabled	0			
20		1 : Enabled				
20						
29						
30	ECE Code	1 to 4	1			
51		1 : National Ρ/Δ				
		2 : NYC				
		3 : Chicago				
32	Prime FCF Floor	1 to Top Flr	1			
33	Alt FCF Floor	1 to Top Flr	2			
34	Nudging on FCF I	0 = No 1 = Yes	1			
35	Future					
36	Future					
37	Future					
38	Future					
39	Future					
40	Future					
41	Car Call Door Time	2 to 30 Sec	6 sec			
42	Hall Call Door Time	2 to 30 Sec	10 sec			
43	Lobby Door Time	2 to 30 Sec	10 sec			
44	Re-Open Door Time	2 to 30 Sec	3 sec			
45	Edge Time Out	10 to 60 Sec	25 sec			
46	Park Delay Time	2 to 600 Sec	60 sec			
47	PI ShutDown Time	0 to 600 Sec	0 sec			
ļ		0 : For NO Shut Down				
48	Low Oil Time	30 to 300 sec/floor	45 sec			

Para#	Desc	Range	<u>Default</u>	<u>Units</u>	<u>Access</u>	
49	Ind/Att Disc Time	1 to 60 sec	15 sec			
50						
51						
52						
53						
54						
55						
56						
57						
58						
59						
60	Remote Access Code	0 – 64000	12345			
61	OUTPUT #20 Options	0 to 4 0 : No Ouput 1 : Low Oil LT 2 : In Use Lt 3 : OS 4 : OsnoSWTPmem	0			
62	Reserved		0			
63	DG/UG on OL,Z,SD	0 – 2 0: On OL 1: On Z, Door Zone 2: On SD, SlowDown	0			
64	Door Hold = 28S	0 = No Door Hold Input 1 = Input25 = #28H	0			
65	Door Hold Door Time	3 – 600 sec	60sec			
67	'S' Button Enable for #61 S/P Buzzer	0: None #61 always works 1: Use INPUT[15] 2: Use INPUT[35]	0			
102	Floor 2 Marking T H R U	1 = "1" to $32 = "32"$ $33 = "B"$ $34 = "B1"$ $35 = "B2"$ $36 = "B3"$ $37 = "C"$ $38 = "D"$ $39 = "G"$ $40 = "G1"$	2			

Para#	Desc	Range	<u>Default</u>	<u>Units</u>	<u>Access</u>	
		41 = "G2"				
		42 = "G3"				
		43 = "GF"				
		44 = "GR"				
		45 = "L"				
		46 = "L1"				
		47 = "L2"				
		48 = "L3"				
		49 = "LL"				
		50 = "M"				
		51 = "P"				
		52 = "P1"				
		53 = "P2"				
		54 = "P3"				
		55 = "PH"				
		56 = "R"				
		57 = "S"				
132	Floor 32 Marking	58 = "SB"	32			
102		59 = "T"	02			
141	Flr 1 Call Disable	0 : All Calls Enabled	0			
thru	thru	2 : ALL CALLS Disabled				
172	Flr 32 Call Disable	For a Particular Floor				
200	Reserved					