

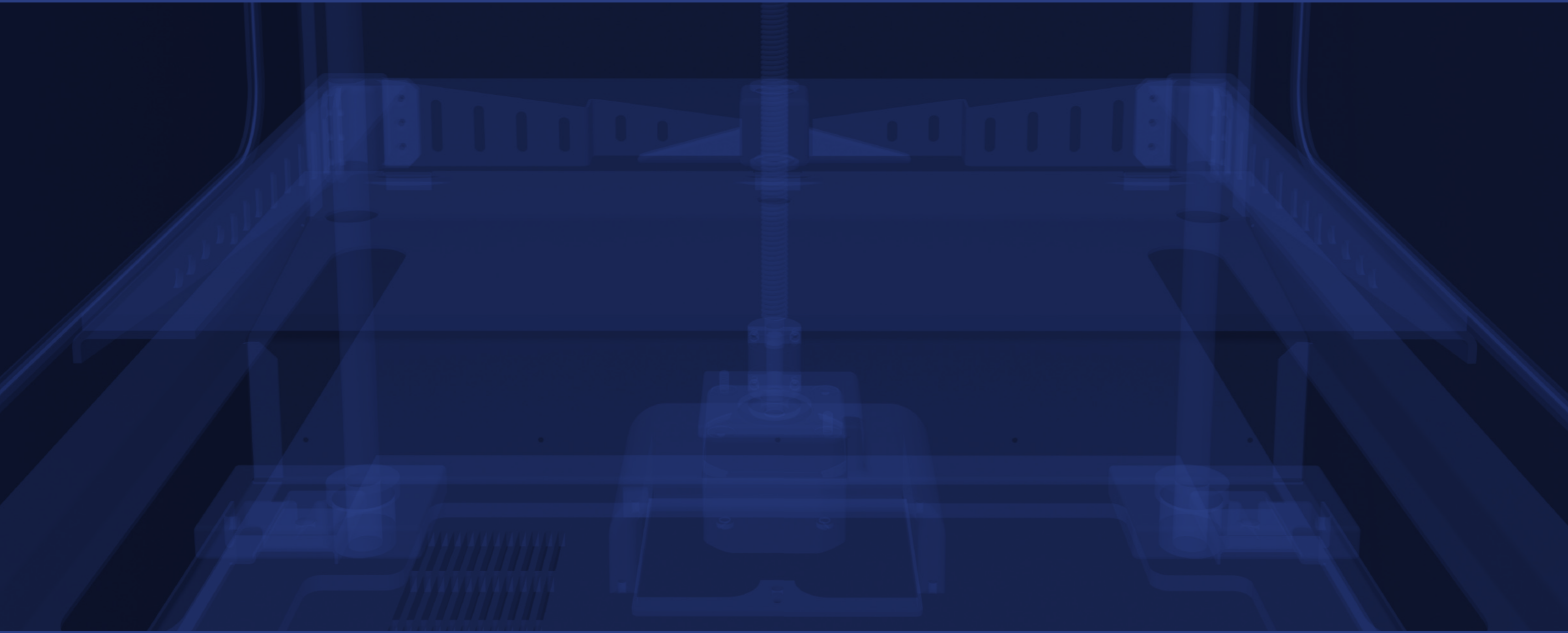


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3D PRINTING PROFESSIONAL COMPANY

Professionalism,  
Cooperation,  
Creative Confidence.

Professionalism,  
Cooperation  
Creative Confidence.



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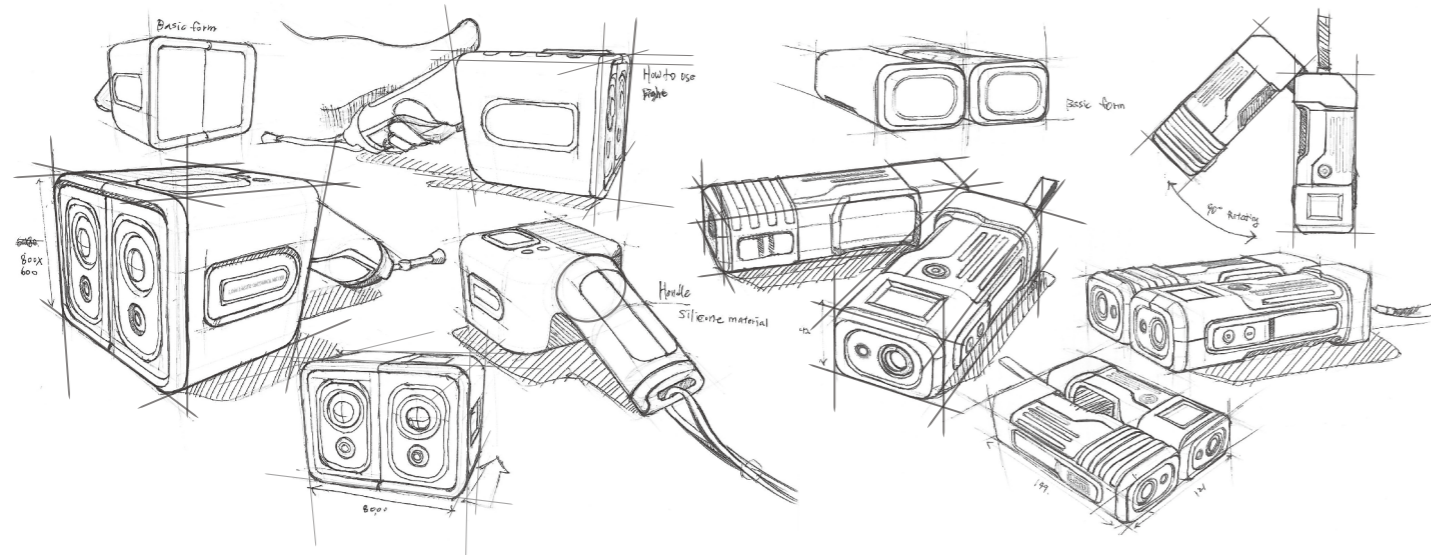
**3D PRINTING  
PRODUCT DEVELOPMENT  
COMPANY**

 **L.LINE**

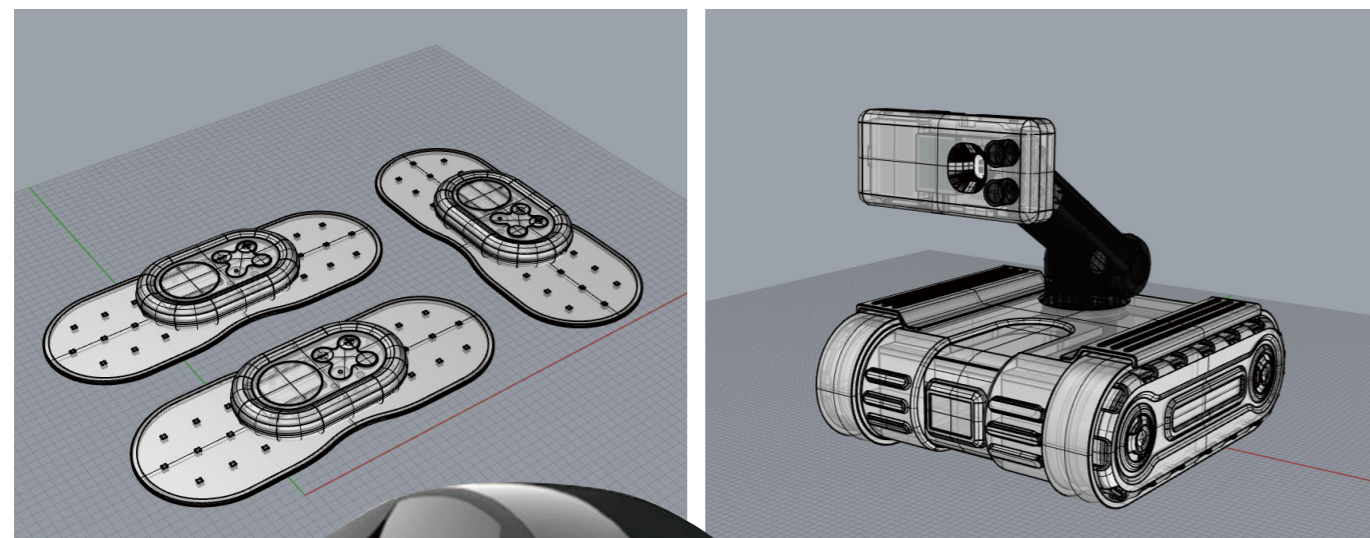


# 1 DESIGN

Flow 01 Concept Design



Flow 02 3D Modeling



Flow 03 Rendering



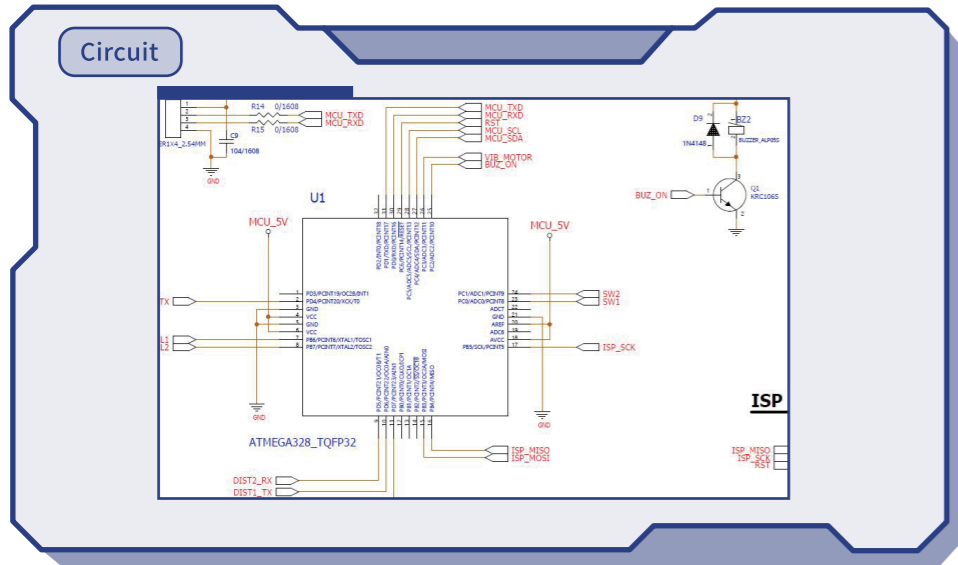
## DESIGN DEVELOPMENT

L.line mainly focuses on developing prototype such as product design, industrial design, mechanism design, visual design, and package design, and consulting mass production, and presents the best solutions through close communication and cooperation with customers, from creating a design concept to realize customer's vague ideas to developing a product idea to increase user satisfaction.

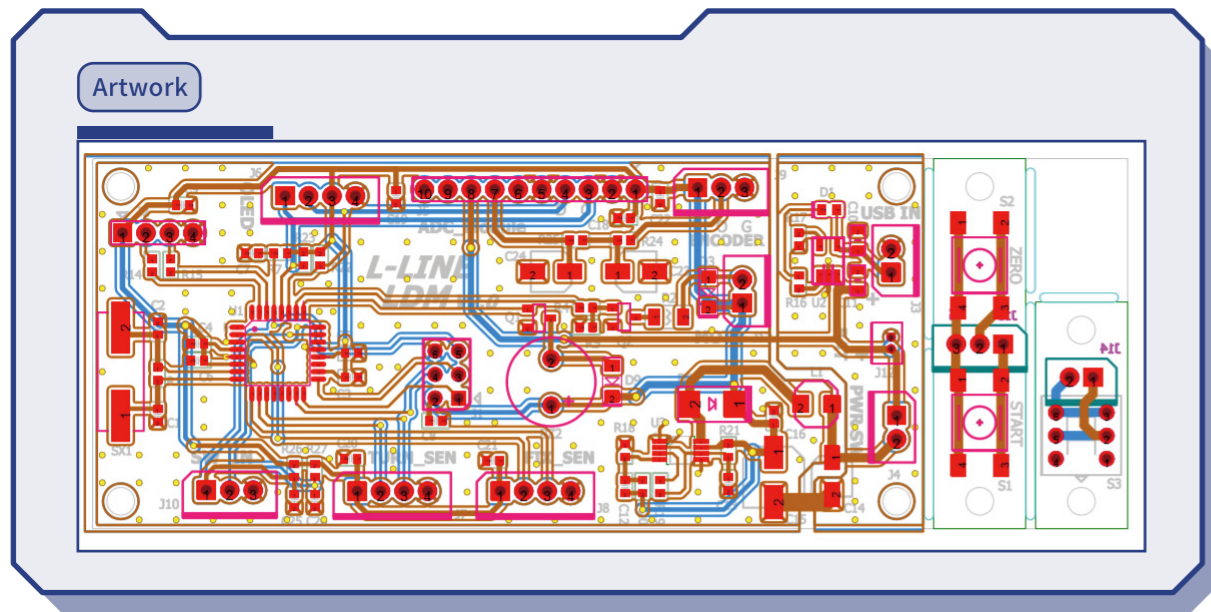


# 2 CIRCUIT

Flow 01 Circuit Diagram & Artwork

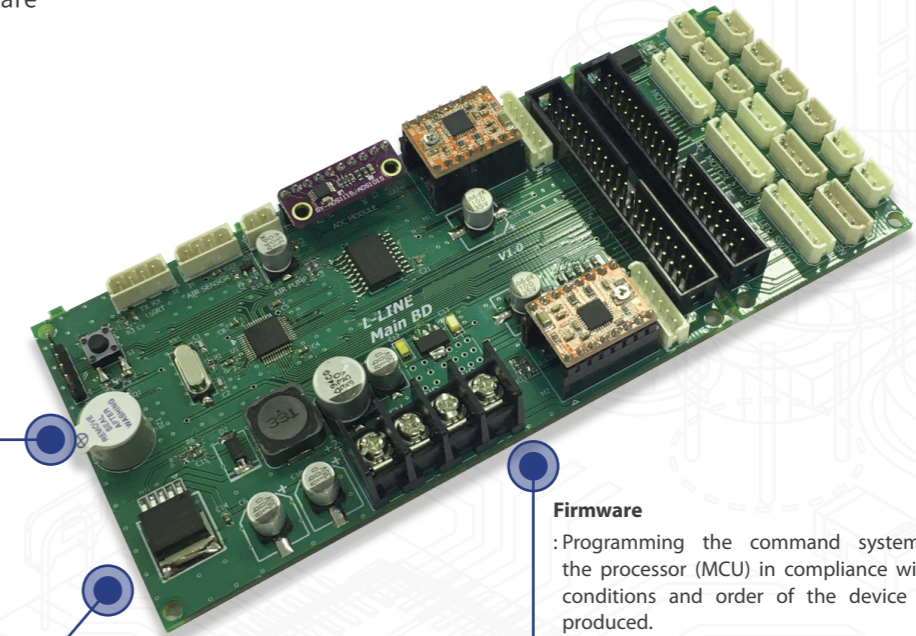


**Circuit diagram**  
: Creates a logical structure to enable it to work in a customer-desired way.



**Artwork**  
: Designs a circuit board in compliance with the conditions of the actual equipment to be installed based on the electronic theory and connection status.

Flow 02 PCB & Firmware



**Firmware**  
: Programming the command system into the processor (MCU) in compliance with the conditions and order of the device to be produced.

**Firmware**

```

150
151 RCC_OscInitStruct.OscillatorType = RCC_OSCILLATORTYPE_HSE;
152 RCC_OscInitStruct.HSEState = RCC_HSE_ON;
153 RCC_OscInitStruct.PLL.PLLState = RCC_PLL_ON;
154 RCC_OscInitStruct.PLL.PLLSource = RCC_PLLSOURCE_HSE;
155 RCC_OscInitStruct.PLL.PLLM = 4;
156 RCC_OscInitStruct.PLL.PLLN = 96;
157 RCC_OscInitStruct.PLL.PLLP = RCC_PLLP_DIV2;
158 RCC_OscInitStruct.PLL.PLLQ = 4;
159 if (HAL_RCC_OscConfig(&RCC_OscInitStruct) != HAL_OK)
160 {
161     _Error_Handler(_FILE_, _LINE_);
162 }
163
164 /**Initializes the CPU, AHB and APB buses clocks
165 */
166 RCC_ClkInitStruct.ClockType = RCC_CLOCKTYPE_HCLK|RCC_CLOCKTYPE_SYCLK
167 |RCC_CLOCKTYPE_PCLK1|RCC_CLOCKTYPE_PCLK2;
168 RCC_ClkInitStruct.SYSCLKSource = RCC_SYSCLKSOURCE_PLLCLK;
169 RCC_ClkInitStruct.AHBCLKDivider = RCC_SYSCLK_DIV2;
170 RCC_ClkInitStruct.APB1CLKDivider = RCC_HCLK_DIV2;
171 RCC_ClkInitStruct.APB2CLKDivider = RCC_HCLK_DIV1;
    
```

## PRODUCT DEVELOPMENT & ELECTRONIC CIRCUIT

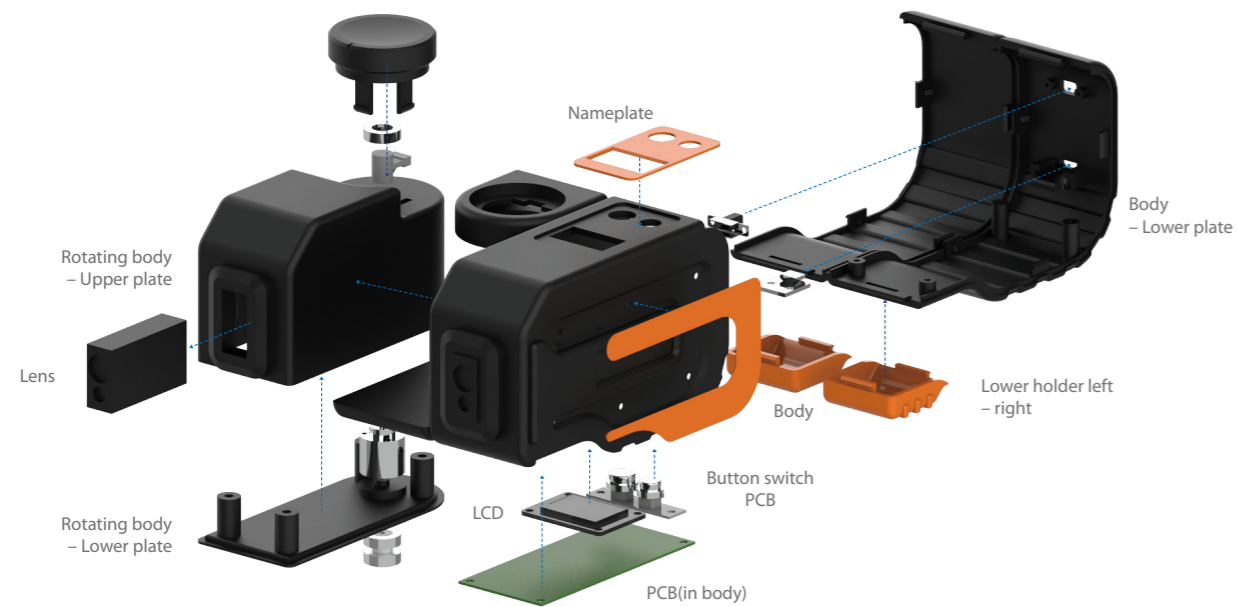
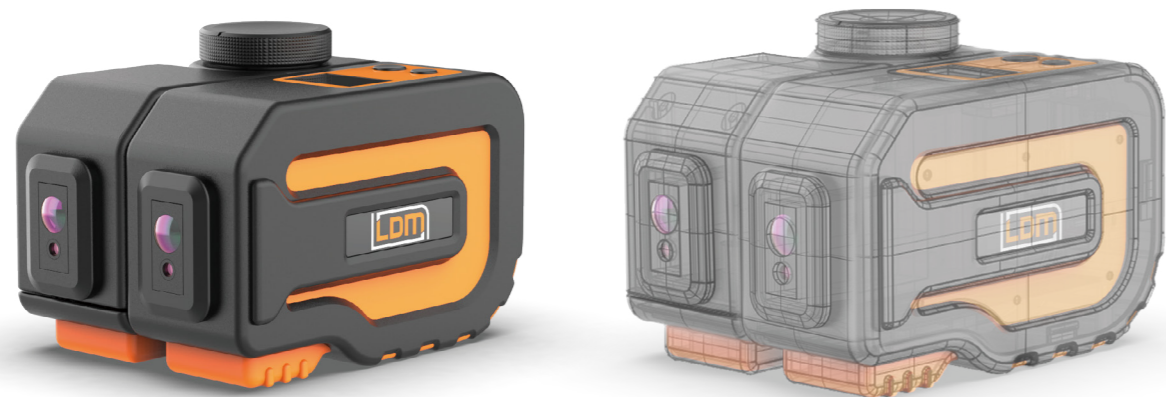
L.line develops high quality hardware products by working (developing circuit and artwork PCB) software for operating the hardware. Product development takes place in a one-step total solution process from design, mechanism design, circuit design, and production, thus, L.line responds flexibly and quickly to customer requirements.

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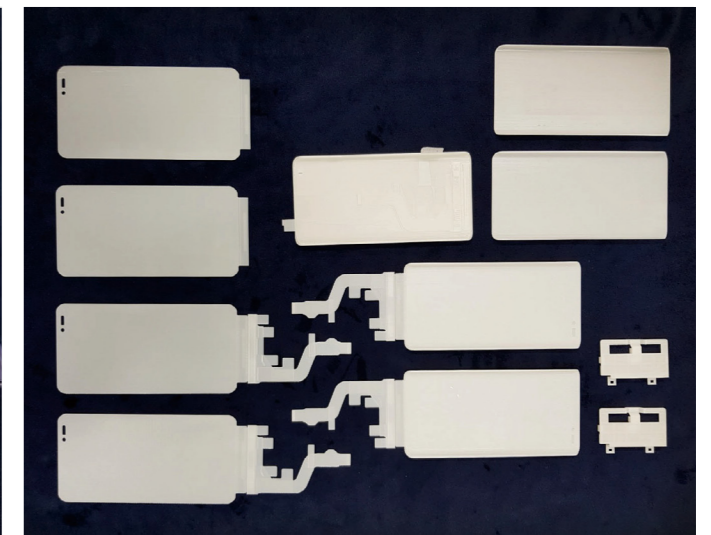


# 3 ENGINEERING / 3D PRINTING

Flow 01 Engineering



Flow 02 3D Printing



Flow 03 Mock-up



## 3D PRINTING FOR RAPID PROTOTYPING

It is produced by an experienced operator who has know-how in machine design and operation of device, to review the shape and assembly of the product before designing the mold, and to examine commercial value and marketability. Devices and materials will be selected to suit the purpose of using the actual product, and the final product will be provided to customers after going through post-processing.



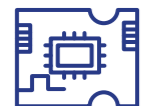


**L.LINE thinks of the invisible  
to make the visible.**



#### Design

L.line thinks with customers to meet the demands of users for convenience, such as planning ideas and concepts, and developing product and packaging designs.



#### Circuit development

R&D experts with high skills and know-how develop the circuit, PCB and firmware to enable the hardware to work, enhancing the degree of completeness.



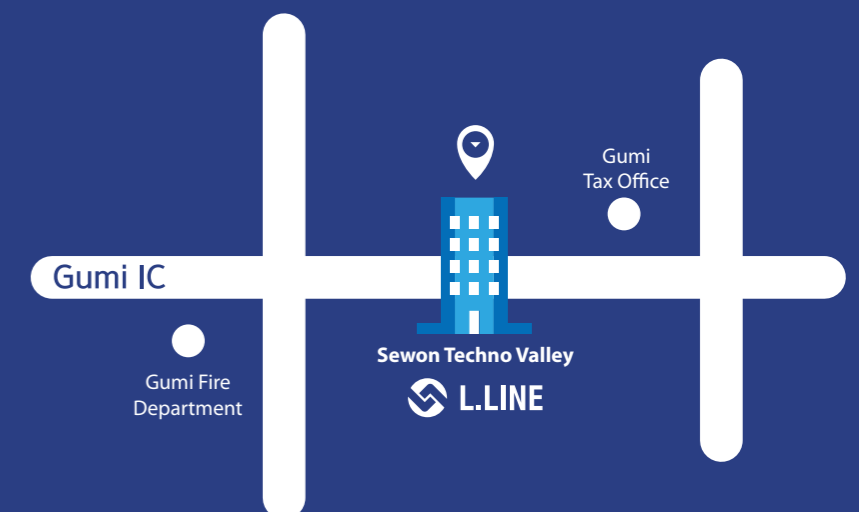
#### Design / printing output

Skilled operating experts in 3D printer are in charge of designing small to large equipments, 3D printing, post-treatment and post-processing, and provide high-quality products to meet customer satisfaction.



### How to find us

Address Unit 502 Sewon Techno Valley, 152 Suchuldae-ro, Gumi-si, Gyeongsangbuk-do  
Tel +82-54-476-0045  
Fax +82-54-715-1645  
E-mail [office@l-line.co.kr](mailto:office@l-line.co.kr)





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**L.LINE** | Unit 502 Sewon Techno Valley, 152 Suchuldae-ro, Gumi-si, Gyeongsangbuk-do  
**TEL** +82-54-476-0045 **FAX** +82-54-715-1645  
**Email** office@l-line.co.kr  
[www.L-LINE.co.kr](http://www.L-LINE.co.kr)