DN-8468GB Data Sheet

(Version 2.1)

For General Type Motor

1 DN-8468GB Daughter Board

The DN-8468GB is the daughter board for General Purpose Ampilifiers. It has 4-axis I/O signals.

1.1 Board Layout for DN-8468GB

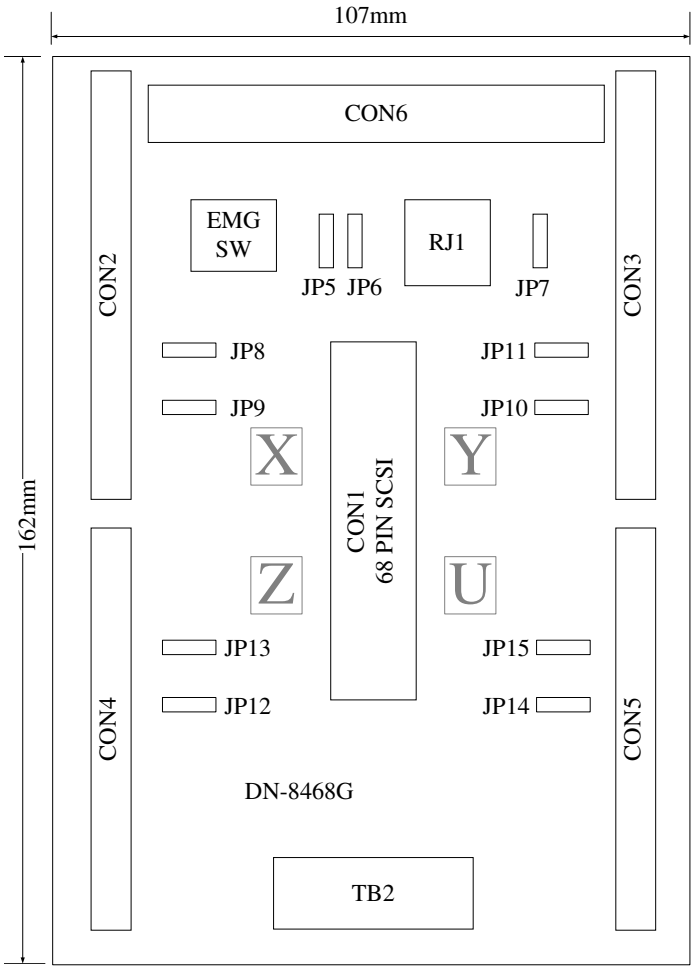

Fig. 1-1 Board layout for the DN-8468GB

1.2 Signal Connections for DN-8468GB

Maintaining signal connections is one of the most important factors in ensuring that your application system is sending and receiving data correctly.

■ Pin Assignment for CON1

The I/O connector on the DN-8468GB is a 68-pin SCSI II connector that enables you to connect to the I-8094 motion card. Fig. 1-2 shows the pin assignment for the 68-pin I/O connector on the DN-8468GB (or on the I-8094), and refer to Table 1-2, 1-3 for description of each motion I/O signal.

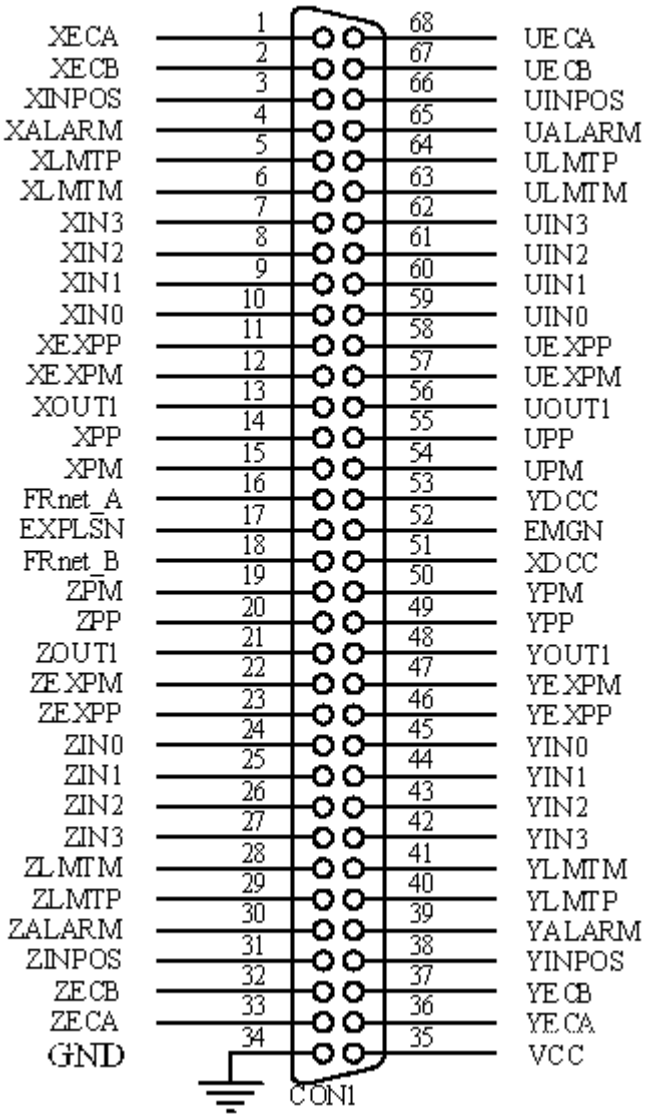

Fig. 1-2 I/O connector pin assignment for the CON1

Table 1-2 DN-8468GB I/O connector signal description (part 1)

Pin name	Pin number	Description
XECA	1	Encoder A-phase signal for X axis
YECA	36	Encoder A-phase signal for Y axis
ZECA	33	Encoder A-phase signal for Z axis
UECA	68	Encoder A-phase signal for U axis
XECB	2	Encoder B-Phase signal for X axis
YECB	37	Encoder B-Phase signal for Y axis
ZECB	32	Encoder B-Phase signal for Z axis
UECB	67	Encoder B-Phase signal for U axis
XINPOS	3	In-position signal for X axis
YINPOS	38	In-position signal for Y axis
ZINPOS	31	In-position signal for Z axis
UINPOS	66	In-position signal for U axis
XALARM	4	Alarm signal for X axis
YALARM	39	Alarm signal for Y axis
ZALARM	30	Alarm signal for Z axis
UALARM	65	Alarm signal for U axis
XLMTP	5	Limit switch input signal (+) for X axis
YLMTP	40	Limit switch input signal (+) for Y axis
ZLMTP	29	Limit switch input signal (+) for Z axis
ULMTP	64	Limit switch input signal (+) for U axis
XLMTM	6	Limit switch input signal (-) for X axis
YLMTM	41	Limit switch input signal (-) for Y axis
ZLMTM	28	Limit switch input signal (-) for Z axis
ULMTM	63	Limit switch input signal (-) for U axis
XIN3	7	Input 3 signal for X axis
YIN3	42	Input 3 signal for Y axis
ZIN3	27	Input 3 signal for Z axis
UIN3	62	Input 3 signal for U axis
XIN2	8	Input 2 signal for X axis
XIN2	43	Input 2 signal for Y axis
XIN2	26	Input 2 signal for Z axis
XIN2	61	Input 2 signal for U axis
XIN1	9	Input 1 signal for X axis
YIN1	44	Input 1 signal for Y axis
ZIN1	25	Input 1 signal for Z axis
UIN1	60	Input 1 signal for U axis
XIN0	10	Input 0 signal for X axis
YIN0	45	Input 0 signal for Y axis
ZIN0	24	Input 0 signal for Z axis
UIN0	59	Input 0 signal for U axis

Table 1-2 DN-8468GB I/O connector signal description (part 2)

Pin name	Pin number	Description
XEXPP	11	EXT pulsar input signal (+) for X axis
YEXPP	46	EXT pulsar input signal (+) for Y axis
ZEXPP	23	EXT pulsar input signal (+) for Z axis
UEXPP	58	EXT pulsar input signal (+) for U axis
XEXPM	12	EXT pulsar input signal (-) for X axis
YEXPM	47	EXT pulsar input signal (-) for Y axis
ZEXPM	22	EXT pulsar input signal (-) for Z axis
UEXPM	57	EXT pulsar input signal (-) for U axis
XDRIVE	13	Driver enable signal for X axis
YDRIVE	48	Driver enable signal for Y axis
ZDRIVE	21	Driver enable signal for Z axis
UDRIVE	56	Driver enable signal for U axis
XPP	14	Driving pulsar signal (+) for X axis
YPP	49	Driving pulsar signal (+) for Y axis
ZPP	20	Driving pulsar signal (+) for Z axis
UPP	55	Driving pulsar signal (+) for U axis
XPM	15	Driving pulsar signal (+) for X axis
YPM	50	Driving pulsar signal (+) for Y axis
ZPM	19	Driving pulsar signal (+) for Z axis
UPM	54	Driving pulsar signal (+) for U axis
XOUT1	16	Output 1 signal for X axis
YOUT1	48	Output 1 signal for Y axis
ZOUT1	21	Output 1 signal for Z axis
UOUT1	56	Output 1 signal for U axis
EXPLSN1	17	EXT pulse input signal for interpolation
EMGN1	52	Emergency stop input signal
FrnetA	16	FRnet port A
FrnetB	18	FRnet port B
XDCC	51	Deviation Counter Clear for X axis
YDCC	53	Deviation Counter Clear for Y axis
GND	34	Ground
VCC	35	External power (12~24V)

■ CON2 ~ CON5 (I/O connector for each AXIS)

The connectors CON2 ~ CON5 are 20-pin connectors that enable you to connect to the I/O signals for general purpose motor drivers. Fig.1-3 shows the pin assignment for the 20-pin connector on the DN-8468GB, and the Table 1-3 shows its I/O connector signal description.

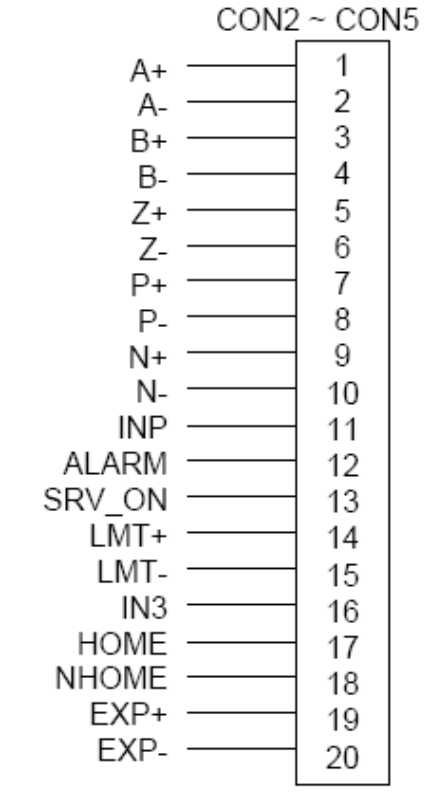

Fig. 1-3 Pin definition for CON2 ~ CON5

Table 1-3 CON2 ~ CON5 Signal Connection

Name	Number	Description
A+	1	Encoder A-Phase (+)
A-	2	Encoder A-Phase (-)
B+	3	Encoder B-Phase (+)
B-	4	Encoder B-Phase (-)
Z+	5	Encoder Z-Phase (+)
Z-	6	Encoder Z-Phase (-)
P+	7	Positive Direction Pulse Output(+)
P-	8	Positive Direction Pulse Output(-)
N+	9	Negative Direction Pulse Output(+)
N-	10	Negative Direction Pulse Output(-)
INP	11	Servo In Position
ALARM	12	Servo Alarm
SRV_ON	13	Servo On
LMT+	14	Limit Switch Input Signal (+)
LMT-	15	Limit Switch Input Signal (-)
IN3	16	Input Signal (IN3)
HOME	17	Home Sensor Input Signal
NHOME	18	Near Home Sensor Input Signal
EXP+	19	EXT Positive Direction Pulse (+)
EXP-	20	EXT Negative Direction Pulse (-)

■ CON6

The connector CON6 is 16-pin connector that enables you to connect to the signals of your motor drivers. Fig.1-4 shows the pin assignment for the 16-pin connector on the DN-8468GB, and the Table 1-4 shows its I/O connector signal description.

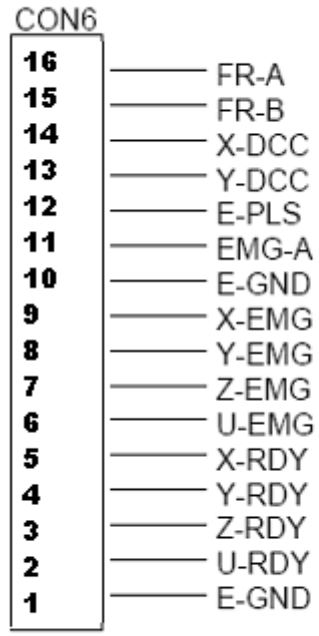

Fig. 1-4 Pin definition for CON6

Table 1-4 CON6 Signal Connection

Name	Description
FR-A	FRnet port A
FR-B	FRnet port B
X-DCC	Deviation Counter Clear for X axis
Y-DCC	Deviation Counter Clear for Y axis
E-PLS	EXT pulse signal
EMG-A	EMG input signal for all axes
E-GND	EXT power ground
X-EMG	EMG input signal for X axis
Y-EMG	EMG input signal for Y axis
Z-EMG	EMG input signal for Z axis
U-EMG	EMG input signal for U axis
X-RDY	Ready input signal for X axis
Y-RDY	Ready input signal for Y axis
Z-RDY	Ready input signal for Z axis
U-RDY	Ready input signal for U axis

■ TB2

The connector TB2 is 5-pin connector that enables you to connect to the signals of your motor drivers. Fig.1-5 shows the pin assignment for the 5-pin connector on the DN-8468GB, and the Table 1-5 shows its I/O connector signal description.

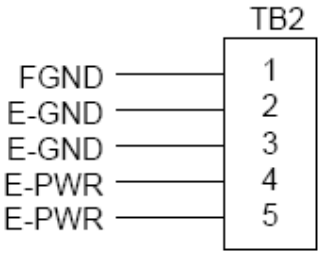

Fig. 1-5 Pin definition for TB2

Table 1-5 TB2 Signal Connection

Pin name	Description
E-PWR	EXT power supply +24V
E-GND	EXT power ground
FGND	Frame ground

▶ **Note:** Don't reverse connect signals with E_PWR and E_GND. Serious damage to your motion card and motion controller might be happened.

■ RJ1 (The I/O signals of the FRnet)

The connectors RJ1 is an 8-pin RJ45 connector that enable you to connect to the signals of FRnet. Fig.1-6 shows the pin assignment for the 8-pin connector on the DN-8468GB, and the Table 1-6 shows its I/O connector signal description.

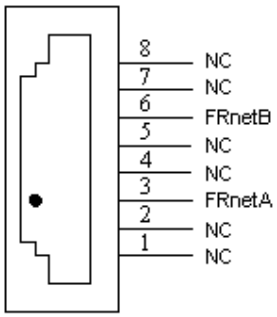

Fig. 1-6 Pin definition for RJ1

Table 1-6 RJ1

Pin name	Description
FRnetA	FRnet port A
FRnetB	FRnet port B
NC	No connection

Note: Don't connect NC (not connected) signals. Connecting these signals could cause permanent damage to your motion controller.

1.3 Jumper and Switch Settings

■ JP7

Jumper 7 controls the EMG-A signal of the CON6 connector. The following diagram is shown the selection condition of the jumper 7.

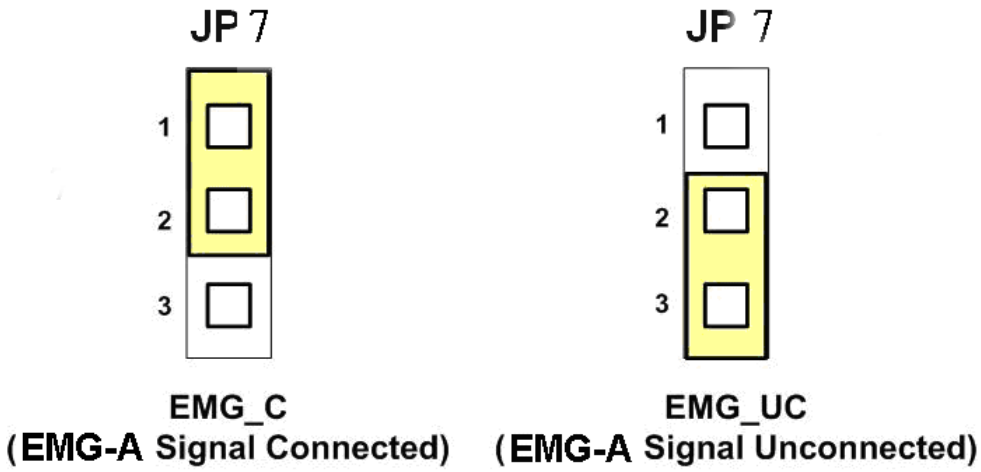

Fig. 1-7 Jumper 7 setting

■ EMG SW

The emergency stop signal for each servo ampilfier can be selected from EMG SW. The number 1, 2 , 3, 4 on EMG SW are denoted as axis X, Y, Z, U, respectively. Fig. 1-8 is the default setting to connect the EMG singals to GND. The EMG signals from CN1 ~ CN4 will not take effect. If the switch is disconnected as shown in Fig. 1-9, the emergency stop signals can be controlled from EMG signals in CON6.

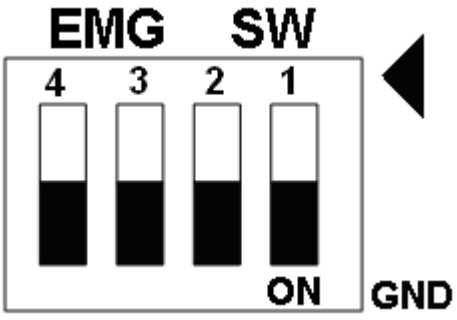

Fig. 1-8 EMG SW setting for normally GND (Default setting)

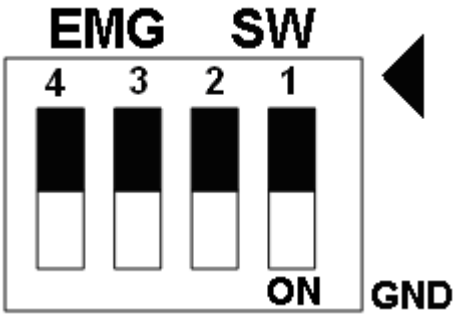

Fig. 1-9 EMG SW setting for user controlled signals.

■ JP8/9, JP10/11, JP12/13, JP14/15

Jumper 8, 9 controls the XPP, XPM signals of the CON1. The couple of jumpers are indicated the type of pulse output signal for X axis. However there are the same jumper settings for Y, Z, and U axis. (Jumper 10, 11 for Y axis; jumper 12, 13 for Z axis; jumper 14, 15 for U axis). The following diagram is shown the selection condition of the jumper 8, 9.

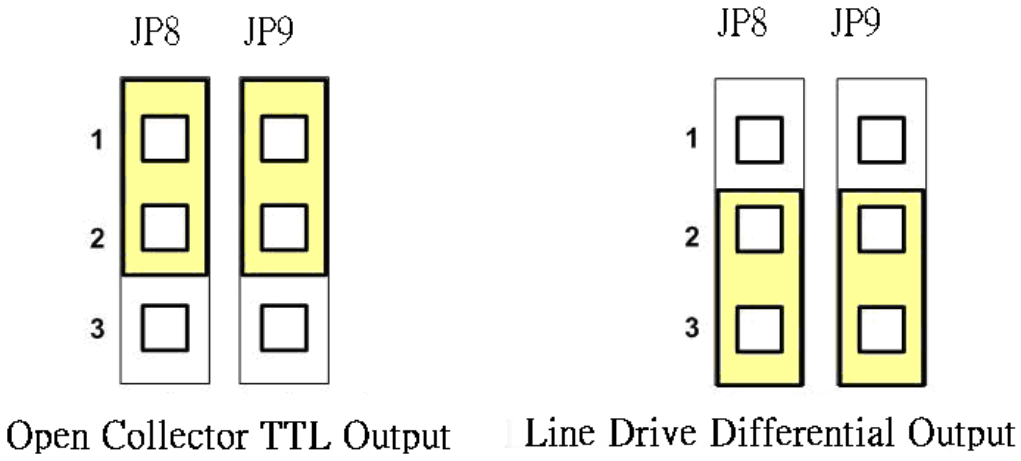

Fig. 1-10 Jumper 8, 9 setting