

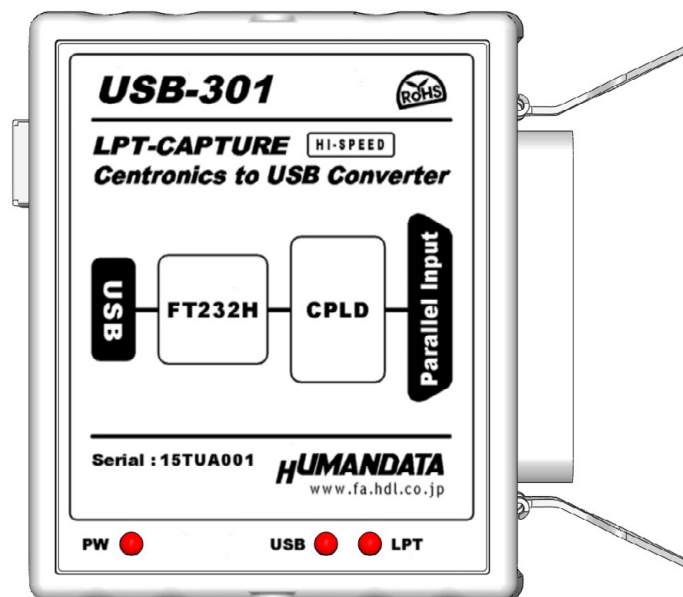
**LPT-CAPTURE  
Parallel/USB Converter**



**USB-301**

**User's Manual**

**Ver. 1.2**



**HUMANDATA LTD.**

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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
Dec. 9, 2014	v1.0	Initial release
Sep. 30, 2024	v1.1	Correct: typo
Jan. 21, 2025	v1.2	Update: 1.1. Optional Accessories

## ● Introduction

Thank you for purchasing our product USB-301. USB-301 converts parallel signal to USB interface.


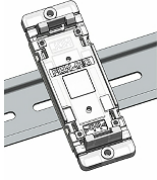
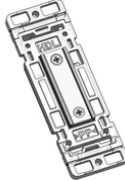
## 1. Specifications

<b>Power Supply</b>	DC5V	Powered by USB bus-power
<b>Current Consumption</b>	500mA or less	
<b>Host interface</b>	USB 2.0 Compliant (Support Hi Speed)	USB 1.1 compatible (*1)
<b>Parallel Input</b>	Centronics Parallel Interface	
<b>Parallel Side Connector</b>	Centronics Type 36 pin Female Connector	
<b>Function</b>	Convert print data input to USB and load the data into PC.	
<b>USB Connector</b>	USB B type Female Connector	1.8m USB Cable is attached
<b>USB Driver</b>	Virtual COM Port Driver	Receiver Only
<b>LED</b>	Power LED USB Status LED Parallel Status LED	
<b>Operating Temp Range</b>	-20 to +60 °C	No condensation permitted.
<b>Operating Humidity Range</b>	30 to 85 % RH	No condensation permitted.
<b>Storage Temp Range</b>	-20 to +60 °C	No condensation permitted.
<b>Storage Humidity Range</b>	30 to 85 % RH	No condensation permitted.
<b>Noise Tolerance</b>	Not defined	
<b>Transmission and other Standard</b>	Not defined	
<b>Weight</b>	100 [g] approx.	only main body
<b>Dimensions</b>	69 x 82.5 x 30 [mm] (2.717" x 3.248" x 1.181")	without projections

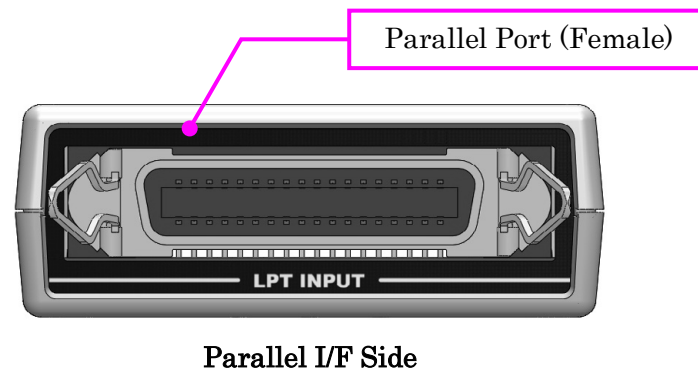
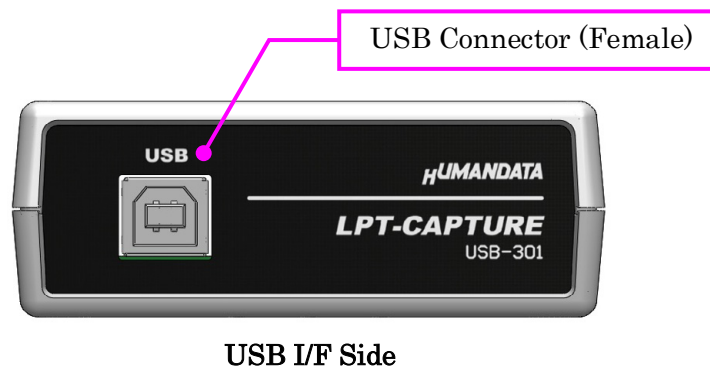
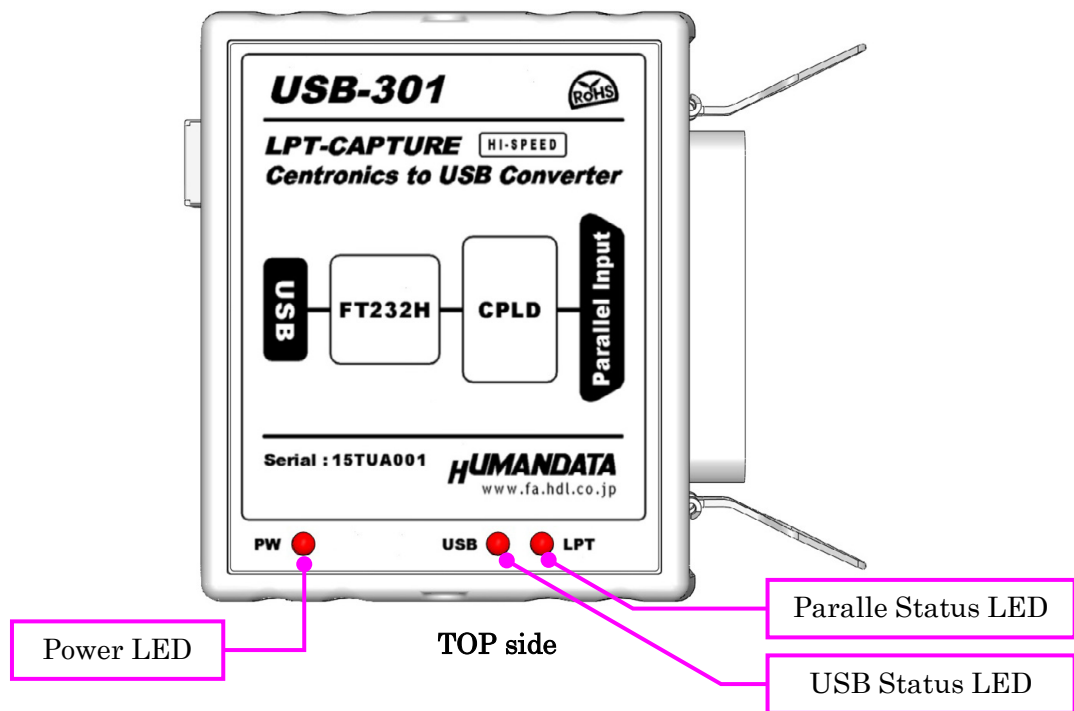
(\*1) Connecting with all USB host equipments is not ensured.

\* Power saving function (suspend, standby, sleep and others) is not supported.

### 1.1. Optional Accessories

Model Name	Image	Description
<b>PEN-003</b>		Attachment with clamping screw JAN: 4937920800709
<b>PEN-003-DIN</b>		Attachment for 35mm DIN rail JAN: 4937920800716
<b>PEN-003-MG</b>		Attachment with neodymium magnet JAN: 4937920801201

## 2. Overview



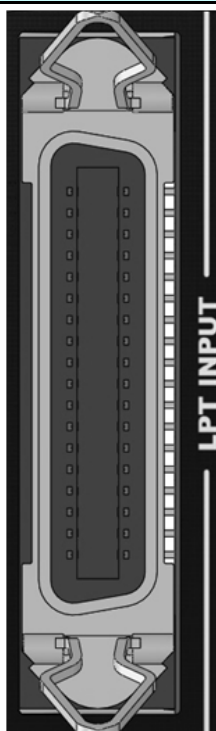
## 2.1. Power Supply

USB-301 operates on USB bus power. No external power supply is required.

## 3. Communication Condition

USB-301 doesn't have the function of serial conversion. When using virtual COM port, setting communication condition is not needed.

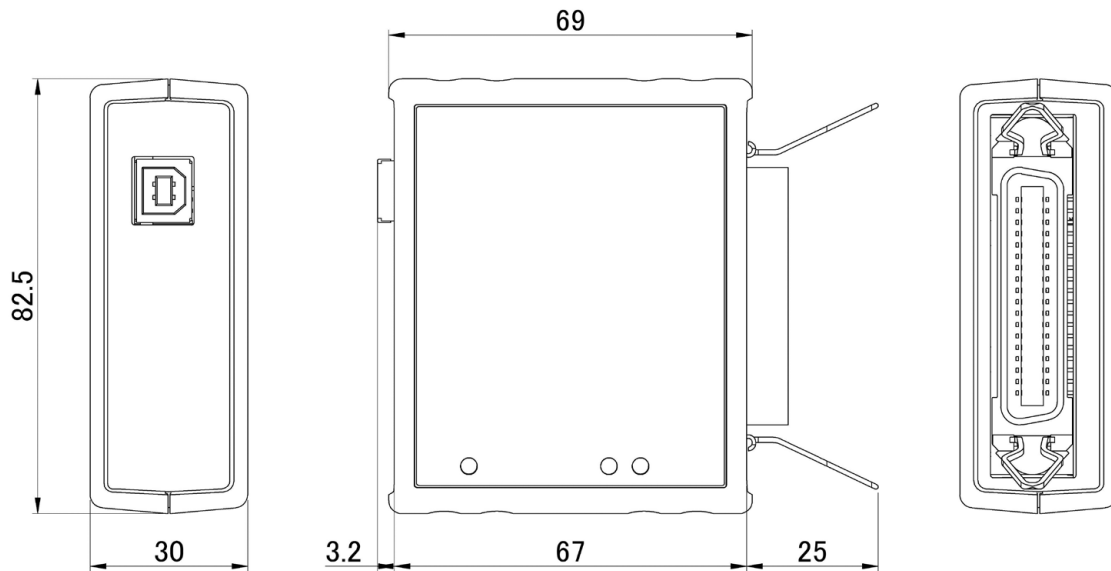
## 4. Connector Pin Assignment

Signal	Dir.	Pin Number		Dir.	Signal	
Data Strobe	IN	1		19	I/O	GND
DATA 1	IN	2		20	I/O	GND
DATA 2	IN	3		21	I/O	GND
DATA 3	IN	4		22	I/O	GND
DATA 4	IN	5		23	I/O	GND
DATA 5	IN	6		24	I/O	GND
DATA 6	IN	7		25	I/O	GND
DATA 7	IN	8		26	I/O	GND
DATA 8	IN	9		27	I/O	GND
Acknowledge	OUT	10		28	I/O	GND
Busy	OUT	11		29	I/O	GND
Paper Empty/Paper End	OUT	12		30	I/O	GND
Select	OUT	13		31	IN	Initialize
Auto Feed	IN	14		32	OUT	Fault(Error)
NC	–	15		33	–	NC
GND	I/O	16		34	–	NC
FG	I/O	17		35	–	NC
5V	OUT	18		36	IN	Select Input

Connector: Centronics Type 36pin Female Connector



## 5. Dimensional drawing



\* The dimensions above are designed values. Please note that some errors may be observed.

## 6. Additional Documentation and User Support

The following documents and other supports are available at

<https://www.hdl.co.jp/ftpdata/usb-301/>

- Device Driver  
... and more.

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