Frontline Cloud Services

**Boost the PCB CAM workflow dramatically
via a cloud-based SaaS solution**

Why Cloud?

With the rapid growth of software as a service (SaaS), electronics manufacturers are shifting to cloud-based solutions to transform their operations, improve efficiency and optimize production. SaaS subscription models are being developed with the highest level of security to offer cost-efficient, scalable solutions for electronics manufacturers that streamline workflows and increase business flexibility, to meet new production demands.

Frontline Cloud Services

Frontline Cloud Services is a pioneering new SaaS solution for PCB manufacturers that combines Frontline's proven PCB CAM and DFM technologies with the powerful calculation capabilities of cloud computing, so you can accelerate production, cut costs and simplify infrastructure management.

Frontline is the first in the industry to harness the virtually infinite capacity of the cloud to address emerging trends and increasing PCB design size and complexity: higher processing power and memory demands for 5G and LED, parallel processing limits on computer effectiveness, and growing demand for artificial intelligence to optimize DFM analysis.

Operating on the most secure cloud platform in the world, Frontline Cloud Services offer availability, reliability and scalability, enabling PCB manufacturers to work at their optimum. All this and dizzying CAM processing speeds empowering you to propel your business to new heights.

Ready for takeoff?

Cost Saving

Availability & Reliability

Continuous Software Updates

Scalability

Why Frontline Cloud?

Accelerate DFMs and analysis to meet productivity demand

- Frontline Cloud Services utilize smart, machine learning-driven data processing to accelerate design analysis by up to 90% to meet rising productivity demand. We ran 500 jobs at five different sites and found an average time gain of 60-90%. That's seriously fast!

Cost-saving

- Frontline Cloud Services help you eliminate the capital investment in hardware and fixed IT architecture associated with on-premise infrastructure and the experts that run it, bringing significant cost benefits.

Available and reliable

- Frontline Cloud Services run 24/7 with no downtime or failures so your system is never unavailable, offline or not operational.

Continuous software updates

- Frontline Cloud Services remove the need for regular software updates and maintenance, so your people can focus on more strategic tasks.
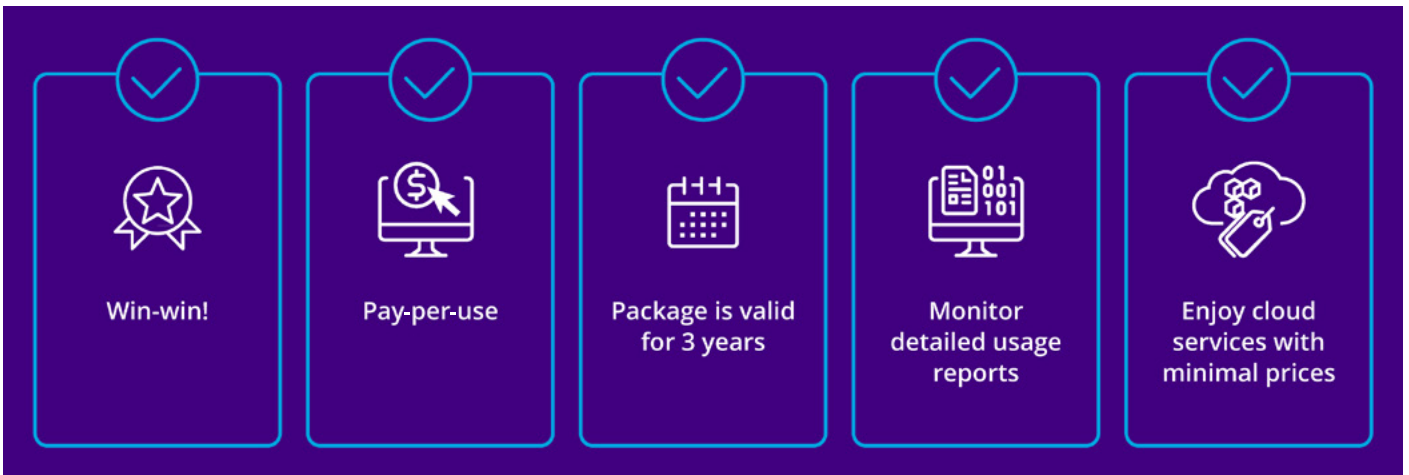
Fully scalable CAM computation resources

- With elastic cloud infrastructure, your business gets exactly the right amount of IT resources on demand and can scale up – or down – as your needs change.

Flexible payment and consumption

- Flexible payment and licensing models enable you to pay only for what you use for a three year period. Keep track of activity with detailed usage reports. It's a win-win!

KLA+

✓	✓	✓	✓	✓
Win-win!	**Pay-per-use**	**Package is valid for 3 years**	**Monitor detailed usage reports**	**Enjoy cloud services with minimal prices**

Complies with Cloud Security Standards

The security of your data is our number one priority. Frontline Cloud Services use the most secure cloud platform in the world. We safeguard your data with protective mechanisms at every step, using encryption and access control.

Secure access

- Every factory has a unique encryption master key.
- Internet access is restricted to a single port and URL.
- Credentials are required for cloud access.
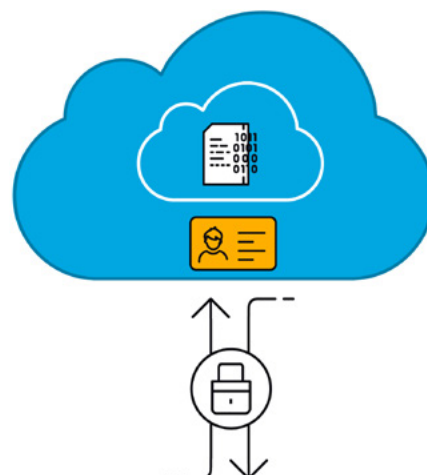- Factory cloud credentials are hidden from InCAM Pro users.

Job-level security

- Each job is encrypted via a uniquely generated key; data at rest is encrypted.
- Data is uploaded and downloaded via a random time-bound address.
- Data is decrypted in a restricted private access network (AWS), and is deleted from the cloud immediately after download.
- Secure channels: HTTPS for job data and the web.
- Secure socket for status notifications.

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DFMs and Analysis as a Service

Faster time-to-panel with ready-to-use secured PCB CAM and DFM cloud services

Frontline Cloud Services provide the fastest and most reliable way to run compute-intensive DFMs and analyses to give you the best productivity, speed and accuracy.

Benefits

- **Fast** – With fast operator onboarding and zero training or implementation required, you can run analyses in the background up to 90% faster than via on-premise IT infrastructure.

- **Efficient** – Checklists are automatically sent to the cloud based on predefined considerations, with no operator involvement.

- **Available and Reliable** – No need to worry about performance because the cloud's unlimited, multi-computer capabilities always deliver what you need.

- **Cost saving and scalable** – Enjoy financial flexibility with pay-per-use terms for cost optimization.

Customer Success

Dramatic time savings

Frontline Cloud Services enable up to 90% faster design analysis speeds, empowering customers to meet the growing demand for advanced technologies.

See why our customers are switching:

- Customer A (HDI) - From 75 hours to 30 minutes. 90% faster.

- Customer B (HDI) - From 24 hours to 2.5 hours. 90% faster.

- Customer C (Mini LED) - From nine hours to just 20 minutes. That's 96% faster!