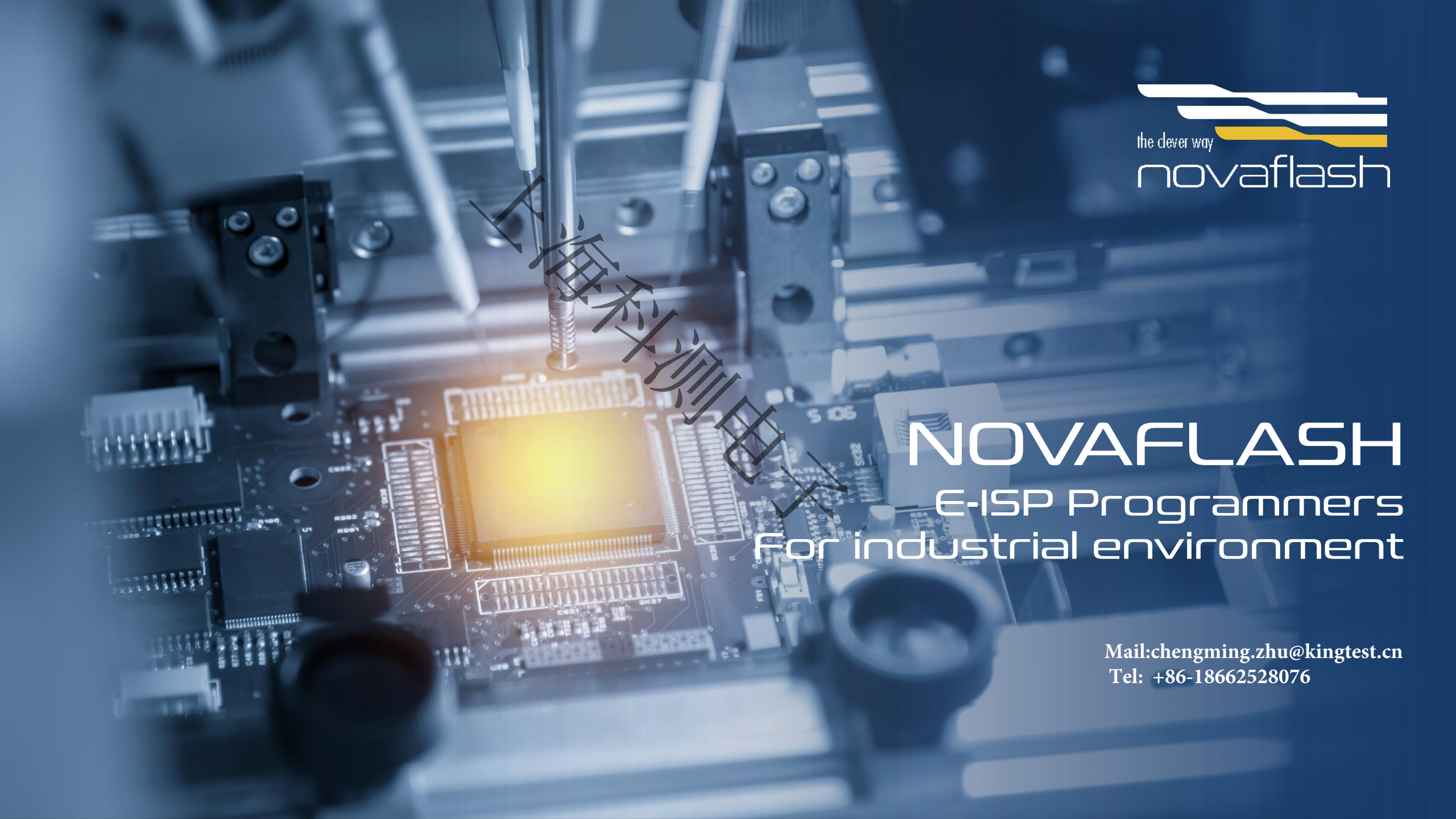

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NOVAFLASH

E-ISP Programmers
For industrial environment

Mail:chengming.zhu@kingtest.cn
Tel: +86-18662528076

Electronics boards production

Initial Product: PCB
(Printed Circuit Board)

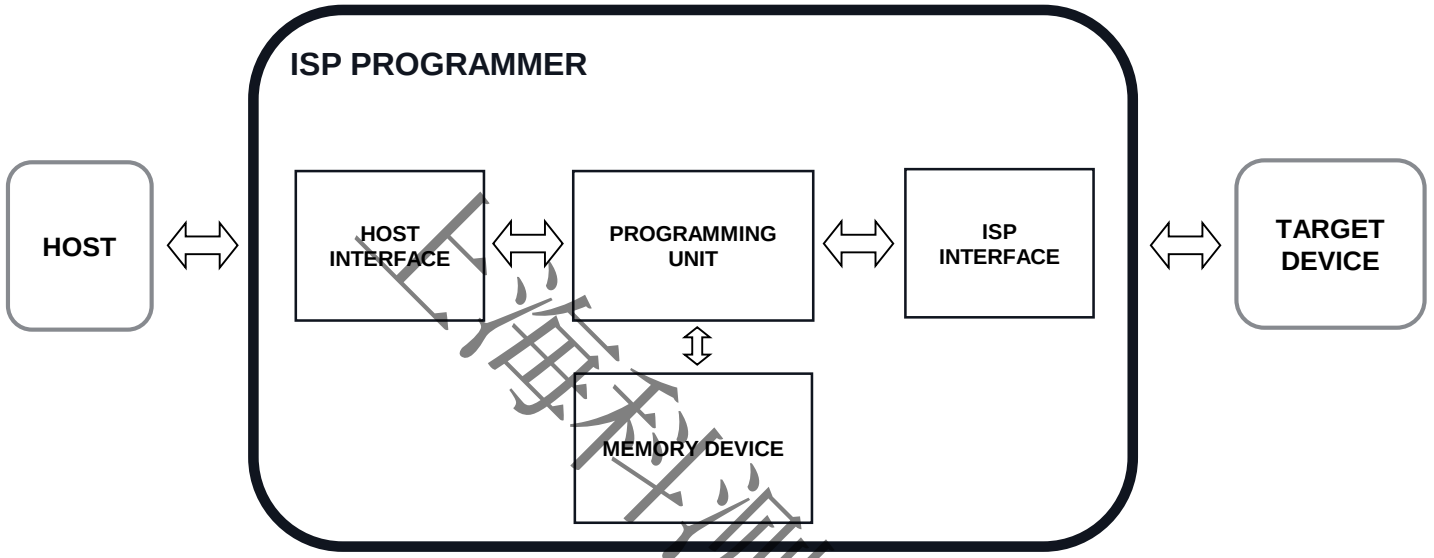
Components assembly (microchip
and other electronics devices)

ISP
(In-System Programming)

TEST
(Automatic Test Equipment)

Final Tested Product: PCBA
(Printed Circuit Board Assembly)

The problem: In-System Programming weaknesses



Large product size

Long Cables

Poor Signal integrity

Low programming Speed

Unique HW ISP Interface

No Interface Optimization

Always Compromises

Low programming speed

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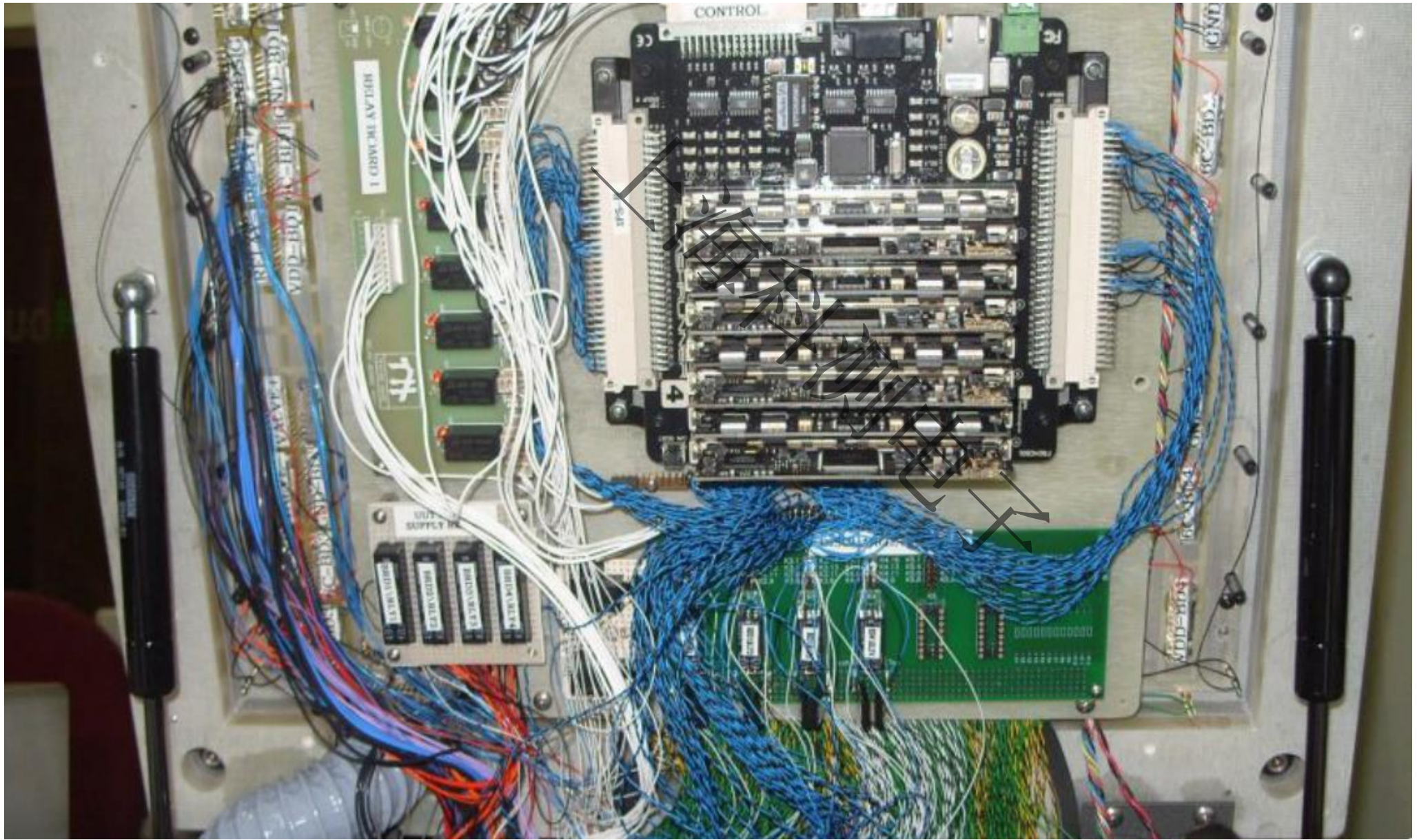
In-System Programming weaknesses



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The Revolution

E-ISP: Extended In-System Programming

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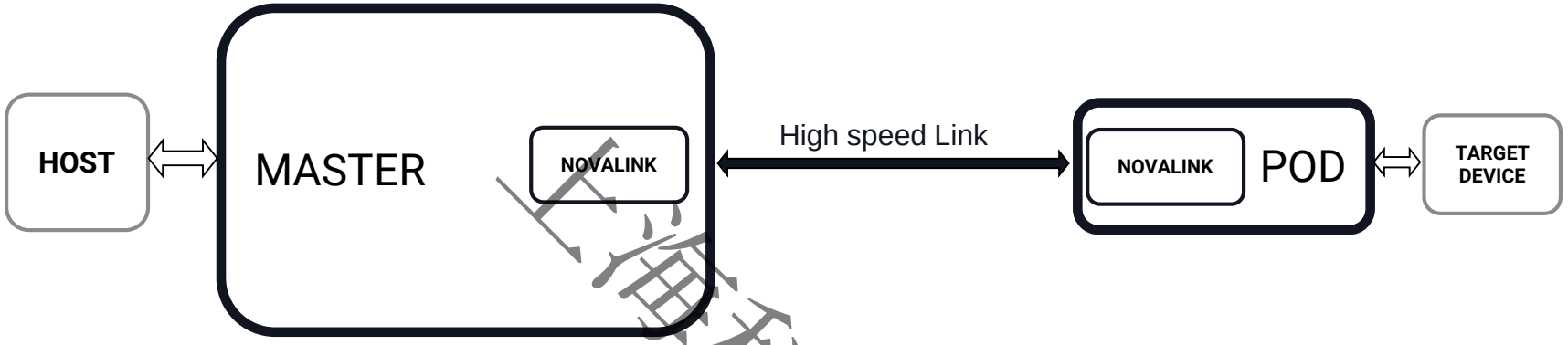
The Solution: Extended In-System Programming



POD Tiny size	Close to the Target	Short Cables	**High programming speed**
POD easy to develop	POD always up-to-date	ISP Interface optimized	**High programming speed**

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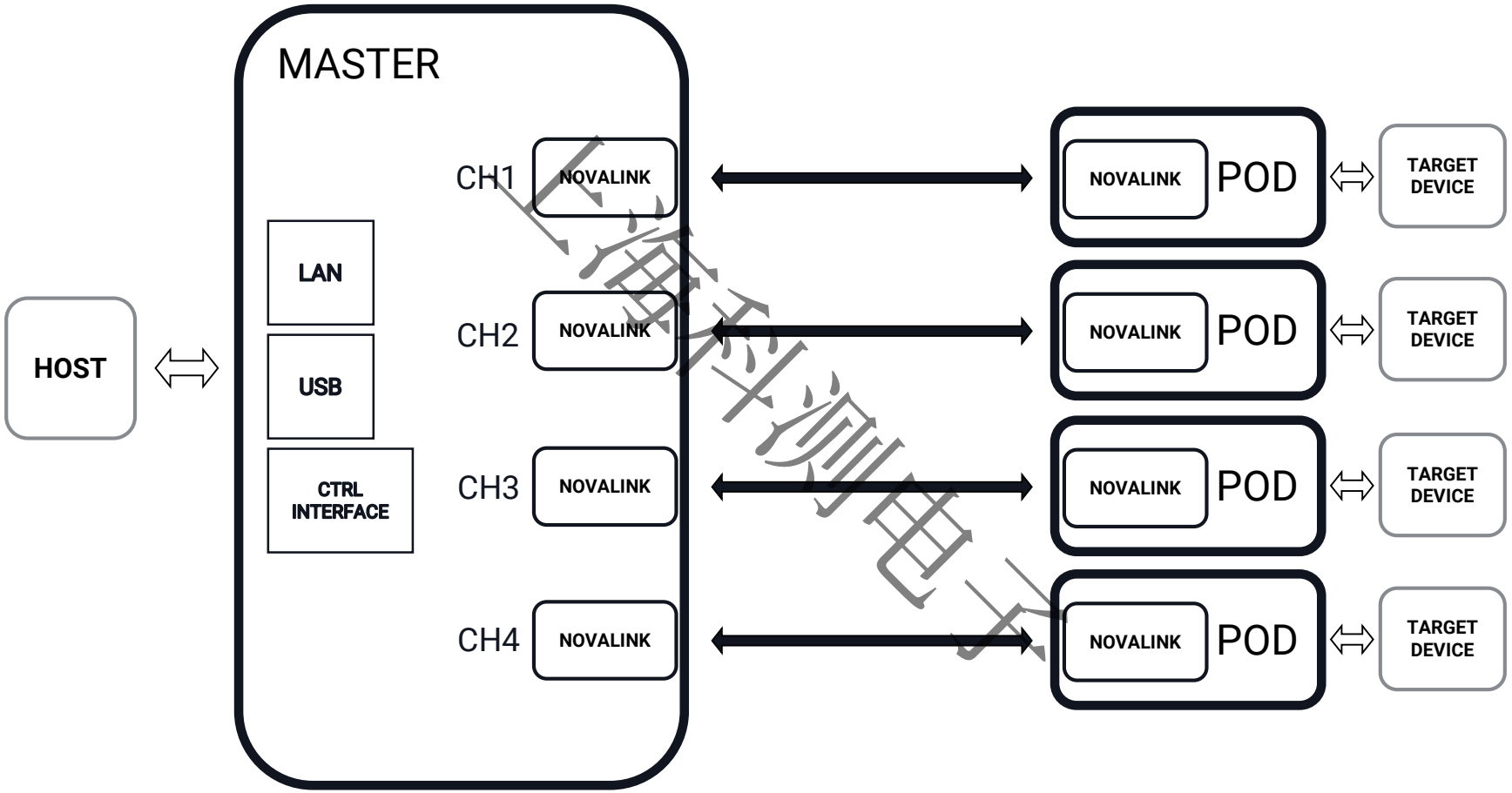
The Product



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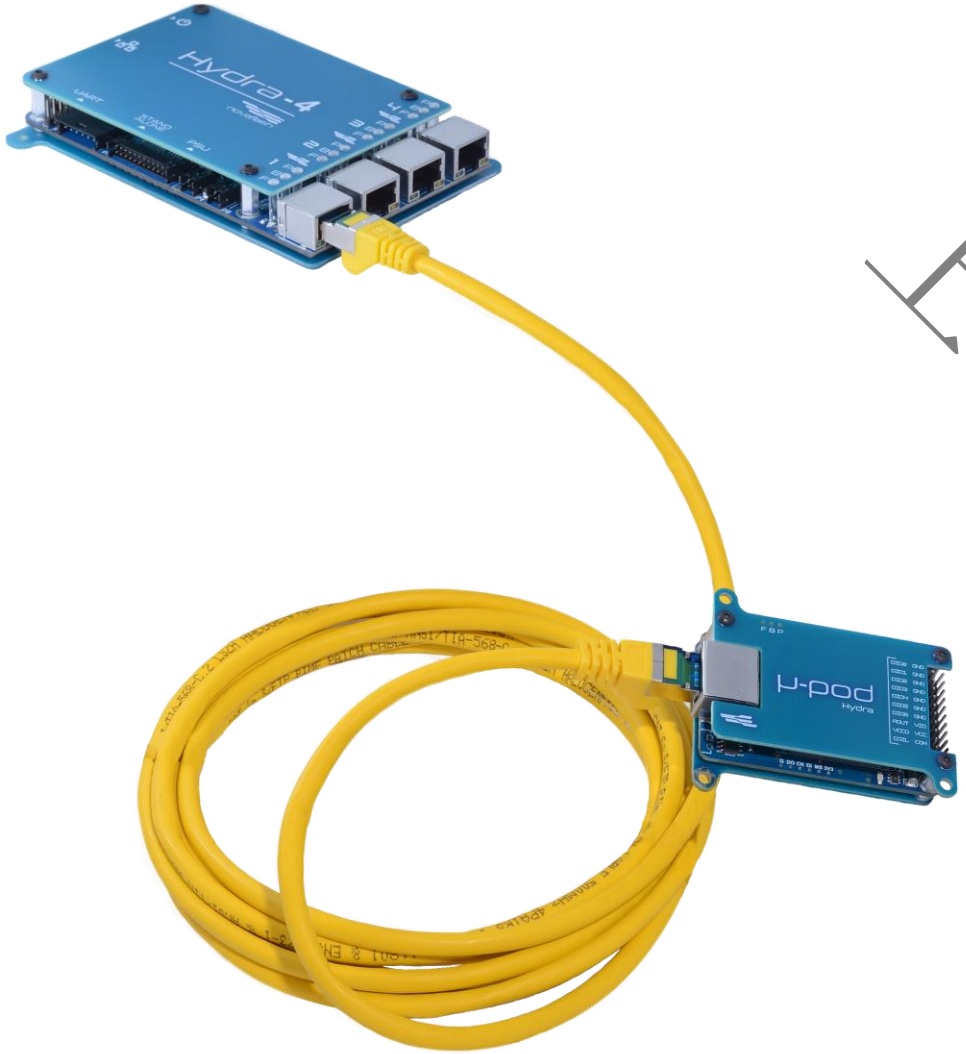
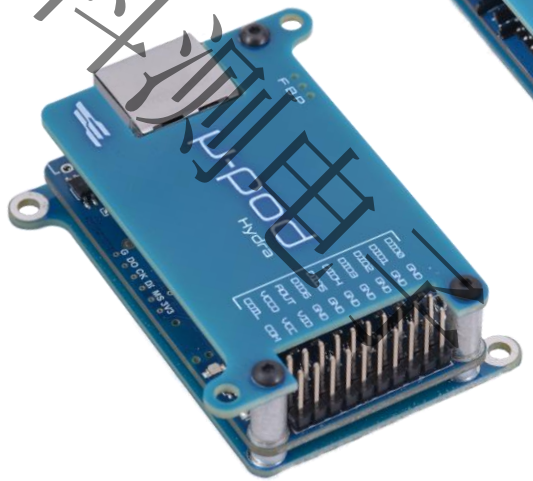
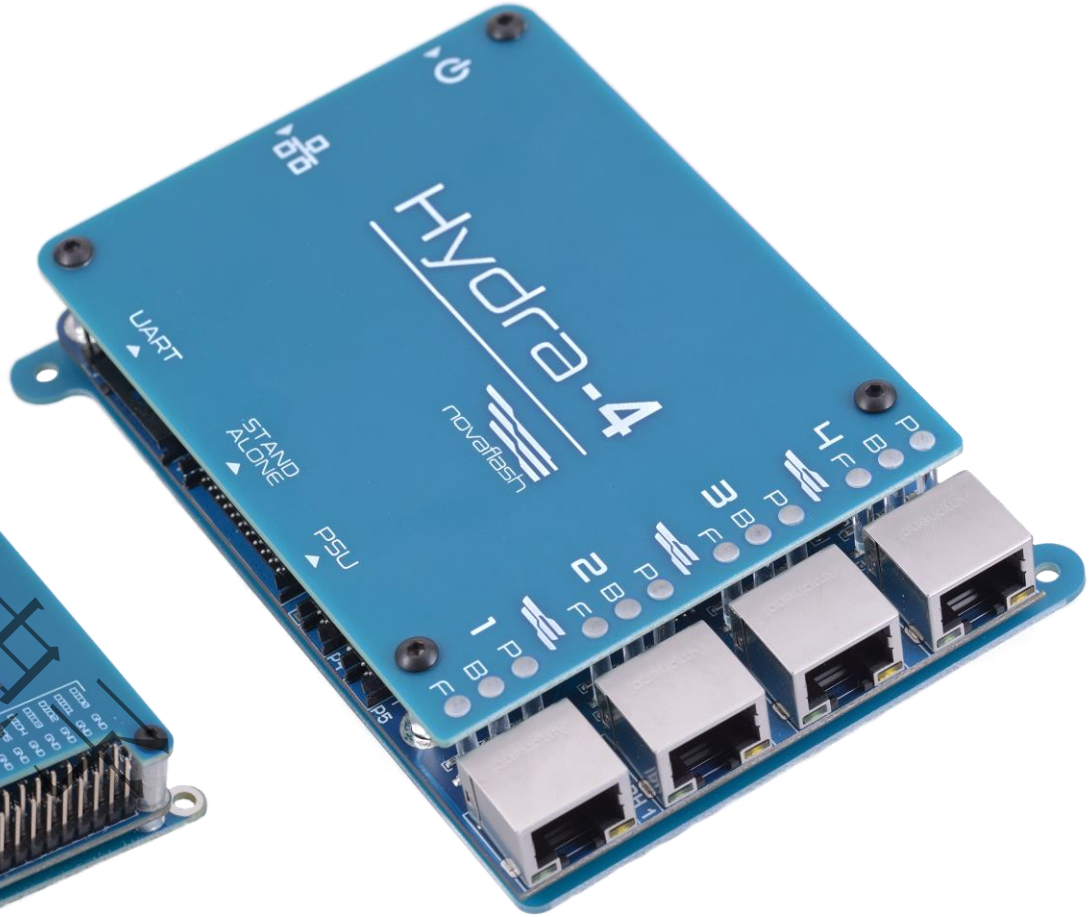
The solution: Extended In-System Programming







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The Product: Technical data

Master Unit

- Host Interface: 1Gbps LAN, USB, isolated RS232
- Standalone mode with isolated Automatic Test Equipment (ATE) interface
- Up to 4 indipendent and parallel channels
- Real Time clock for log tracking
- Dimensions: 125mm x 80mm x 19mm
- True universal platform (all POD types supported)
- User friendly host interface. Create a project has never been so easy

The Product: Technical data

Programming Header (POD)

- MCUs, Serial Memories, CPLD with JTAG, SPI, I2C, BDM, ICSP, SWD, DAP, UART, ISSP, SBW, etc. protocols
- 7 digital I/O, 1 analog/digital I/O
- Target supply voltage and current measurements
- Target I/O voltage measure
- Log system
- Novalink transfer rate (Master - POD): 1Gbps
- Up to 5 meters distance from Master unit with CAT6A cable with no data loss
- Directly supplied by Master from Novalink interface. No need of external power supply.
- Extremely tiny size: 65mm x 38mm x 18mm
- External Relay Control

- New Units type soon available:
  - eMMC and NAND support
  - 2 sequential channels per POD
  - I/O relay barrier
  - Flexray, LIN and CAN interface

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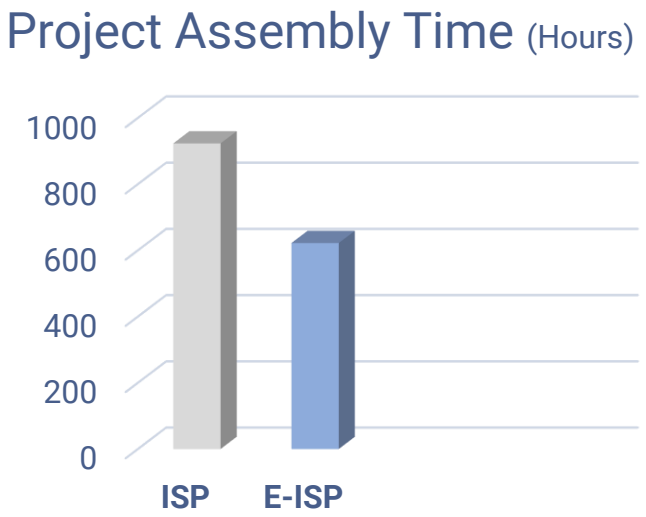
E-ISP: Customer Benefits

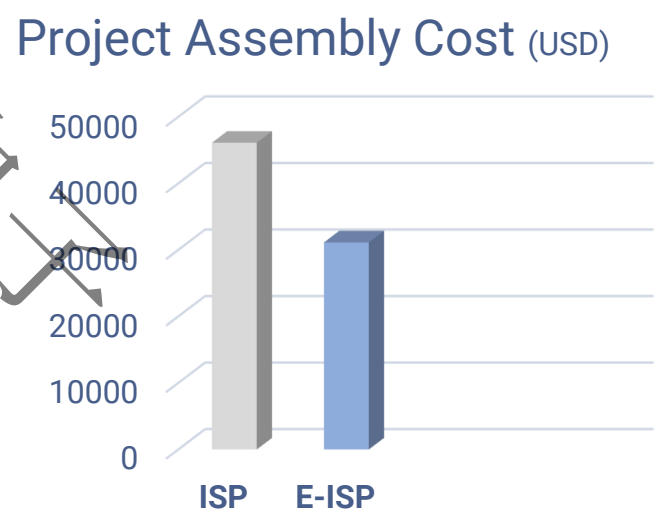
Example of board assembly project:

- 40,000 boards to be produced
- 1 target device on each board
- NXP (Freescale) MPC5748G (6MB Flash)
- Hourly production cost: 50 USD
- ISP programming time: 83 seconds
- E-ISP programming time: 56 seconds

15,000 USD Saved

On this single project





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Business Model

Products

- Programming Header (POD)
- New programming drivers
- Customer turnkey solution
- Master + (up to 4) POD

Sales Strategies

- Key customers directly managed
- Technical & Sales partners
- Re-sellers partners

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Business Model - Products line up

Products HW

- Single POD
- Master + 1 POD
- Master + 2 POD
- Master + 4 POD

Products SW and Services

- New programming drivers
- Customer turnkey solution
- License

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Business Model - License Policy

Programming Header

- 1 Serial Number
- 1 license included
- License linked to POD S/N
- Additional licenses on request

New driver development

- Customer turnkey solution FOC included in development
- License FOC for all HW bought in the same order

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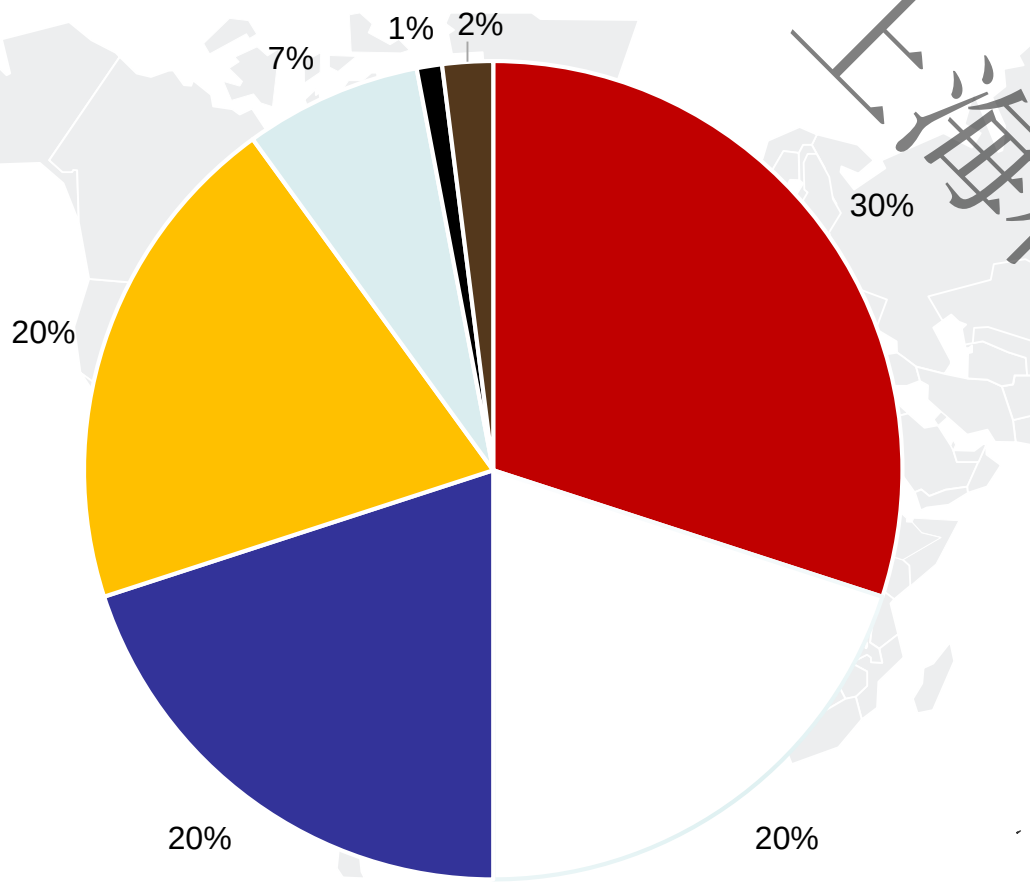
The Market

Potential Target Market



Potential Customers

- EMS
- OEM
- ODM
- ATE producers
- Fixture producers

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Commercial & technological partners

Strategic Partners

- Novaflash Asia Branch
- Silicon Manufacturers

Local Distributors & Customers

- Europe (Germany, Netherlands, Italy)
- Asia (China, Malaysia, Singapore, India, S. Korea)

Marketing

Relationship	• Silicon Manufacturers (Infineon, NXP, Intel …) • ATE Producers • Fixture Producers
Communication	• Web-site with newsletters • Brochures and flyers • LinkedIn
Product Show	• Demo Kits • Trial Units • Competitors Comparisons

Status & Next Steps

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Vision & Mission

Vision

Novaflash dream is to be present in every PCBA assembly line in the world, recognized as a **brand** for ISP programming solutions

Mission

Improving the quality of In-Circuit-Test systems by making the integration of programming features within ATE machinery an effective reality

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Where are we?

China address:

Operation Centure: Block2A-203,205. OET Park

No.69 Weixin Road,SIP Suzhou China

www.kingtest.cn

Tel:0512-62990639

18662528076

Website: **https://www.nova-flash.com**

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Milestone

21st January 2019: Novaflash became member of build! start-ups incubator

January 2019: Novaflash became member of Silicon Alps cluster

March 2019: KWF recognizes Novaflash as a company with a high level of innovation and of technology

Milestone

1st April 2019: Novaflash became member of High Tech Campus Villach

1st June 2019: Novaflash starts distribution of its products with the shipment of first trial units

June 2019: Novaflash opens its Asia Branch office in Seoul, Korea to follow Asia Pacific market

Thank you!

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for industrial environment