

Integr8tor – the powerful catalyst for growth, productivity and profitability

Since it opened for business in 1999, the ICAPE Group has grown to be one of the world's leading trading companies for the global PCB industry. Now, over 2000 customers from more than 70 countries rely on ICAPE to supply them with high quality, quick-turn, cost-optimized PCBs. With a current turnover of €125 million, ICAPE delivers no less than 22 million boards every month, from simple standard technology to advanced HDI and RF products, handling order sizes that range from small prototype series to high volume production. This is thanks to ICAPE's 450-strong global workforce, which works together as a network of highly efficient, professional business teams distributed across three continents, as well as 25 carefully selected PCB manufacturing partners, most of whom are located in China.

In 2019, the company realized that its PCB quotation process represented a bottleneck for its future growth and business targets, and that this part of its service had to be automated, made more professional, and offer faster turnarounds. ICAPE tried various solutions, including in-house and off-the-shelf pre-CAM alternatives, but one solution stood head and shoulders above the rest: Ucamco's Integr8tor, the PCB industry's premier data entry and design analysis tool.

ICAPE's Chief Technical Officer Frédéric Defresne explains:

“ Our Service Offices in China and Mexico are staffed by highly qualified employees who do a great job of providing full quotation services to our sales teams around the world. Until last year, they were doing this using simple pre-CAM Gerber viewer tools, visually inspecting and analyzing our customers' incoming requests for quotes (RfQs) before manually generating the prices that our sales colleagues could send back to our customers. In 2019, we realized that these manual quotation procedures were approaching their limits: continued high growth in our sales and incoming RfQs meant that this was an area in which we had to make some fundamental changes.



We evaluated a number of new tools and techniques, and these included internal options such as using the Gerber viewer to conduct DfM tests. This worked well from a technical point of view but we found it less helpful for quotation. We also tried all the pre-CAM solutions, including Orbotech's InSight quotation tool but here too we were not entirely satisfied. We heard of Integr8tor through our ICAPE Italia Managing Director Renato Farruggio, who knew and trusted Ucamco, and Integr8tor has a very good reputation as a web-based intelligent workflow system, so we ran some initial trials on the system. They were so impressive that we

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decided to focus all of our subsequent development efforts on Integr8tor. Between March and October 2020, and with the very welcome help of Ucamco’s Denis Morin, we ran in-depth trials on the system and tailored it for integration into our processes. One of the key technical advantages that we quickly learned to trust is Integr8tor’s data accuracy. Integr8tor eliminates human error and tells us everything we need to know to generate quotes. It also tells us if there are issues with the customer’s design, where there are conflicts or missing data, and even when such problems mean that decisions cannot be made. This is absolutely invaluable because we know what we can and cannot do, and we know the real costs, in a fraction of the time it would have taken us to calculate them using our previous procedures. The trials showed us that we could rely completely on Integr8tor for perfect design-rule, DfM and capability checks, making it very easy for us to decide that all of our RfQs should go through Integr8tor. Indeed, it now handles 100% of all our RfQs – that’s over 2500 jobs every month and growing.

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One of our key needs as a service company was to make the process more professional: we wanted to add value to our offering by providing our clients, where appropriate, with reports on their designs. We discovered that through its QED (Quotation Engineering Data) reports, Integr8tor could quickly identify issues, potential problems and difficulties with our customers’ designs, or areas where they could be modified quickly and easily for more cost-effective manufacture. Before Integr8tor, we would provide our clients with a price offer and a simple report with basic technical information such as IPC class, layer count, details on finish, color, that sort of thing. Now, Integr8tor creates a detailed QED report for every RfQ, providing accurate in-depth data to our internal engineering team, which uses it to generate tooling schedules for our manufacturing partners. Where appropriate and necessary, and particularly in the case of more complex designs, simplified versions of these reports are also provided to our customers as part of our quotation service.

Automation

Currently, requests for quotes are either input by ICAPE’s sales and customer service teams, via Integr8tor’s Cockpit interface, or our customers can do this via the eShop, which is connected to Integr8tor. In the first case, all necessary information is gathered via Cockpit and results are used to manually create a quote that the sales teams can access. For eShop requests, the web server automatically gathers all the data necessary to create a QED report and quote. A natural next step for us is to simplify the quotation process further by automatically importing Integr8tor’s QED data into our SAP system.

Accuracy and speed

Thanks to Integr8tor, our quoting process is now faster and more accurate, and it is very likely that this has contributed to improvements in our conversion rate of RfQs to actual orders. We are in a highly competitive business where time is money, and the quicker we can give customers their quotes, or revert to them with proposals for improvements to their designs, the more likely they are to order from us.



Easy to use

One of the things we liked from the start is that Integr8tor is very easy to use and operators can start using it very quickly. After just 3 days of training, they can understand the system and in a week they can be up and running with it. It's so simple that our sales teams are now able to produce quotes for our customers. Before Integr8tor, our engineers had to run the Gerber data through pre-CAM for a quotation analysis. It was a lengthy manual process. Now, thanks to Integr8tor, our engineers are free to focus on jobs that need their specific skill sets, such as tooling up for our manufacturing partners, or dealing with the issues that Integr8tor flags up on incoming designs. With Integr8tor, we have really been able to optimize the process also in terms of human resources.

Global access to web-based system

As well as quotation services for our sales teams, our service provision includes engineering and management support for our manufacturing partners. Although we have some in Taiwan, Vietnam and Korea, most are based in China, so a few years ago we moved our principal Services Office from Europe to China. Today, its team comprises 230 highly qualified engineers and technicians. The quotation team supports our European and Asian sales teams throughout their working hours. Our European sales teams account for roughly 65% of our sales and cover all countries from Great Britain to Russia, as well as North Africa. The Asian sales teams account for 15-20% of our sales, as do our Americas sales teams, who are supported by our second quotation team which is based in Mexico. Having the two service

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provision teams in different time zones ensures 24-hour coverage for quotation generation and safeguards continuity in the services we provide internally.

Here too, Integr8tor offers significant advantages to us as a global company. As Integr8tor is web-based and can be accessed through our company-wide server, it can be used easily by our teams

wherever they are. It also means that our Service Offices can “share” the system between them and this helps them to work together, improving communications between our employees, with our manufacturing partners and with our clients, worldwide.

In the few months since we have started working with Integr8tor, we have seen significant improvements in many aspects of our business, from quotation to after sales. Thanks to Integr8tor, our quotation service is more professional, faster and more accurate, making it a powerful catalyst for ICAPE’s increased growth, productivity and profitability into the future. ”



About Ucamco

Ucamco (former Barco ETS) is the market leader in PCB CAM and Pre-CAM Software, Laser Photoplotters and Direct Imaging Systems. We have more than 35 years continuous experience developing and supporting leading-edge front-end tooling solutions for the global PCB industry. We help fabricators world-wide raise yields, increase factory productivity, and cut enterprise risks and costs.



For more information on Integr8tor:

<https://www.ucamco.com/en/software/precam-engineering/integr8tor>

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About ICAPE Group

Founded in 1999, ICAPE Group has 450 employees and a solid network of 25 PCB manufacturing partners in Asia. A major player in the global electronics industry, ICAPE offers expertise in providing customer-oriented services to the global PCB sector.



For more information on ICAPE's PCB services:

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