

Mount the terminal block on spare DIN rail space.
Use the terminal block to distribute the 24V supply.

This EtherCAT chassis uses copper only.
Mount the modular adapters to the front panel.
Using CAT5 patch cables:

- Connect the front panel input to the first coupler (left rail).
- Connect the output of the first coupler to the input of the second one.
- Connect the output of the second coupler to the input of the third one.
- Connect the front panel output to the output of the last coupler (right rail).

Ports

IN

OUT

1A

2A

PN1 EtherCAT chassis LIGO D0902552-v3	PN5 Ethernet patch cable, 1'	PN8 Ethernet patch cable, 1'	PN11 Adapter panel LIGO D1100108-v1	PN13 Adapter panel LIGO D1100108-v1
PN2 Name Plate LIGO D1102435-v1	PN6 Ethernet patch cable, 1'	PN9 Ethernet patch cable, 1' Newark 21M5658		
PN3 Rear Panel LIGO D2400266-v1				

CAT5
Corner

CAT5
Corner

Blank

Blank

TBLOCK

PN19 Terminal Block	PN25 Terminal Block	PN33 Terminal Block	PN40 Terminal Block
PN20 Terminal Block	PN26 Terminal Block	PN34 Terminal Block	PN41 Terminal Block
PN21 Terminal Block	PN27 Terminal Block	PN35 Terminal Block	PN42 Terminal Block
PN22 Terminal Block	PN28 Terminal Block	PN36 Terminal Block	PN43 Terminal Block
PN23 Terminal Block	PN29 Terminal Block	PN37 Terminal Block	PN44 Terminal Block
Digi-Key 277-1483-ND		Digi-Key 277-1483-ND	
	PN30 Jumper, 10pos		PN45 Jumper, 10pos
PN24 End Plate	PN31 Jumper, 10pos	PN38 End Plate	PN46 Jumper, 10pos
Digi-Key 277-1495-ND	Digi-Key 277-1494-ND	Digi-Key 277-1495-ND	Digi-Key 277-1494-ND

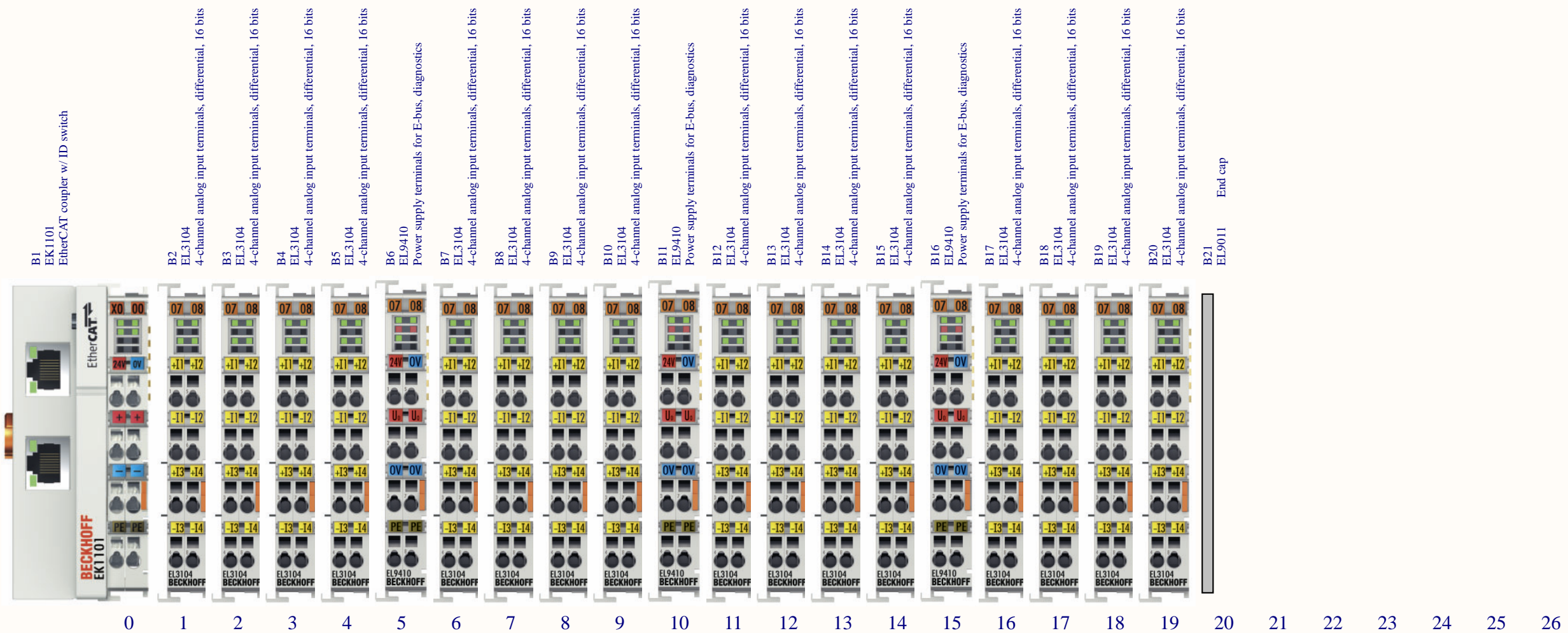
Slots

1 2 3 4 5 6 7 8 9 10 11 12

PN4 Adapter panel LIGO D0902557-v1	PN7 DB37M adapter LIGO D0902569-v1	PN10 DB37M adapter LIGO D0902569-v1	PN12 DB37M adapter LIGO D0902569-v1	PN14 DB37M adapter LIGO D0902569-v1	PN15 DB37M adapter LIGO D0902569-v1	PN16 DB37M adapter LIGO D0902569-v1	PN17 DB37M adapter LIGO D0902569-v1	PN18 DB37M adapter LIGO D0902569-v1	PN32 DB37M adapter LIGO D0902569-v1	PN39 DB37M adapter LIGO D0902569-v1	PN47 DB37M adapter LIGO D0902569-v1
	E1 #6-32 1/4" flat	E3 #6-32 1/4" flat	E5 #6-32 1/4" flat	E7 #6-32 1/4" flat	E9 #6-32 1/4" flat	E11 #6-32 1/4" flat	E13 #6-32 1/4" flat	E15 #6-32 1/4" flat	E17 #6-32 1/4" flat	E19 #6-32 1/4" flat	E21 #6-32 1/4" flat
	E2 #6-32 1/4" flat	E4 #6-32 1/4" flat	E6 #6-32 1/4" flat	E8 #6-32 1/4" flat	E10 #6-32 1/4" flat	E12 #6-32 1/4" flat	E14 #6-32 1/4" flat	E16 #6-32 1/4" flat	E18 #6-32 1/4" flat	E20 #6-32 1/4" flat	E22 #6-32 1/4" flat
	McMaster-Carr 91099A205	McMaster-Carr 91099A205	McMaster-Carr 91099A205	McMaster-Carr 91099A205	McMaster-Carr 91099A205	McMaster-Carr 91099A205	McMaster-Carr 91099A205	McMaster-Carr 91099A205	McMaster-Carr 91099A205	McMaster-Carr 91099A205	McMaster-Carr 91099A205

Spare Demod O BHD LSC Demod N BHD WFS Demod E IMC WFS Demod F REFL A Demod G REFL B Demod H REFL C Demod I JAC Demod J AS A Demod K AS B Demod L AS C Demod M SQZ WFS

Title EtherCAT Corner 4		
Size B	Number D1101266	Revision 4
Date: 8/07/2024	Sheet 1 of 4	
File: C:\Users\...\EtherCATCornerD1.SchDoc	Drawn By: Daniel Sigg	



Ebus	24V	—	24V	—
Power contacts	—	—	—	—

Demod J

Power budget:
 EL3104: 0.180 A (8x)

 0.720 A

Demod K

Power budget:
 EL3104: 0.180 A (8x)

 0.720 A

Demod L

Power budget:
 EL3104: 0.180 A (8x)

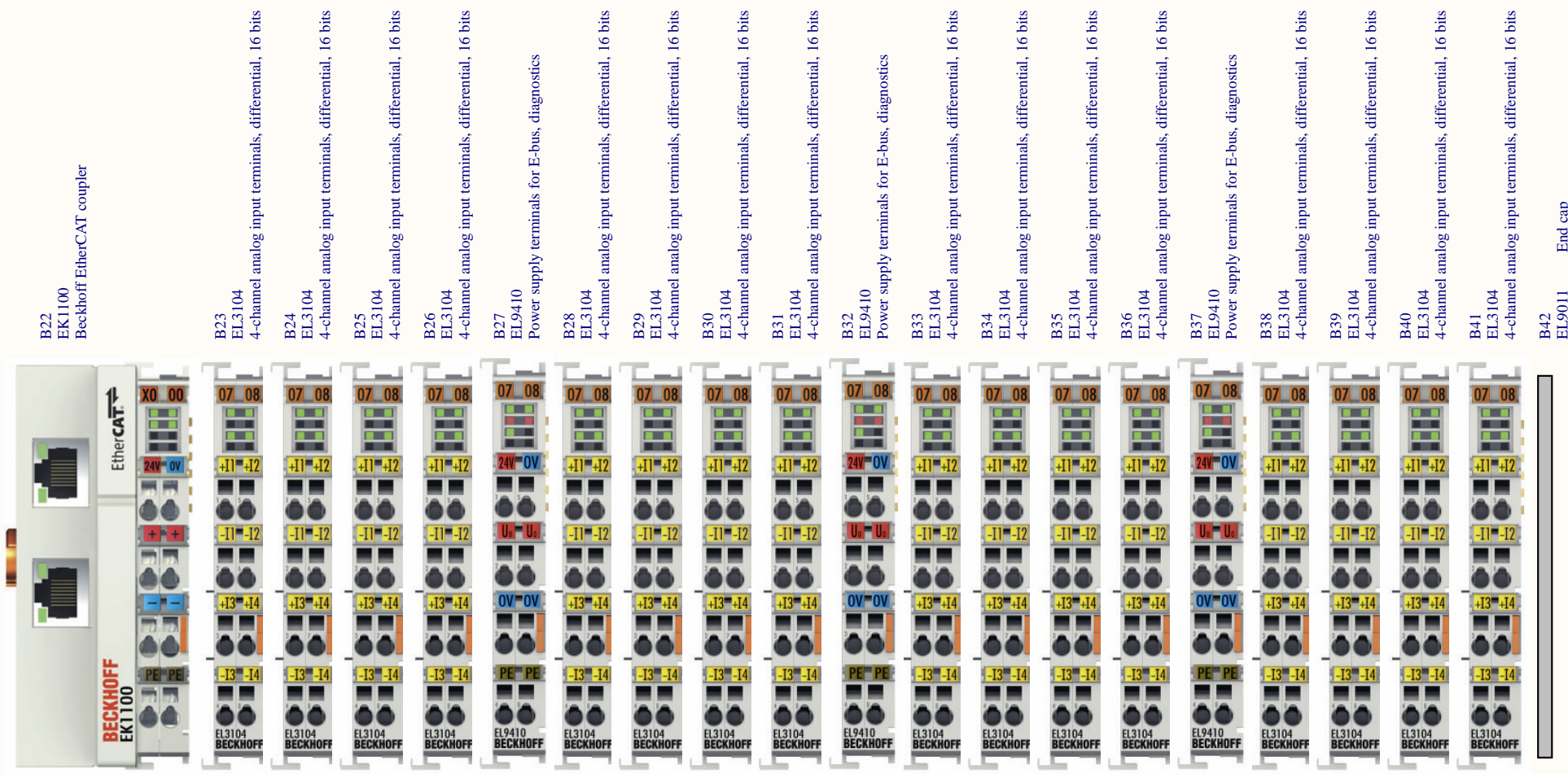
 0.720 A

Demod M

Power budget:
 EL3104: 0.180 A (8x)

 0.720 A

Title			EtherCAT Corner 4: Left Rail
Size	Number	Revision	
B	D1101266	4	
Date:	8/07/2024	Sheet 2 of 4	
File:	C:\Users\...\EtherCATCornerD2.SchDoc	Drawn By: Daniel Sigg	



B22 EK1100 Beckhoff EtherCAT coupler

B23 EL3104 4-channel analog input terminals, differential, 16 bits

B24 EL3104 4-channel analog input terminals, differential, 16 bits

B25 EL3104 4-channel analog input terminals, differential, 16 bits

B26 EL3104 4-channel analog input terminals, differential, 16 bits

B27 EL9410 Power supply terminals for E-bus, diagnostics

B28 EL3104 4-channel analog input terminals, differential, 16 bits

B29 EL3104 4-channel analog input terminals, differential, 16 bits

B30 EL3104 4-channel analog input terminals, differential, 16 bits

B31 EL3104 4-channel analog input terminals, differential, 16 bits

B32 EL9410 Power supply terminals for E-bus, diagnostics

B33 EL3104 4-channel analog input terminals, differential, 16 bits

B34 EL3104 4-channel analog input terminals, differential, 16 bits

B35 EL3104 4-channel analog input terminals, differential, 16 bits

B36 EL3104 4-channel analog input terminals, differential, 16 bits

B37 EL9410 Power supply terminals for E-bus, diagnostics

B38 EL3104 4-channel analog input terminals, differential, 16 bits

B39 EL3104 4-channel analog input terminals, differential, 16 bits

B40 EL3104 4-channel analog input terminals, differential, 16 bits

B41 EL3104 4-channel analog input terminals, differential, 16 bits

B42 EL9011 End cap

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26

Ebus 24V 24V 24V 24V

Power contacts — — — —

Demod F Demod G Demod H Demod I

Power budget:
EL3104: 0.180 A (8x)

0.720 A

Power budget:
EL3104: 0.180 A (8x)

0.720 A

Power budget:
EL3104: 0.180 A (4x)

0.720 A

Power budget:
EL3104: 0.180 A (4x)

0.720 A

Title			EtherCAT Corner 4: Middle Rail
Size	Number	Revision	
B	D1101266	4	
Date:	8/07/2024	Sheet 3 of 4	
File:	C:\Users\...\EtherCATCornerD3.SchDoc	Drawn By: Daniel Sigg	

B43
5V/0.6A isolated DC-DC converter, Omron S82S-7305

B44
EK1100
Beckhoff EtherCAT coupler

B45
EL3104
4-channel analog input terminals, differential, 16 bits

B46
EL3104
4-channel analog input terminals, differential, 16 bits

B47
EL3104
4-channel analog input terminals, differential, 16 bits

B48
EL3104
4-channel analog input terminals, differential, 16 bits

B49
EL9410
Power supply terminals for E-bus, diagnostics

B50
EL3104
4-channel analog input terminals, differential, 16 bits

B51
EL3104
4-channel analog input terminals, differential, 16 bits

B52
EL3104
4-channel analog input terminals, differential, 16 bits

B53
EL3104
4-channel analog input terminals, differential, 16 bits

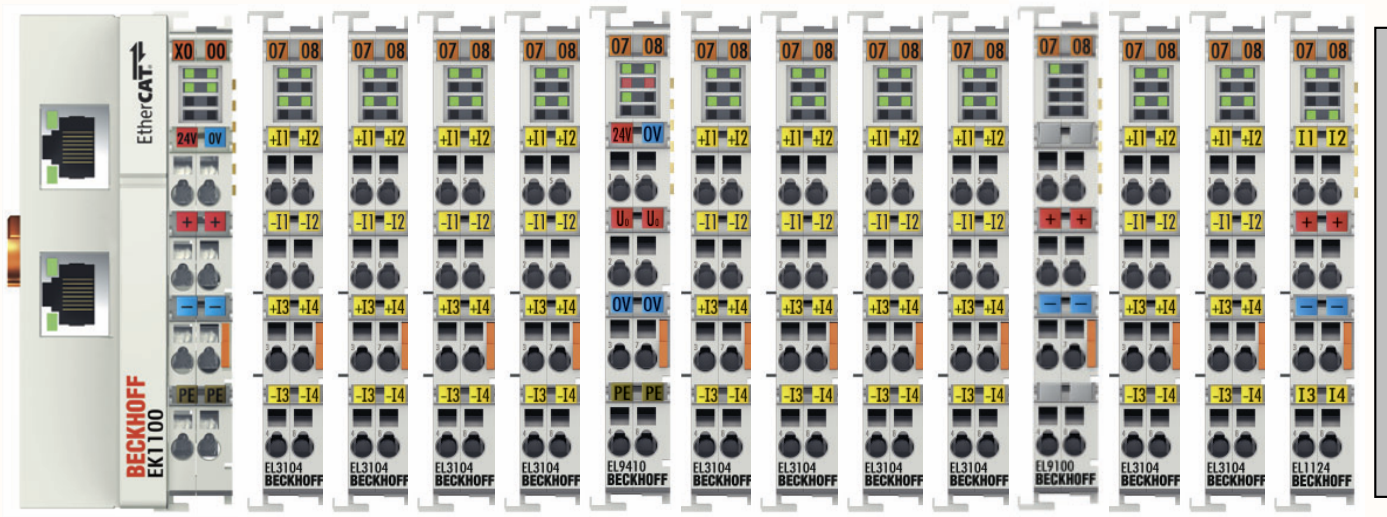
B54
EL9190
Feed terminal, arbitrary voltage

B55
EL3104
4-channel analog input terminals, differential, 16 bits

B56
EL3104
4-channel analog input terminals, differential, 16 bits

B57
EL1124
4-channel digital input terminals, 5V

B58
EL9011
End cap



0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

Ebus 24V 24V 24V

Power contacts — — —

DC_1 Demod E Demod N Demod O

Power budget:
EL3104: 0.180 A (4x)

0.720 A

Power budget:
EL3104: 0.180 A (6x)
EL1124: 0.090 A (1x)

1.170 A

Title EtherCAT Corner 4: Right Rail		
Size B	Number D1101266	Revision 4
Date:	8/07/2024	Sheet 4 of 4
File:	C:\Users\...\EtherCATCornerD4.SchDoc	Drawn By: Daniel Sigg