

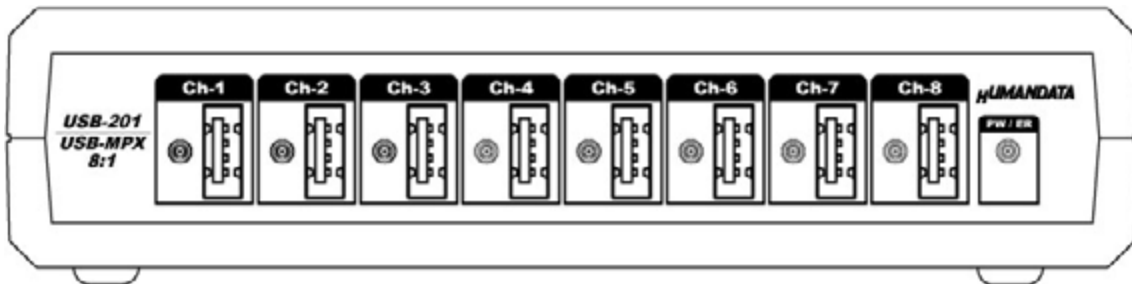
**USB Multiplexer 8:1**



**USB-201**

**User's Manual**

**Ver. 1.0**



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## Precautions

### Do Not

1. This product uses ordinary off-the-shelf electronic components, and is therefore inappropriate for use in applications that require special quality or reliability and are expected to protect human lives or prevent accidents, such as safety mechanisms in fields including space, aeronautics, medicine, and nuclear power.
2. Do not be used underwater or in high-humidity environments.
3. Do not be used in the presence of corrosive gases, combustible gases, or other flammable gases.
4. Do not turn on power when circuit board surface is in contact with other metal.
5. Do not apply voltage higher than rated voltage.

### Attention

6. This manual may be revised in the future without notice owing to improvements.
7. All efforts have been made to produce the best manual possible, but if users notice an error or other problem, we ask that they notify us.
8. Item 7 notwithstanding, HuMANDATA cannot be held liable for the consequences arising from use of this product.
9. HuMANDATA cannot be held liable for consequences arising from using this product in a way different from the uses described herein, or from uses not shown herein.
10. This manual, circuit diagrams, sample circuits, and other content may not be copied, reproduced, or distributed without permission.
11. If the product emits smoke, catches fire, or becomes unusually hot, cut the power immediately.
12. Be careful of static electricity.
13. This product may be subject to the export restrictions of Japan, the United States, or other countries. Purchasers are responsible for properly observing export restrictions.
14. HuMANDATA firmly refuses to export (including reexporting) products to countries or regions subject to export restrictions.

## Product Warranty and Scope of Support

1. HuMANDATA guarantees that its products can be assembled as shown in published circuit diagrams and other design documents. There may be differences between actual components or their prescribed quantities and model numbers and those shown in circuit diagrams.
2. Except for the guarantee in item 1, above, no guarantees whatsoever are made. When assembling the product as shown in a circuit diagram is impossible, and the problem can be solved by revising the diagram, HuMANDATA will revise the diagram. When a problem can be solved only by replacing components or modifying the product, HuMANDATA will take back the product to replace it with a properly functioning product.
3. If the problem is minor, HuMANDATA will sometimes describe how to make the revision or modification, and ask the customer to solve the problem.
4. HuMANDATA will determine how to honor the warranty, as through repair, replacement, return, or other action. The customer cannot specify what action to take.
5. FPGAs and other components used in products sometimes have characteristic defects. Returns and replacements are not possible even if such defects are discovered, whether before or after purchase.
6. HuMANDATA shall not be obligated to inform customers about defects in the main components used in products.
7. HuMANDATA shall not be obligated to provide support for products, or to provide support for the software of other companies needed to use HuMANDATA products.
8. Published documentation shall be limited to that published by HuMANDATA at the time of product purchase, and HuMANDATA shall not be obligated to provide any other documentation.
9. When repairs or replacements are provided under warranty in Japan, purchaser shall pay shipping charges for shipping to HuMANDATA, and HuMANDATA shall pay shipping charges for shipping to purchaser.
10. When shipping from outside of Japan, purchaser shall pay all expenses including shipping charges and taxes.
11. Under whatever circumstances, HuMANDATA shall provide support for its products for a maximum of one year after shipping from factory.
12. The Warranty is not applicable and support ends in the event of fire, storm and flood damage, earthquakes, lightning strikes, and other natural disasters, as well as conflict or other occurrences.
13. Purchaser is assumed to have read and understood all the above when purchasing a HuMANDATA product.

## Limitation of Liability

1. Purchasers assume all liability associated with the use of this product.
2. HuMANDATA assumes no liability whatsoever for any direct, indirect, special, incidental, or consequential damages arising from the use of this product, even if HuMANDATA has been advised of the possibility of such damage, whether legal or in tort.
3. At the time this product is purchased, items 1 and 2 above shall be deemed to have been confirmed by purchaser.

## Trademarks and Other Considerations

1. This manual uses various companies' trademarks in places.
2. HuMANDATA is this company's registered trademark.

## HuMANDATA's Philosophy

1. HuMANDATA endeavors to raise product quality. We continually make detailed improvements and adjustments that are not shown in circuit diagrams.
2. HuMANDATA actively publishes, on the Web and in other ways, information considered useful to customers. Examples would be how to use FPGAs and how to use development tools.
3. HuMANDATA makes efforts for the long-term provision of products and for continuing their long-term support.
4. Instead of concealing small product problems and documentation errors, HuMANDATA makes them public.
5. HuMANDATA abides by Japanese law and its spirit. We make no transactions with purchasers who commit illegal acts.

- **Revision History**

Date	Revision	Description
Sep. 7, 2015	v1.0	Initial release

- **Introduction**

Thank you for purchasing our product USB Multiplexer 8:1 USB-201.




USB-201 can switch 8 ports by your PC with simple command. It can promote labor-saving for inspection process and auto-inspection system of USB devices.

## 1. Specifications

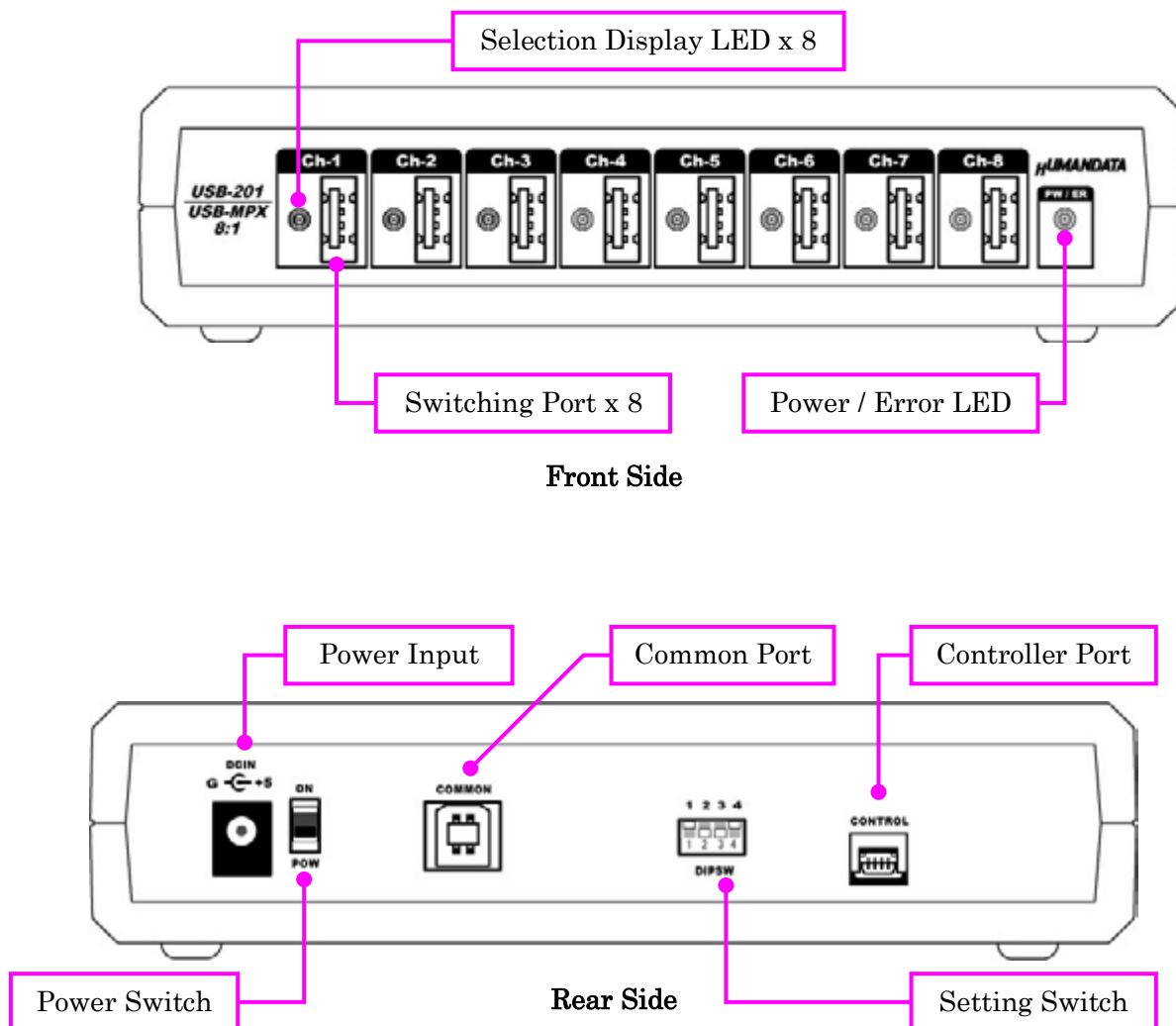
<b>Model</b>	USB-201
<b>Power Input</b>	DC 5 [V] / under 250 [mA] (when USB port not selected) Supplied by AC adapter (self-power)
<b>Channel</b>	8 ch
<b>Target side port OS</b>	not limited
<b>Control side port OS</b>	Windows 8.1 / 8 / 7 / XP
<b>Controller Port</b>	<ul style="list-style-type: none"> <li>• USB mini-B connector</li> <li>• USB 2.0 Full-speed</li> <li>• ESD protection</li> </ul>
<b>Common Port</b>	<ul style="list-style-type: none"> <li>• USB B connector</li> <li>• USB 2.0 Hi / Full / Low-speed</li> <li>• ESD protection</li> </ul>
<b>Switching Port</b>	<ul style="list-style-type: none"> <li>• USB A connector x 8</li> <li>• USB 2.0 Hi / Full / Low-speed</li> <li>• ESD protection</li> </ul>
<b>Current Measure Function</b>	Simple Current Monitor Circuit is mounted
<b>Control Method</b>	<ul style="list-style-type: none"> <li>• communication control by virtual COM port</li> <li>• baud-rate and other conditions are optional</li> </ul>
<b>Status LED</b>	<ul style="list-style-type: none"> <li>• Power / Error x 1 (bi-color LED)</li> <li>• Selection display x 8 (bi-color LED)</li> </ul>
<b>LSI</b>	MAX4999 USB2.0 Multiplexer (MAXIM)
<b>Operating Temp. Range</b>	0 to +60 °C * No condensation permitted. Except AC adapter
<b>Operating Humid. Range</b>	30 to 85 % RH * No condensation permitted. Except AC adapter
<b>Storage Temp. Range</b>	-20 to +55 °C * No condensation permitted. Except AC adapter
<b>Storage Humid. Range</b>	30 to 85 % RH * No condensation permitted. Except AC adapter
<b>Noise Tolerance</b>	not specified
<b>Safety Standard</b>	not specified
<b>Dimensions</b>	165 x 80.5 x 39 [mm] 6.496" x 3.169" x 1.535" (not including projection)
<b>Weight</b>	approx. 230 [g]
<b>Accessory</b>	USB Cable 1.8 [m] mini USB cable 1.0 [mm]
<b>RoHS Compliance</b>	YES

\* There may be cases that these parts and specifications are changed.

### 1.1. Optional Accessories

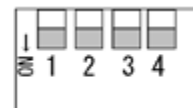
Model Name	Image	Description
ACC-027		Metal bracket type A for vertical mounting USB series JAN : 4937920801096
ACC-028		Metal bracket type A for horizontal mounting USB series JAN : 4937920801102
ACC-031		Din rail attachment type B for USB series JAN : 4937920801256

## 2. Overview



### 2.1. Setting Switch

The function of these switches is not opened. Please set them to OFF.



## 3. Power Input

USB-201 is self powered; cannot be operated by bus-power. Please input power by attached AC adapter.

## 4. Controller Command

You can control with simple single character command shown in the following table by using terminal software and keyboard. Each controller command is an ASCII text. The command is case sensitive.

Send Command	Function	Response
'1'~'8'	Select USB port from 1 to 8	<CMD>,[active channel]<CR>
'0'	Select no USB port	<CMD>,0<CR>
'C'	Get active USB port	<CMD>,[active channel]<CR>
'T'	Get electric current value	<CMD>,[current value]<CR>
'Z'	Set current offset value (set the current sensor value as base value)	<CMD>,[offset value]<CR>
'X'	Clear current offset value	<CMD>,[offset value(=0)]<CR>
'V'	Get product version	"USB-201 Ver.***"<CR>
other	-	"Undefined command"<CR>

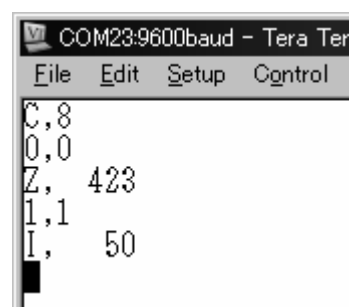
<CMD> : response sending command

<CR> : Carriage Return (0x0D)

Current value is monitored by mounted current sensor circuits. It is not calibrated. Please think the value is just for reference.

### Communication example

First clear all USB connections, then set current offset value, and set USB port ch.1 active and get the value 50 as current value.



```

COM23:9600baud - Tera Ter
File Edit Setup Control
C,8
0,0
Z, 423
1,1
I, 50
  
```



## 5. Additional Documentation and User Support

The following documents and other supports are available at

<http://www.hdl.co.jp/en/spc/USB/usb-201/>

- Device Driver
- Dimensional drawing
- ... and more.

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**Ver. 1.0 ..... Sep. 7, 2015**

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