

#### Industrial PCs applied in

- / Logistics and Warehouse
- / Heavy Duty
- / Fleet Management
- / Stationary and Automation

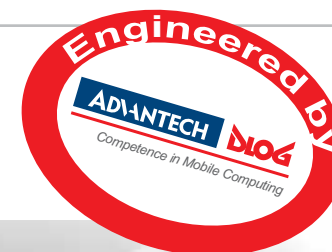


## Technology | Products | Solutions



## Advantech-DLoG

Advantech-DLoG represents the merger of two global market leaders each bringing expert knowledge and a history of success in delivering trusted and reliable industrial computing and in-vehicle applications for use in the most extreme environments.



Along with expert design, engineering, and high quality products, Advantech-DLoG provides customization services, pre- and post- sales support, and an extensive network operating in 18 countries and 39 major cities.



Advantech-DLoG leverages the strategic competence of DLoG's engineering and design talents from its German headquarters paired with Taiwan based Engineering, fast time-to-market and cost efficiency. Combined with Advantech's extensive support, sales, and marketing network, the fully integrated company is better than the sum of its parts.



**"Committed for longterm growth through leadership in target-markets."**

K C Liu, CEO and founder Advantech

Combining the leadership, talent and innovation of the two organizations into one, the new Advantech-DLoG, one of the four strategic vertical focuses of Advantech Co., Ltd, is positioned to deliver in-vehicle products and services to demanding markets such as fleet management, in-vehicle surveillance, construction, warehousing, mining, heavy duty, ports, agriculture, and intra-logistic applications.





## Advantech-DLoG worldwide

Advantech-DLoG combines local support with a worldwide reach. With offices around the world, it is able to provide personalized support, while taking advantage of its global presence to increase efficiency and reduce time-to-market.

End-to-end support minimizes risk, increases efficiency, and offers continuity from Advantech-DLoG's expert team of engineering, sales and project management professionals.



**“Combining Forces –  
Cultural, ideological  
and intellectual.”**

Hans-Peter Nüdling, CEO DLoG GmbH



Two headquarters, one in Germany and the other in Taiwan, allows Advantech-DLoG to operate with sharp focus by utilizing its core competencies wherever they are located. The company offers comprehensive and complete consulting services, beginning with pre-planning and project kickoff, continuing with professional rollout and implementation, and following up with post operational support to monitor success and fine-tune.



Advantech-DLoG can assist with a variety of project management tasks, such as completing site surveys, building WLAN configurations, or providing infrastructure analysis and recommendations. These services ensure the right results, the right configuration, and the right products for your business. Advantech-DLoG's world-wide focus brings unprecedented innovations and maturity to the market.







## Intralogistics / Warehousing / Ports

Intralogistics and warehouse applications have a single goal: error-free stock management. Knowing item location, quantities on-hand, stock-outs, re-order triggers, space and scheduling, how to minimize movement and manage assets in a harsh, high pressure environment are only some of the challenges faced.



**“We are the prime-brand in Warehousing and Ports.”**

Andreas Bibinger, Key Account Manager



Fast, correct, real-time data capture and access are key issues. Advantech-DLoG Vehicle Mount Computers (VMTs) bring advanced computing to extreme environments, coping with dust, shock, vibration, humidity, impact, physical abuse, and extreme temperatures. From mechanical engineering to radio antenna design, from rugged to extreme, Advantech-DLoG's portfolio of VMTs offers the best-of-breed, in-vehicle computing solutions.

On forklifts or cranes, managing pallets or containers, in freezer storage or bright sunlight, in warehouse or shipyard, Advantech-DLoG provides real-time, error-free intra-logistic solutions to inventory management. Success in managing the critical business of intra-logistics, gives companies a competitive edge, and Advantech-DLoG helps companies build a cost-effective infrastructure to support these processes and ensure optimal operations.







## Heavy Duty

Heavy Duty equipment such as earth movers, agricultural vehicles, dumpers, excavators, crawlers, cranes, quarry, mining and other vehicles operate business critical applications, in situations where downtime spells disaster.



Operating in temperature extremes from Egypt to Finland, these vehicles require computing solutions that monitor, analyze, predict and report information about vehicle, driver, components, location, and more.



**“22g, sun, ice, dust – we develop products that can withstand tough impacts.”**

Thorsten Kraus, Director  
Strategic Product Management / Marketing

Applications as diverse as truck queuing systems, tire-pressure management, shovel hang time, vehicle oil pre-heating, load scheduling, and collision avoidance can mean the difference between continuous operation and meltdown. A single tire on a heavy duty vehicle might have a replacement cost of thousands of USD and a backorder lead-time of several months, for instance. Advantech-DLoG ultra-rugged VMTs operate where needed—robustly and reliably—from cranes in Abu Dhabi, to dumpers in Alaska.



Our products monitor health conditions of vehicle components through CAN-Bus attachments; track navigation and location; prevent collision and monitor driver behavior—in real-time. Advantech-DLoG VMTs improve efficiency, safety and productivity. They are cost-effective, and relied on by companies around the globe.







## Fleet Management

Advantech-DLoG in-vehicle computing and fleet management solutions translate real-time data about vehicles, cargo, deliveries and workers into dynamic, understandable displays that help increase productivity and lower operating costs. Designed from the ground up to handle extreme environments, these robust platforms facilitate the accurate monitoring of driver and vehicle performance to reduce costs and increase productivity.



**“True vehicle degree products ensure committed quality and advanced technology! Nothing else but vehicle application & in-vehicle environment!”**

Van Lin, Manager of Advantech DLoG IMC team



Upgrade from paper-based processes and track freight automatically through-out the delivery process. A full range of products, at all levels of ruggedization, can help you monitor everything you want to control, even down to individual tire pressures. Streamline load planning, routing, and scheduling to eliminate inefficiency and costly mis-loads. Relay routing decisions in real-time to increase productivity.



Keep vehicles road-worthy while making better-informed maintenance decisions that optimize performance, reducing both downtime and spare parts inventory. Ideal for any fleet, whether it is composed of trucks, vans, buses, or off-road vehicles; Advantech-DLoG specializes on, and has extensive experience in, industrial fleet management applications.





## Stationary applications

Point-of-Information systems are used to lead people through the processes of manufacturing, assembly line production, process flow, logistics and factory information. They provide the human interface to the machine environment.



The manufacturing environment is often dirty, noisy, subject to vibration, temperature fluctuation, and other harsh conditions.



**“Install and be productive right away – Your system will be stable 24x7.”**

Richard Rieger, Key Account Manager

Ultra-rugged Advantech-DLoG industrial PCs are well suited for use in these stationary applications. They provide reliable, modular design, with digital I/O for connectivity; WLAN, eliminating an expensive wired infrastructure and permitting easy setup and equipment relocation; and information displays providing 3D drawings, work in progress, production line counting, machine stats, and pre-emptive failure information.



Advantech-DLoG designs equipment with galvanically isolated parts, sealed units, and advanced communication features (Bluetooth, Ethernet, WLAN, RFID), to meet the demand of these heat, dust and shock prone industrial environments. Terminals may be mounted to machinery for job control information, production line flow analysis, counting, and process control and so on, increasing safety, efficiency, output, and uptime.





## Advantech-DLoG products

Industrial PCs and vehicle mount terminals (VMT), developed in house from the scratch for several applications: from stationary POS/POI to extremely demanding applications:

360° IP protection, IP 65 / IP 66 / IP67, design and mounting for reliable shock & vibration protection up to 5M3, i.e. up to 10.5g effective continuous impact, 3 x times higher than the Military standard requires (MIL810F).



**UTC-520**

### UTC-520

- Fanless design
- Atom CPU
- CF or SATA HDD mass storage
- 21,5" LED Display with touch screen
- Up to 2GB RAM
- 2 x RJ45 Gigabit Ethernet
- Integrated speaker



### ITC 7

- Rugged industrial PC, 360° IP protection
- 15" XGA display
- Intel Celeron CPU
- DLoG specific resistive touch screen
- Service USB
- Shock&Vibration 5M1



**ITC 7**



**IPC 7**

### IPC 7

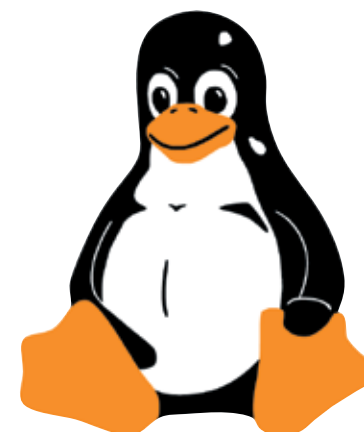
- Fully rugged industrial PC, 360° IP protection
- 15" XGA display
- Intel Celeron and DualCore CPU
- Diversity WLAN
- DLoG specific resistive touch screen and capacitive touch screen
- 2 x PCI
- Shock&Vibration 5M3



**MPC 6**

### MPC 6

- Fully rugged vehicle mount terminal, 360° IP protection
- 10.4" and 12.1", SVGA and XGA
- Intel Celeron and DualCore CPU
- Diversity WLAN
- DLoG specific resistive touch screen
- Sunlight readable solution
- 1 x PCI
- Shock&Vibration 5M3



### MTC 6

- Fully rugged vehicle mount terminal, 360° IP protection
- 10.4" SVGA and 12.1" XGA
- Intel ATOM CPU
- Diversity WLAN
- DLoG specific resistive touch screen
- Sunlight readable solution
- CFast mass storage, customer replaceable
- Service USB
- Shock&Vibration 5M3



**MTC 6**







## Advantech-DLoG products

Best of breed for vehicle mounted terminals: From perfectly adoptable in-vehicle fleet management terminals to individually configurable VMTs for challenging off-road applications.

All our products are developed from our experienced engineers: HW and SW, Mechanics and Mountings – all terminals are application oriented designed.



### XMT 5/7

- Fully rugged vehicle mount terminal, 360° IP protection
- 7" QVGA
- PXA processor
- Diversity WLAN
- GPS, GPRS/HSDPA
- DLoG specific resistive touch screen
- Sunlight readable solution
- Service USB
- Shock&Vibration 5M3



**XMT 5/7**



**XMT 5/10**

### XMT 5/10

- Fully rugged vehicle mount terminal, 360° IP protection
- 10.4" SVGA
- PXA processor
- Diversity WLAN
- GPS, GPRS/HSDPA
- DLoG specific resistive touch screen
- Sunlight readable solution
- CAN 2.0B with J1939 ready
- Shock&Vibration 5M3



**TREK-743**

### TREK-743

- 7" Mobile data terminal, QVGA
- Automotive grade operating temperature (-20 to 60°C)
- DC power input for in-vehicle application
- CAN 2.0B with J1939 protocol (available)
- GPS/WLAN/GPRS/HSDPA
- Shock&Vibration MIL 810F



### TREK-510 & TREK-303L

- ARM-based in-vehicle computing box
- Automotive grade operating temperature (-30 to 75°C)
- DC power input for in-vehicle application
- GPS (AGPS)/WLAN/GPRS/HSDPA/CDMA
- CAN 2.0B with J1939 protocol (available)
- Shock&Vibration MIL 810F
- TREK-303L Display: 7" with 480 x 234 resolution

**TREK-510 & TREK-303L**

### TREK-550 & TREK-303H

- Intel Atom based in-vehicle computing & communication solution
- Automotive grade operating temperature (-30 to 70°C / -22° to 158°F)
- DC power input for in-vehicle application
- 50 channel GPS with AGPS and dead reckoning
- Rich communication features WLAN/GPRS/HSDPA/CDMA
- CAN 2.0B with J1939 protocol & J1708 port
- Vehicle degree shock&vibration SAE J1455 & MIL-STD 810F
- Advance security & safety features: Analog AV-input ports (real-time rear view monitor application) & built-in G sensor (auto SOS)
- TREK-303H Display: 7" with 800 x 480 resolution



**TREK-550 & TREK-303H**



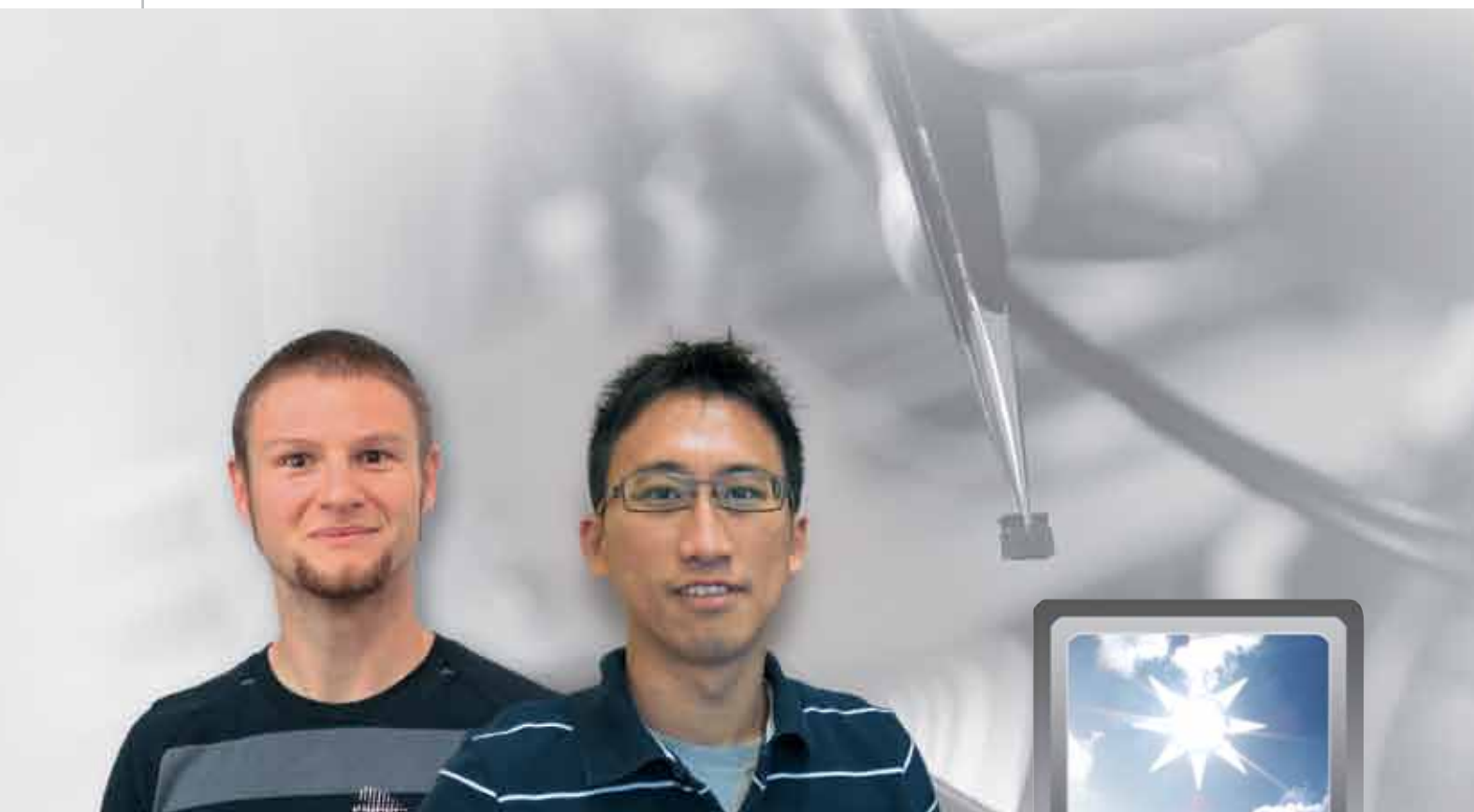


## Advantech-DLoG technology

In typical areas of application, our industrial grade computers are subject to permanently harsh environmental conditions and must operate reliably and fail-safe even under extreme conditions.



Warehouse and harbor logistics, industrial manufacturing, large machinery, as well as construction and agricultural sectors place particularly high demands on the quality of terminal solutions.



**“Leading in Technology means leading the market.”** Chijen Li & Stefan Behringer, Hardware Engineers



### Sunlight-readable

Advantech-DLoG manufactures the ultimate solution on the market with displays that are mechanically robust and readable in direct sunlight; in bright, snowy environments; in reflective environments; and indoors. They perform superlatively; ideal for situations like forklifts moving between indoors and outdoors.

### Touchscreen

We work together with touchscreen manufacturers to create a unique design, specific to each product family, and extremely robust against mechanical impact and abrasion. Surviving a steel ball drop test, our durable touchscreens are integrated into the unit design offering complete IP65/66/67 protection.

### Mechanical Engineering

Advantech-DLoG has a dedicated and experienced engineering department. They know the applications and requirements and make sure our systems exceed mechanical specification requirements, from IC, to capacitor, to resistor and up. Proper engineering ensures safety and reliability.

### Power

Transient power in vehicles can cause fatal problems for electronics. Advantech-DLoG designs power supplies that can cope with jump starts, cold cranks, load dumps, reverse battery connections, power standby, noise and other types of “dirty” power. Our robust design is certified by industry standards: ISO 7637-2, SAE J1113, SAE J 1455, SAE J1119, and emark.







## Advantech-DLoG technology

We meet quality demands through our many years of experience and excellent know-how in electrical, electronic and mechanical development - from computer boards to power supply units, touch screens and mounting brackets.



**“We do not stop investing in Research for newest technologies.”**

Brian Hsieh, Product Manager



### Operating temperature

Advantech-DLoG terminals are designed to handle extreme operating temperatures, from  $-30^{\circ}\text{C}$  in the deep freeze, to  $+60^{\circ}\text{C}$  in the sunbaked vehicle cab. And they handle temperature shock, a condition caused by constant moving from one extreme to another, as in forklift operation from freezer to dock.

### Mounting

Weak mounts can be the weak link in a product design. Our terminals include the mounting solution in the certification testing. We publish a catalog of over 70 pages of mounting solutions, from mixed, to clamps, to drilled, to standard. And we can mount the product without leaving a mark – perfect for vehicle leases.

### CFast

CFast, the successor of CF card technology, uses SATA connectors for faster I/O, higher capacities, and more stable connections. Focused on SLC technology, our industrial components offer longer data retention, faster read/writes, wider temperature ranges, and better longevity. As the first-to-market, Advantech-DLoG knows CFast!

### WLAN/WWAN

Starting with modules from qualified vendors, our engineers integrate the technologies into our finished products. We build based on individual customer need, and with our knowledge of antenna design, can offer integrated or remote antennas, with multiband capability and spatial diversity, optimized for perfect transmission.





## Consulting

Warehouses require careful planning when adopting WLAN technologies due to high racks, building frames, and obstructed areas. Planning access points, wireless cells, and channel selection is part of the consulting services Advantech-DLoG offers.



Our dedicated WLAN experts begin the process with a site survey, and carry out complete project management including access point adjustment, antenna placement, security, troubleshooting, and terminal integration. Advantech-DLoG's consulting services support technology, business requirements and customer needs.



**"On-site consulting is part of our philosophy."**

Daniel Tsai, Application Engineer & Juergen Philipps, Product Solution Specialist

We provide end-to-end support of new and existing infrastructure development, including interoperability with legacy systems, with the goal of providing smooth integration while maintaining absolute business continuity.

Starting with the right equipment is only one aspect of the project. Expert knowledge of WLAN technology is critical, as is following through from start to finish of the project. Our experts can tune TX/RX settings, roaming thresholds, and other values based on environment and application needs. They can survey existing infrastructures with tools and spectrum analyzers to give the customer comprehensive recommendations.

Advantech-DLoG strives to make continuous improvements to all facets of WLAN operation by testing the latest technology in radios, drivers and antennas to optimize transmissions, roaming behavior, and ensure the best in communications.



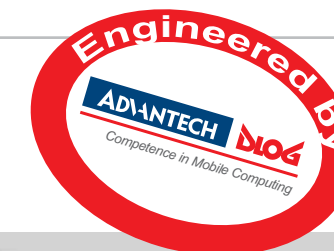




## Advantech-DLoG: Service worldwide

Advantech-DLoG competence centers operate around the world providing comprehensive services to our customers. With local service and a global presence we are able to take advantage of economies of scale while at the same time providing individualized services.

Our service strategy includes: design-in and pre-sales support; sales support, marketing and training; technical services; and repair services. Technical services are critical for customer success. We know our products, the market, and are able to offer customer specific consulting to determine specific infrastructure needs.



**“Responsiveness and Quality in Service as a major strategy within our organization.”**

Siegfried Weber, Head of Technical Services

We have global technical competence centers for mobile computing, and can integrate and certify third party components for use in our products, as well as provide software and drivers updates. During the design-in and pre-sales service phase, we help the customer make the right choices based on their business requirements. After hardware and software are chosen, we assist with defining configuration and software settings. When everyone is satisfied we “freeze” the design. This ensures consistency whether we are producing 1 or 1,000 units. And we offer the customer a single point of contact for technical and project management. The goal of sales and marketing support is delivering consistently outstanding service. “DLoG University”, in conjunction with partner certifications, ensures our channel and vertical account managers are directly trained to deliver the best customer service possible, from contract terms, to correct configurations.

Advantech-DLoG also has a demo/loan program whereby potential customers can easily sign up for an evaluation system, to see just how easy to use our products are.



Repair handling is another facet of our service strategy. Although Advantech-DLoG products enjoy a very low return rate, having a solid repair program in place reduces customer risk. We begin with rapid turn-around: 5 working days. We operate a global service and repair center network, with the ability to set up local spare parts depots based on customer need. Our repair services have been certified by ISO and TÜV standards.



## Customer specific modifications

Advantech-DLoG provides professional ODM services. With our experience in the industry, our processes and ability to adapt and translate customer need into delivered product is very mature.

The process begins by selecting the right system from our product roadmap. After discussion with the customer we can tailor the product in many ways. We can transform product attributes such as front panel and color, as well as provide specialized labeling and packaging, serial numbers, or part numbers. The end result is Advantech-DLoG's product and service quality, repackaged and rebranded for the customer's use.



Our dedicated account management team offers ODM-specific sales and project services, with a single point of contact and complete project management.

Our experience in the ODM business has made us very flexible and customer-centric, with mature processes that are easily adapted to individual needs, quickly and efficiently.





## Customer specific development

Advantech-DLoG extended ODM services are available for customers who need specialized product design and development based entirely on their own unique specifications.



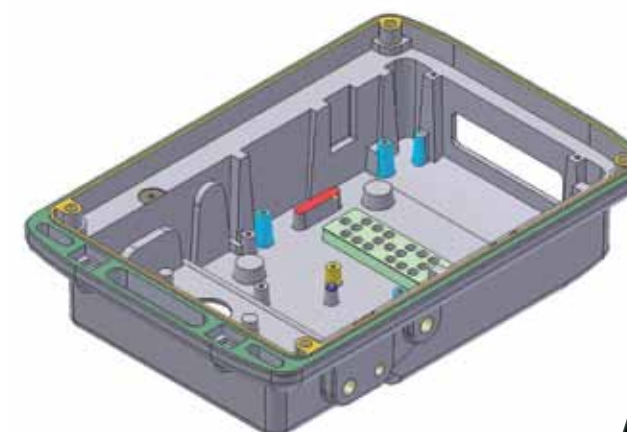
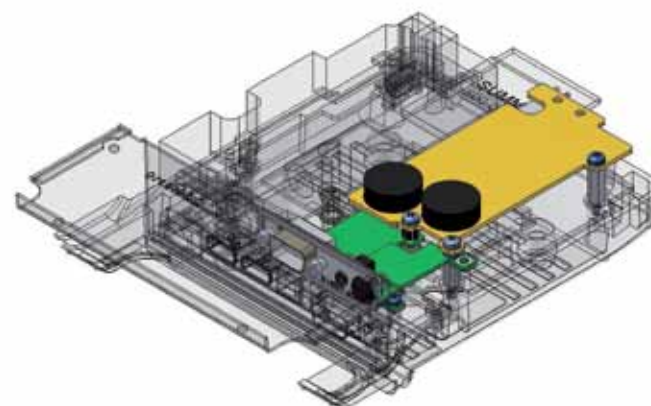
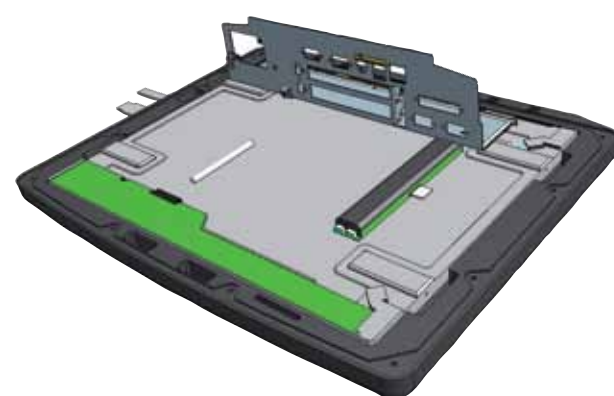
In addition to technical expertise, Advantech-DLoG also offers professional project management services. We are able to take care of the project and process management, and are very experienced in managing cost control, setting project milestones, and following up along the way.

Whether it is a fully custom design or a component derivative, we can transform specialized and one-of-a-kind requests from different vertical markets into finished products.

**"We listen to your requirements and strive for making your design a success."**

This allows the customer to focus on running their business, while we focus on the ODM design, manufacturing and implementation. We can also integrate customer proprietary and confidential technologies with our technologies to deliver truly unique products with the trust and quality that is expected from Advantech-DLoG. With Advantech-DLoG ODM services, the customer defines the specification and scope of work, and we do the rest.

- *Scope of Work*
- *Milestones*
- *Timelines*
- *Specification freeze*
- *Project management*
- *Start mass production*





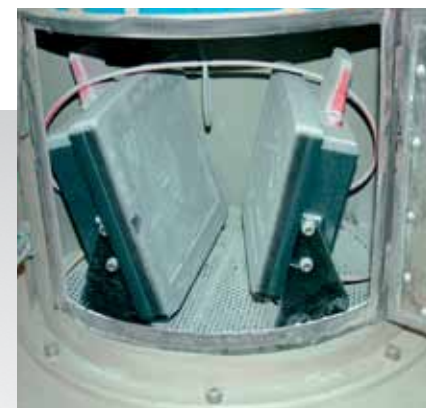


## Qualification and certification

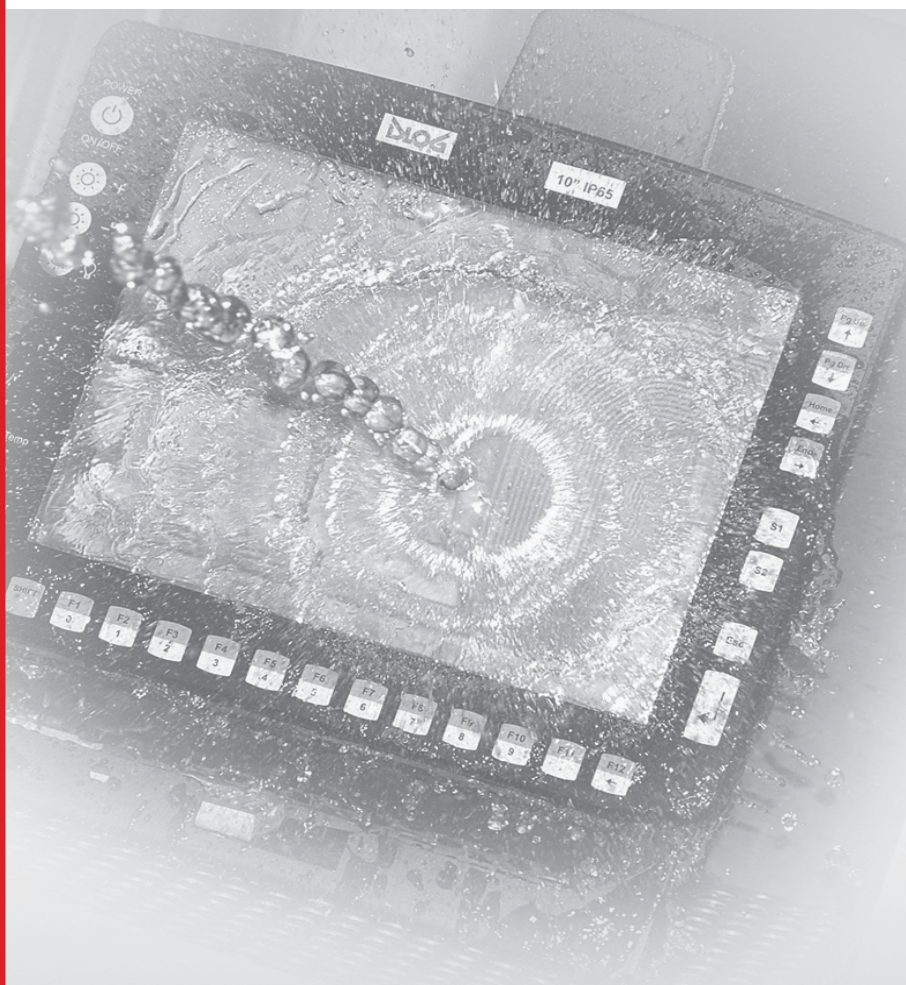
Advantech-DLoG takes quality control seriously. We manufacture high-end products for extreme environments and we test to make sure our units are released with as close as possible to 100% zero failure operation. Our rigorous testing conducted in climate controlled test chambers is designed to stress and burn-in products.



Each product is tested for shock and vibration at levels appropriate for product class, all the way to EN60721-3-5 5M3 standards, which far exceeds the normal industry standard. Our products are qualified for dust and water protection at IP level ratings of IP54, IP65, IP66 and/or IP67 (offering 360 degrees of protection), depending on class.



We also have independent testing done to meet well-known certification standards such as:



- Surge : IEC-61000-4-5, Level 1
- Transient- burst: IEC-61000-4-5
- ESD: IEC-61000-4-2 (Level 3= 8kV air / Level 2 = 4kV contact)
- UL94V-0
- CE Mark: EN 55022 CLASS A, EN 6100-6-2, IEC 60950-1 ; UL 60950-1
- FCC Class A, B
- RTTE 1999/5/EC
- CCC
- emark
- ISO-7637-2
- SAE J1455
- SAE J1113
- ISO/TS 16949





© by DLoG GmbH 2010  
Industriestraße 15  
82110 Germering/Germany  
Phone: +49 (0)89 411191-0  
[www.advantech-dlog.com](http://www.advantech-dlog.com)

Information in this document is subject  
to change without notice.