

# **FnIO G – Series :**

## ***GT-4668***

***GT-4668 (8 Channels, Voltage Output, 0~10V / 0~5V / 1~5V,  
16bit(Include Sign 16bit / Full-Range 16bit))***

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History

Rev	Pages	Remarks	Date	Editor
1.00	9		2024/12/13	Soyeong, Park
1.01	5, 8-12	Add Resolution (16bit Full-Range)	2025/05/22	Soyeong, Park

# Specification

## 1. ENVIRONMENT SPECIFICATION

Environmental specification	
Operating Temperature	-40°C ~60°C
UL Temperature	-20°C ~60°C
Storage Temperature	-40°C ~85°C
Relative Humidity	5% ~ 90% non-condensing
Mounting	DIN rail
General specification	
Shock Operating	IEC 60068-2-27
Vibration Resistance	Based on IEC 60068-2-6, 4g
Industrial Emissions	EN61000-6-4/All : 2011
Industrial Immunity	EN 61000-6-2 : 2005
Installation Position	Vertical and horizontal installation is available
Product Certifications	CE, UL

# Specification

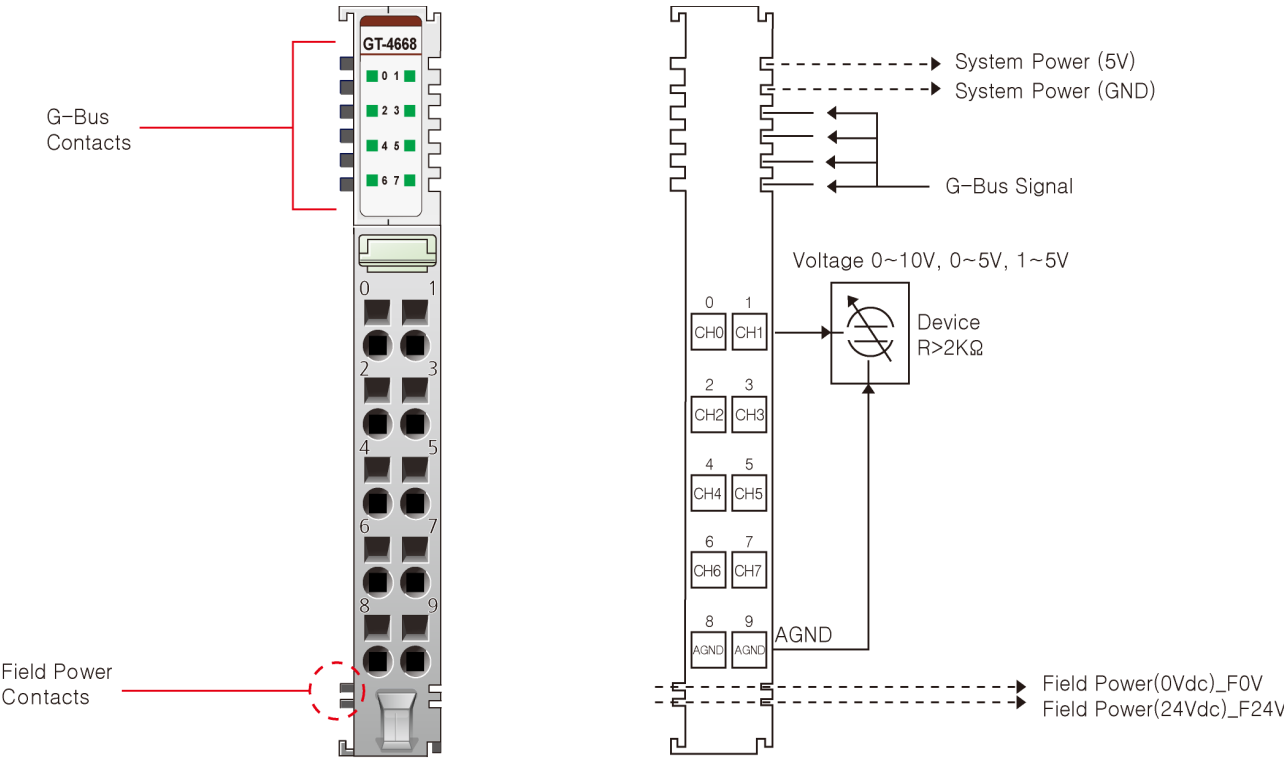
## 2. GT-4668 (8 Channels Voltage Output, 0~10V / 0~5V / 1~5V, 16bit)

### 2.1. GT-4668 Specification

Items	Specification
<b>Output Specification</b>	
Outputs per module	8 Channels single ended, non-isolated between channel
Indicators(Logic side )	8 Green Output status
Resolution in Ranges *	16 bit (Include Sign) 15bits : 0.31mV/Bit(0~10V) 15bits : 0.15mV/Bit(0~5V) 15bits : 0.12mV/Bit(1~5V)
	16 bit (Full-Range) 16bits : 0.15mV/Bit(0~10V) 16bits : 0.076mV/Bit(0~5V) 16bits : 0.061mV/Bit(1~5V)
Output Range	0 ~ 10Vdc, 0~5Vdc, 1~5Vdc
Data Format *	Include Sign 16bit : 16bits Integer (2' compliment)
	Full-Range 16bit : Unsigned Straight Binary
Module Error	±0.1% Full Scale @ 25°C ±0.3% Full Scale @ -40°C, 60°C
Load Resistance	Min. 2KΩ
Conversion Time	0.3msec / All channel
Diagnostic	Field Power Off: LED Blinking
Calibration	Not Required
Common Type	2 Common, Field Power 0V is Common(AGND)
<b>General Specification</b>	
Power dissipation	Max. 30mA @ 5Vdc
Isolation	I/O to Logic : Isolation Field power : Non-Isolation
UL Field Power	Supply voltage : 24Vdc nominal, Class2
Field Power	Supply Voltage : 24Vdc nominal
	Voltage Range : 18~30Vdc Power Dissipation : Max. 70mA @ 24Vdc
Wiring	I/O Cable Max. 2.0mm <sup>2</sup> (AWG 14)
Weight	58g
Module Size	12mm x 99mm x 70mm
<b>Environment Condition</b>	<b>Refer to 'Environment Specification'</b>

\*Refer to 2.6 Parameter Data

2.2. GT-4668 Wiring Diagram

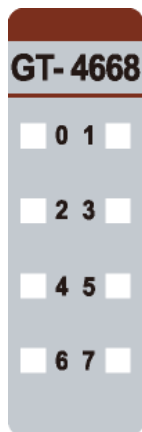


Pin No.	Signal Description	Signal Description	Pin No.
0	Analog Output Channel 0	Analog Output Channel 1	1
2	Analog Output Channel 2	Analog Output Channel 3	3
4	Analog Output Channel 4	Analog Output Channel 5	5
6	Analog Output Channel 6	Analog Output Channel 7	7
8	Output Channel Common(AGND)	Output Channel Common(AGND)	9

# Specification

## 2.3. GT-4668 LED Indicator

### 2.3.1. LED Indicator



LED No.	LED Function / Description	LED Color
0	OUTPUT Channel 0	Green
1	OUTPUT Channel 1	Green
2	OUTPUT Channel 2	Green
3	OUTPUT Channel 3	Green
4	OUTPUT Channel 4	Green
5	OUTPUT Channel 5	Green
6	OUTPUT Channel 6	Green
7	OUTPUT Channel 7	Green

### 2.3.2. Channel Status LED

Status	LED	To indicate
Normal Operation	Off	No Output Value
	Green	Output Value
Field Power Error	All Channel Repeat Green and Off	Field Power is unconnected.

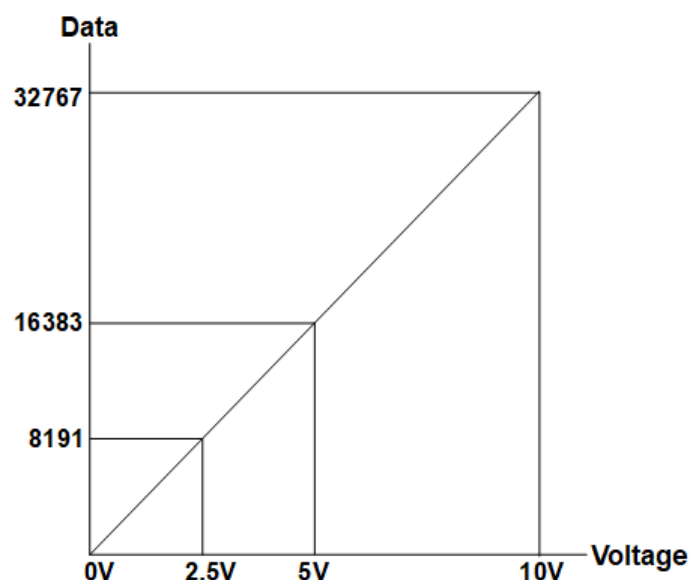
# Specification

## 2.4. Data Value / Voltage

Voltage Range : 0~10V

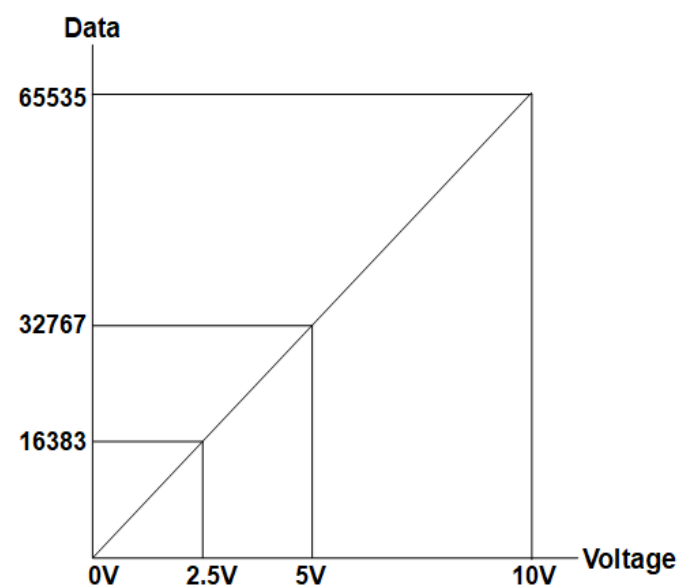
(Include Sign 16bit)

Voltage	0.0V	2.5V	5.0V	10.0V
Data(Hex)	H0000	H1FFF	H3FFF	H7FFF



(Full-Range 16bit)

Voltage	0.0V	2.5V	5.0V	10.0V
Data(Hex)	H0000	H3FFF	H7FFF	HFFFF



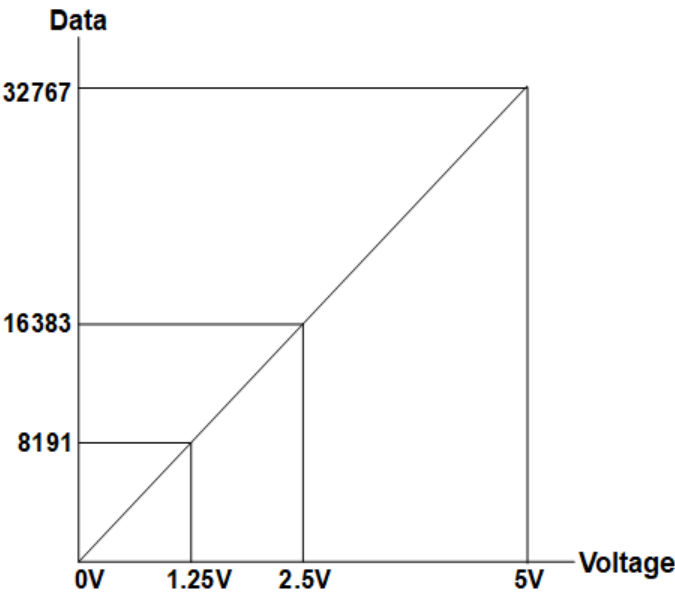


Specification

Voltage Range : 0~5V

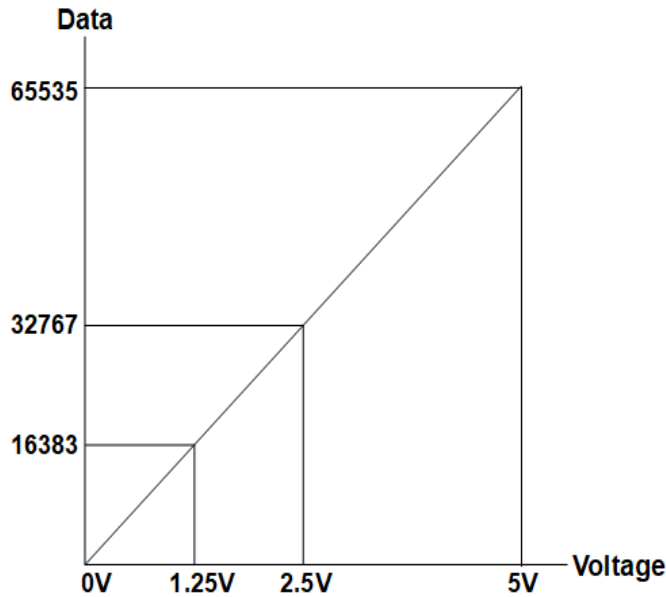
(Include Sign 16bit)

Voltage	0.0V	1.25V	2.5V	5.0V
Data(Hex)	H0000	H1FFF	H3FFF	H7FFF



(Full-Range 16bit)

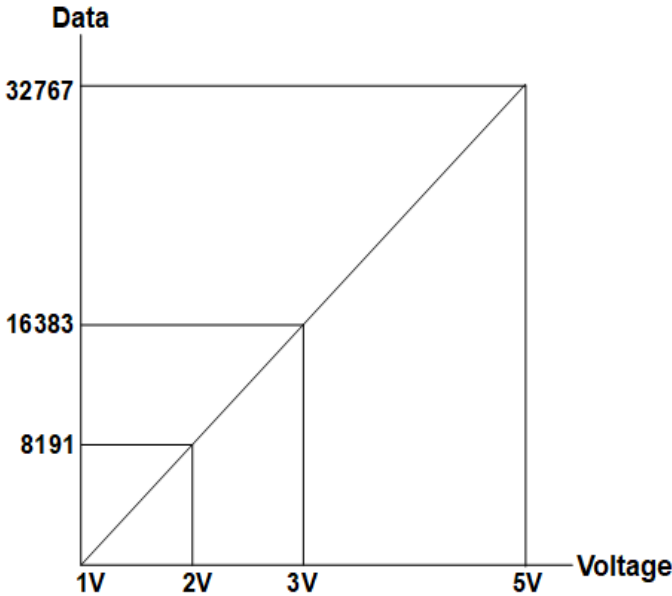
Voltage	0.0V	1.25V	2.5V	5.0V
Data(Hex)	H0000	H3FFF	H7FFF	HFFFF



Specification

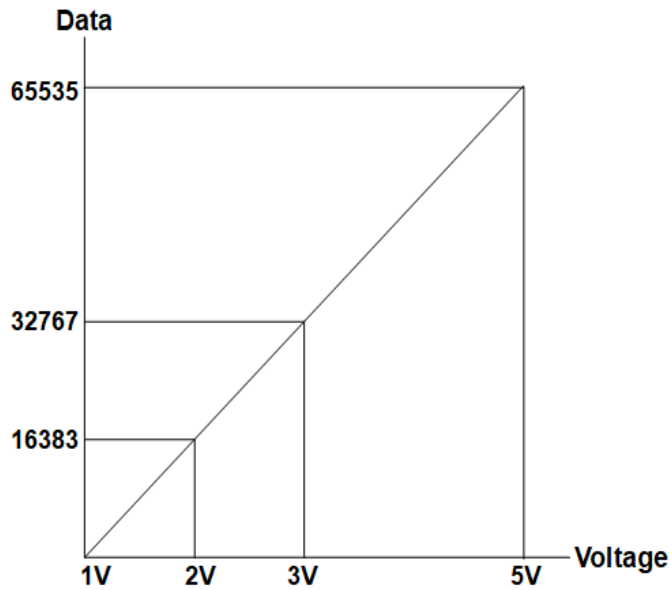
Voltage Range : 1~5V  
(Include Sign 16bit)

Voltage	1.0V	2.0V	3.0V	5.0V
Data(Hex)	H0000	H1FFF	H3FFF	H0FFF



(Full-Range 16bit)

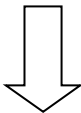
Voltage	1.0V	2.0V	3.0V	5.0V
Data(Hex)	H0000	H3FFF	H7FFF	HFFFF



2.5. Mapping data from the image table

● Output Image Value

Bit No	Bit7	Bit6	Bit5	Bit4	Bit3	Bit2	Bit1	Bit0
Byte0	Analog Output Ch0 Low byte							
Byte1	Analog Output Ch0 High byte							
Byte2	Analog Output Ch1 Low byte							
Byte3	Analog Output Ch1 High byte							
Byte4	Analog Output Ch2 Low byte							
Byte5	Analog Output Ch2 High byte							
Byte6	Analog Output Ch3 Low byte							
Byte7	Analog Output Ch3 High byte							
Byte8	Analog Output Ch4 Low byte							
Byte9	Analog Output Ch4 High byte							
Byte10	Analog Output Ch5 Low byte							
Byte11	Analog Output Ch5 High byte							
Byte12	Analog Output Ch6 Low byte							
Byte13	Analog Output Ch6 High byte							
Byte14	Analog Output Ch7 Low byte							
Byte15	Analog Output Ch7 High byte							



● Output Module Data

Analog Output Ch0
Analog Output Ch1
Analog Output Ch2
Analog Output Ch3
Analog Output Ch4
Analog Output Ch5
Analog Output Ch6
Analog Output Ch7

# Specification

## 2.6. Parameter Data

- Valid Parameter length: 8 Bytes
- Parameter Data

Bit No	Bit7	Bit6	Bit5	Bit4	Bit3	Bit2	Bit1	Bit0
Byte0	Fault Action for channel 3		Fault Action for channel 2		Fault Action for channel 1		Fault Action for channel 0	
Byte1	Fault Action for channel 7		Fault Action for channel 6		Fault Action for channel 5		Fault Action for channel 4	
	00: Fault Value 01: Hold last state 10: Low Limit 11:High Limit							
Byte2	Fault Value Low Byte							
Byte3	Fault Value High Byte							
Byte4	Voltage Range for Channel 3		Voltage Range for Channel 2		Voltage Range for Channel 1		Voltage Range for Channel 0	
Byte5	Voltage Range for Channel 7		Voltage Range for Channel 6		Voltage Range for Channel 5		Voltage Range for Channel 4	
	00 : 0~10Vdc 01 : 0~5Vdc 10 : 1~5Vdc							
Byte6	Reserved							Range Selection*
Byte7	Reserved							

\* Range Selection : 0 = Include Sign 16bits (Data format : 2' compliment) (0 ~ 7FFF)

/ 1 = Full-Range 16bits (Data format : Unsigned Straight Binary) (0 ~ FFFF)