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- **Superb climate control:** Energy-saving, low-maintenance and low-noise climate regulation.
- **Windproof and weather resistant:** Weight-saving, corrosion-resistant and highly robust aluminum construction.
- **Securely protected:** Vandalism-proof, with anti-graffiti coating on request.
- **Protection Class IP 55**

Schroff Outdoor Cabinets

Vibration resistant and vandalism proof

Schroff®

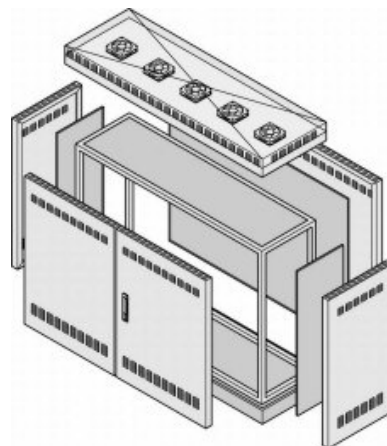


Schroff outdoor cabinets ensure the smooth and dependable functioning of sensitive electronics in outdoor environments. Their standardised components are based on IEC 61969. They not only fulfill the guidelines and standards for shock, vibration and earthquake resistance but also offer climate protection tested to IEC 68-2-1. Further technical advantages are the weight-saving, corrosion-resistant and robust aluminum construction, the ease of access and special cable entry provision. Newly designed cladding parts,

hinges and locks provide enhanced protection from vandalism. And the expansion options are flexible, accepting 19", ETSI or other, even non-standardised, accessories.

The double wall design: Use of a double wall sharply reduces heating within the cabinet from solar radiation. At the same time, it helps to remove the heat inside the double wall with a natural flow of air. The benefit: your outlay for additional cooling is substantially less. The double wall offers similar benefits in protecting from the cold.

The passive meander system: Our new outdoor cabinets are a further demonstration of Schroff's force for innovation: in this passive system the inner walls are constructed in a 'meander' form. Thus the resulting increased surface area acts as a heat exchanger, transferring more heat from the interior to the gap between the walls. Up to 600 - 800 watts at a temperature difference of 25 K.



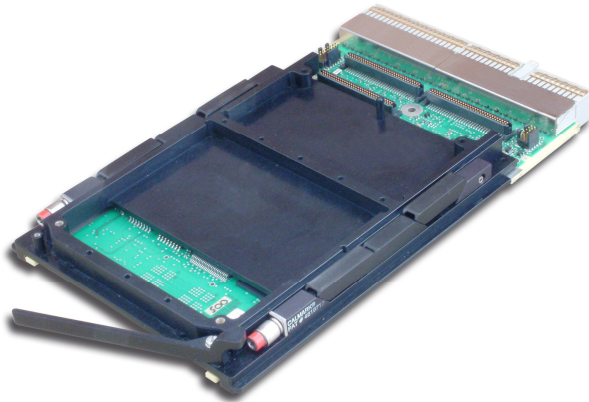
Unibody: simple and cost-optimised. Whether wall, pole or ground mounted, the unibody design scores with its cost-optimised inner enclosure and removable outer cladding. Its advantages rest particularly in smaller cabinets, where access via the front door is sufficient for installation requirements.

Modular: flexible and optimised for maintenance. (see sketch) The modular version consists of an aluminium profile frame with removable double-wall cladding. Its high flexibility offers significant advantages for larger cabinets and for situations where access is required from all sides.

Kontron CP3210: Rugged Conduction-Cooled 3U CPCI CPU board with enhanced PowerPC performance



Kontron strengthens its worldwide leadership in 3U CompactPCI® CPU boards by presenting the new PowerPC based Rugged Conduction-Cooled (RC) Kontron CP3210 at Euronaval '08 in Paris. With a faster clock rate of 733 MHz, accelerated DDR SDRAM (266 MHz, + 33.3 %), double the amount of system and user Flash and a Gigabit Ethernet port for faster data throughput and overall greater system performance, the Kontron CP3210 CompactPCI® CPU board is an enhanced version of the highly reliable and powerful Kontron PowerEngineC7, a proven solution already embedded in major defence programs. Additionally, the new Kontron CP3210 incorporates a thermal sensor for health monitoring and thermal management. Just like the Kontron PowerEngineC7, the new 3U CompactPCI® CPU board is designed to meet the harshest and most demanding requirements through its very low-power dissipation, real-time and certifiable software support as well as rugged conduction cooled design.



CP3210



The Kontron CP3210 CompactPCI® CPU board offers an extensive range of standard functions and expansion options including the new powerful PowerPC G3 750FX RISC processor clocked at 733 MHz, onboard user memory of 512 MB DDR SDRAM with ECC clocked at 266 MHz, 128 MB of System Flash memory, 256 MB of User Flash memory and 128 KB of nvSRAM with realclock. It also offers two onboard serial lines, two Ethernet channels - one Gigabit and one 10/100 as well as one 33/66 MHz PMC expansion slot (PCI Mezzanine Card). To further extend the I/O capabilities an additional PMC can be implemented via the rugged PMC carrier CPMC1. The Rugged Conduction-Cooled (RC) design of the Kontron CP3210 enables reliable operation in temperatures ranging from - 40°C to +85°C according to VITA 47 recommendations.

Kontron's latest rugged conduction cooled CompactPCI® CPU board is delivered with PowerOn Builtin-Tests and the Open Source U-Boot boot-loader firmware with full CPU source code under GPL.

Kontron provides the Real Time Operating Software VxWorks 6.2 Board Support Package, and the Kontron CP3210 offers support for the DO-178 B and ARINC 653 certifiable PikeOS software provided by Sysgo.

The Kontron CP3210 CompactPCI® CPU board can be used both as a system slot or a peripheral slot processor board, making it a unique solution for a complete system. Power consumption can be reduced to less than 10 W by configuring the processor frequency and the system bus frequency to 700/100 MHz, and by enabling the nap mode.

True Industrial Grade Solid State Disks



XCEEDLITE

Up to 72 MB/sec read, 55 MB/sec write. Industrial grade XceedLite SSDs, available in both 1.8" and 2.5" form factors, provide low-power (typically less than 1W active power), high reliability, solid state storage - making them ideal for use in embedded and mobile applications and as a hard disk drive replacement

XCEEDULTRA

Industry-leading performance - **Up to 135 MB/sec read and 105 MB/sec write.** Low power. High reliability and high capacity. The XceedUltra SSD is ideal for data-intensive applications such as video streaming and storage cache.



XCEEDULTRA X

Up to 100 MB/sec read, 85 MB/sec write! And the highest density SLC NAND Flash SSDs in the industry! The XceedUltraX is a true industrial grade storage solution, making it ideal for high performance, high capacity embedded applications in controlled or extreme environments.

XCEEDSECURE

Up to 100 MB/sec read, 85MB/sec write and complies with IRIG 106-07 Chapter 10.8! With ArrayPro and EraSure technologies, XceedSecure SSDs provide high performance, reliability, durability and data security for defence and other sensitive applications

UPDM – A Unified Profile for DoDAF and MODAF

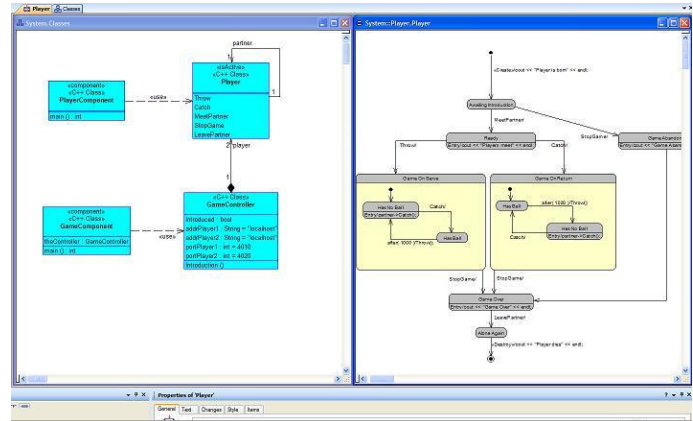


Considering the large variety of military architectural frameworks in existence such as DoDAF and MODAF, among others, a way to unite their differing requirements has recently been born: the Unified Profile for DoDAF and MODAF (UPDM), which works toward a standardized UML/SysML profile for these and other military frameworks.

Amidst a plethora of differing military architectural frameworks arises the new Unified Profile for DoDAF and MODAF (UPDM), which aims to create a standardized UML/SysML profile for these and other military frameworks.

A veritable Tower of Babel of military architectural frameworks, such as DoDAF, MODAF, NAF, DNDAF, and ADOAF, is emerging. Each one adds to, redefines, and/or clarifies the concepts, viewpoints, and concerns contained within military Architectural Frameworks, with the intention of improving procurement, planning, and implementation of military systems. However, supporting multiple and sometimes divergent frameworks leads to problems for industry, military organizations, and tool vendors alike.

In this age of globalization, mil-aero companies provide systems across the world to multiple governments. Often they must be specified in the local Architectural Framework, creating extra overheads. Incompatible frameworks cause interoperability problems between governments because models cannot be exchanged. Interchange, even between modelling tools supporting the same framework, is difficult, if not impossible due to the different underlying implementations. Finally, having to support several constantly changing framework formats means that modelling tool vendors have a support nightmare.



Fortunately, using the Unified Modelling Language (UML) - as extended by the recently created Systems Modelling Language (SysML) - as an underlying mechanism for all of these military Architectural Frameworks makes it feasible to work toward a standardized UML/SysML profile.

What is a Military Architectural Framework?

Military Architectural Frameworks such as DoDAF define a standard way to organize an Enterprise Architecture (EA) or systems architecture into complementary and consistent views. DoDAF contains four basic views: the overarching All View (AV), Operational View (OV), Systems View (SV), and the Technical Standards View (TV). Each view is aimed at different stakeholders, and it is possible to create cross-references between the views. Although they were originally created for military systems, they are commonly used by the private, public, and voluntary sectors around the world to model complex organizations such as humanitarian relief organizations and public services such as FEMA. Their goal is to improve planning, organization, procurement, and management of these complex organizations. All major DoD weapons and information technology system procurements are required to document their enterprise architectures using DoDAF.

UML is a visual modelling language for software and can be extended to include new concepts using what is called a *Profile*, which provides a means to create and extend elements found in UML. *SysML*, which includes new concepts such as enhanced interface and flow specifications, system concepts, parametrics, integrated requirements, and others, is an example of a UML Profile.

Arguably, the two most widely used frameworks are the Department of Defence (DoD) Architecture Framework (DoDAF) in the USA and the Ministry of Defence (MOD) Architecture Framework (MODAF) in the UK. In March 2008, the UPDM Group was re-formed by members of INCOSE and the OMG to create the Unified Profile for DoDAF and MODAF (UPDM) using UML/SysML.

The goals of UPDM are to significantly enhance the quality, productivity, and effectiveness associated with enterprise and system-of-systems architecture modelling, promote architecture model reuse and maintainability, improve tool interoperability and communications between stakeholders, and reduce training impact due to different tool implementations and semantics. Customized views can still be created, but they are based on core UPDM rather than requiring bespoke development. Finally, the UML/SysML foundation will improve the integration between Architectural Framework modelling and system modelling to support post-acquisition life-cycle design and implementation.

Chassis and Enclosures for the Railway Industry

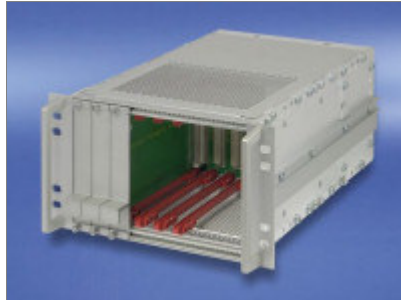


Schroff's comprehensive range of certified standard products demonstrates its capabilities and safe operation every day, on rail vehicles, in buildings and trackside. Thanks to its modular platform concept, Schroff products can be quickly and easily adapted to meet individual requirements. They are in fact so flexible that they impress on two counts: by both their high level of technical functionality and their ergonomic appearance.

For operation in **mobile environments**, electronic systems require a physical construction capable of withstanding extreme conditions in harsh environments. Schroff cabinets, cases and subracks are therefore designed to protect the electronics they house with high levels of mechanical stability and resistance to shock and vibration.



Subrack 6 U, 84 HP (SNCF type)



Subrack 3 U, 36 HP, shielded version (SNCF type)

Subrack Series SCNF

- SCNF Listed, europacPRO-fer Subrack—3U and 6U
- Tested to NFF 61-005 and NFF 60-002
- For use on trains / in rolling stock
- Shielded and unshielded
- Kits for CPCI and VME



Signal box computer with shielded 19" subracks and special backplane



Subrack 6U 84HP (EN50115 type)

Subrack Series EN50155

- Tested to EN 50155 and railway standard BN 411002— 3U and 6U
- IEC 48D (IEC 61587-1)
- For use on trains / in rolling stock
- Shielded and unshielded
- Kits for CPCI and VME

Network Attached Storage on a 6U VME Blade: Up to 640GB



- Conduction cooled and convection cooled versions
- Dual PMC mounted solid state flash SATA drives for rugged environments
- Extended temperature range from -40° C to +85° C
- Configurable to RAID levels 0 and 1
- Automatic and transparent duplication of data
- Automatic data re-sync with no impact to the top level application
- Instantaneous drive to drive fail over with no service interruption
- Ethernet port fail over in redundant networks
- Dual Gigabit Ethernet ports via P0; single front panel port
- Heartbeat support for seamless fail over

