

# We Can Help You More

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A background image of a business meeting with four people in professional attire. The image is semi-transparent and has a reflection effect at the bottom.

## KONTRON MODULAR COMPUTERS S.A.S. SERVICES & SUPPORT

- ▶ Technology Evaluation
- ▶ Application and System Design
- ▶ System Qualification
- ▶ Deployment and Maintenance



## OUR GOAL: TO MATCH PROGRAM NEEDS

### WE CAN HELP YOU MORE

Because we have been in this market for more than 20 years and learned a lot from real-life issues, our services and support have evolved with the way COTS are used in your domain. Our customers recognize our approach to be truly innovative in many ways. There are key concepts that are used throughout this catalog to provide the extensions to our basic COTS commitment policy. You will understand how our unique added value can help you sail through the complex issues associated with the use of COTS in long term programs.

Although our first contact with customers is usually the sale of off-the-shelf hardware (covered by our COTS commitment policy), most of their concern about computers revolve around programs.

Understanding how a program lifecycle is organized is the key to offering the best in service and support.

- ▶ 1- Technology Evaluation
- ▶ 2- Application and System Design
- ▶ 3- System Qualification
- ▶ 4- Deployment and Maintenance

Each phase needs a dedicated approach for support and specific services.

### ▶ 1- TECHNOLOGY EVALUATION

Ease of use is key in this phase where each technology concept must be validated. When needed, we provide evaluation products and expert technical assistance from our Field Application Engineering (FAE) team. If you share your concerns with us, we can also coordinate with our software partners to help you quickly assemble the best solution. Our turnkey systems (EASY systems) are the foundation on which you can build efficient evaluation work.

Hotline Support is the main channel for us to help you with technical issues even at this early stage. Questions raised during the presales process are recorded in our knowledge base and become the foundation for personalized support in the future. Of course, all our products are covered by our Standard Warranty, covering returns and repairs, that you may wish to extend over time with our Warranty Extensions.

### ▶ 2- APPLICATION AND SYSTEM DESIGN

During this phase, efficiency is of the essence. You know about your requirements, we know about our products. We need to hear from you about the challenge you face. Chances are that we came across the same issues already with other customers. Through Hotline Support, you benefit from our vast knowledge base. We work hand in hand with hardware and software vendor partners to help you get across the critical phases of application design. Our experts can help in the tuning of key elements of your system hardware and base software. RTOS (VxWorks, LynxOS, INTEGRITY) or Linux (Red Hat, WindRiver, LynxWorks, Sysgo) we know them all and have extended their features far beyond the typical minimal BSP software you get from other vendors. For the past 15 years, we have extended all

OS technologies to cover multi-processor board and are eager to team with you in the coming wave of multi-core processor based products through On-Site Assistance

### ▶ 3- SYSTEM QUALIFICATION

Upon Final Acceptance with their customer, program managers need to freeze a stable version of the computer validated with the application. This includes hardware, OS, and third party software.

With Tailored Deliveries, you define the complete computer baseline and it becomes the reference for future deliveries and long term support. At this stage, custom acceptance tests can be defined jointly and used throughout the program lifetime. Amongst the Global Program Support services, software deliveries are proposed in the form of Base Software Suites (a single recovery CD contains the validated combination of OS, Libraries plus the software fixes). This can save hours of software configuration hassle at the program level. We maintain a program-specific software reference tree for you and deliver updates according to your own policy (on-demand release, single patch, jumbo patches).

Other services in our Global Program Service offering may be of help early in the qualification phase: you may wish to ask a dedicated account manager for our pre-ILS data package.

### ▶ 4- DEPLOYMENT AND MAINTENANCE

The majority of your costs associated with the deployment and maintenance of COTS in programs lie in this domain. See how we can help you control your long term cost of ownership.

#### CONFIGURATION CONTROL:

Thanks to a prior Platform Definition part of our Tailored Deliveries, your hardware is pre-configured and delivered ready for direct integration on your assembly line. As your acceptance tests are part of our final inspection package and are run prior to delivery, your integration is hassle-free.

#### ASSET MANAGEMENT:

As we maintain configuration information at the board, LRU and system level in our support databases, we can track the life cycle of each delivered product in your program for you. WATCH service covers program specific obsolescence management.

#### LONG TERM DELIVERIES PROTECTION:

Dedicated Schedule and Protect policies are available to secure your deliveries over time (up to 20 years or longer if necessary) to implement a true "build to print" policy. This can even cover situations where the exact quantities are not yet known.

#### SOFTWARE SUPPORT:

Adding to our long-term delivery protection, the software is also included in service extensions. We have agreements with our OS vendor partners to extend the support coverage beyond their standard policy. At Platform Definition time, we create a dedicated source tree for your program in our servers.

From then on, all updates and fixes are generated within your dedicated software environment and delivered in sync with your own system maintenance policy. Updated software is checked with the test suite on the program reference platform prior to be considered for delivery

## COTS COMMITMENT POLICY

With each product purchase you are entitled to our COTS commitment policy: Standard Warranty, Product Life Cycle and Hotline Support Service. This level of commitment already goes beyond what typical hardware vendors offer.

It can also be extended with our other support and services described in this document.

### ▶ STANDARD WARRANTY

All hardware products we design are covered by a two-year return-to-factory warranty. This period can be extended with Warranty Extensions.

### ▶ PRODUCT LIFE CYCLE

Our products have a guaranteed life cycle organized in successive periods named:

- ▶ General Availability,
- ▶ Restricted Availability,
- ▶ Repair Only.

For each period, a standard level of support and services is defined.

#### GA: GENERAL AVAILABILITY

Products can be purchased in any quantity at any time. The more up-to-date version of the product is used for each delivery. Fast Track COTS products are delivered in 2 weeks, while the standard delivery time is 16 weeks. Managing forecasts with our sales force is the best way to further reduce the delivery time. During the GA period, our software support team maintains up to two versions of the software for this product. Our BSP and device drivers will cover OS versions N and N-1 (with N being the current officially supported version, as published by the OS vendor).

#### Notification:

Six months before our products leave the General Availability status, a Notification letter is sent to all customers to announce the product status change to Restricted Availability. During this six-month period, we lay out the product manufacturing plan for the next 5 years and need to hear from you. To guarantee your procurement, you can purchase in advance or enter a dedicated Schedule and Protect service to secure your deliveries over time and only be invoiced later.

#### RA: RESTRICTED AVAILABILITY

During this period, the products continue to be manufactured and delivered to customers with Long Term Supply services. During this period, software BSP and drivers are supported for programs and customers deploying the hardware and covered by HTL-PTS support service.

#### RO: REPAIR ONLY

After the RA period, we maintain the expertise, tools and asset management database for a further guaranteed 5-year period to service and repair.

### ▶ HOTLINE SUPPORT ACCESS

Delivery of each product entitles you to a basic hotline service. During the standard warranty period, you may call our hot line and receive advice on our product usage and features. We dig into our knowledge base and allow you to benefit from our past experience. To make us work specifically on your issues, reproduce your problems on reference platforms and provide a dedicated fix, standard Program Technical Support is available to extend this basic help up to dedicated assistance.

#### We can help more

Now you know about our level of commitment when you purchase equipment from our product catalog. The rest of this document includes all the other services and support we offer to match more program oriented requirements. We designed the offering around real life requirements you meet daily. We are convinced you will find them useful.

## PROGRAM SUPPORT

## LONG TERM DELIVERY, INSURANCES, PROTECT, SCHEDULE

## TAILORED DELIVERY, INTEGRATION, CONFIGURATION, CUSTOMIZATION

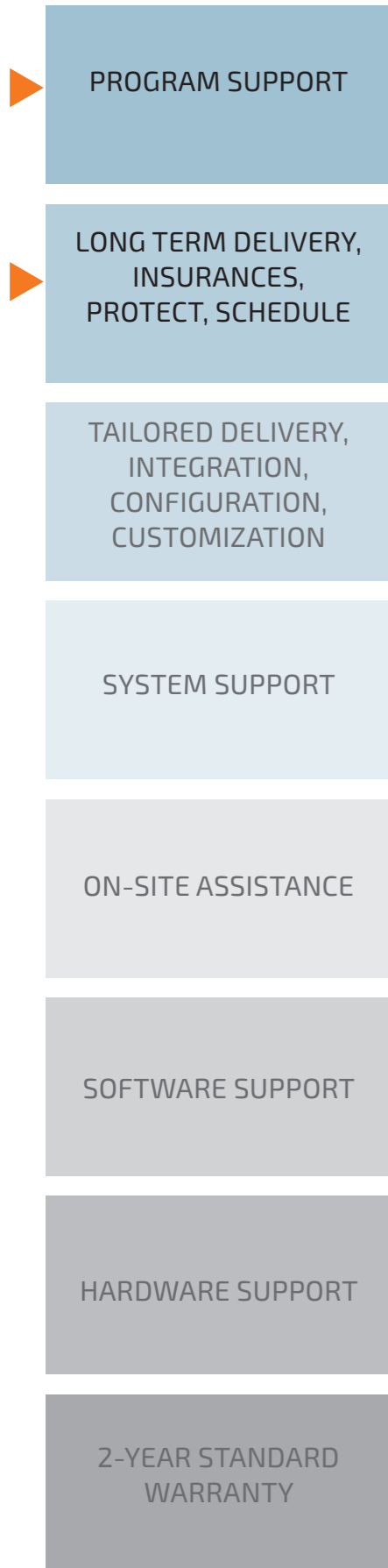
## SYSTEM SUPPORT

## ON-SITE ASSISTANCE

## SOFTWARE SUPPORT

## HARDWARE SUPPORT

## 2-YEAR STANDARD WARRANTY



## LONG-TERM DELIVERY INSURANCES

Obsolescence management is a key success factor and a tough challenge for COTS users. When critical components are no longer available and redesign is not an option, our insurances preserve your program integrity. Sail safely through End of Life notices with the long-term delivery insurances: PROTECT and SCHEDULE.

### LTS-PROTECT Long-Term Reservation Option

Protect your program from products obsolescence for up to 5 years after the General Availability period ends.

- ▶ Define maximum quantity and product version
- ▶ Order products only when you really need them
- ▶ Pre paid yearly subscription fee
- ▶ No penalty incurred in case of cancellation
- ▶ Protect your program "build to print" strategy

▶ Subscribe before the end of General Availability period

### LTS-Schedule Long-Term Delivery Schedule

Secure program procurement for up to 10 years after the General Availability period ends.

- ▶ Define quantity and delivery schedule
- ▶ One global firm order
- ▶ Products invoiced at delivery time
- ▶ Standard warranty conditions at delivery
- ▶ Cash saver, full control on costs

▶ Subscribe before the end of General Availability period

### LTS-Watch Long-Term xxx Watch

Receive alerts for significant evolution of monitored frozen configuration.

- ▶ Propose best strategies to protect the future

▶ Subscribe at Configuration Freeze Time

## LONG-TERM DELIVERY INSURANCES

### ▶ LTS-PROTECT

When you are not ready to commit to buying products and facing situations where exact quantities are still unknown, this service guarantees that your program equipment requirements can still be managed as "build to print" by procuring the exact same parts from us.

LTS-PROTECT is an insurance contract to procure a maximum quantity of designated products. It allows you to order this product version during five more years after the Restriction Availability. With this contract we maintain for you the necessary expertise and goods inventory to be able to deliver the said product quantity. As long as you maintain the service, you may order the product at any time, up to the planned quantity. Products are invoiced at delivery

### ▶ LTS-SCHEDULE

This service warrants the delivery of a planned quantity of a designated product according to a prearranged schedule. This delivery period can span up to 10 years even after the end of the General Availability period. Even with long delivery time after the product General Availability period, all deliveries inside a LTS-SCHEDULE service are entitled to the standard warranty T&Cs.

### ▶ LTS-WATCH

This service covers the handling of program-specific COTS configurations. These require special precautions to avoid situations when the COTS product evolves and the program-specific frozen configuration silently becomes obsolete (preventing further supply or fixes). Life cycle information for COTS products is a standard service.

LTS-WATCH goes a step further by installing a regular dialogue with the programme and suggesting changes in order to keep the programme Computer baseline current. Through this service, the customer is kept aware of changes made to the COTS item that could be appropriate also for the program in order to maximise the service life of the embedded computer design. This allows the programme to make informed decisions to suit planned system technology refreshes with minimal effort. Use HTL-Plus to ask us to investigate obsolescence effects on your configurator, test second source alternatives and associated software.

### ▶ PRICING CONDITIONS

**LTS-PROTECT:** Yearly insurance subscription fee, calculated from the product list price (at the date of the subscription). Products are invoiced at delivery time.

**LTS-SCHEDULE:** A global insurance fee is computed as a percentage of the product list price (at the date of the order). This initial down payment is due at the time of the initial order, the remainder of the fee is spread over the delivery of each product and invoiced with it.

**LTS-WATCH:** Flat yearly fee

### ▶ HOW TO ORDER

**LTS-PROTECT-{D}**

{D} duration in year: 1 to 5

**LTS-SCHED-{D}**

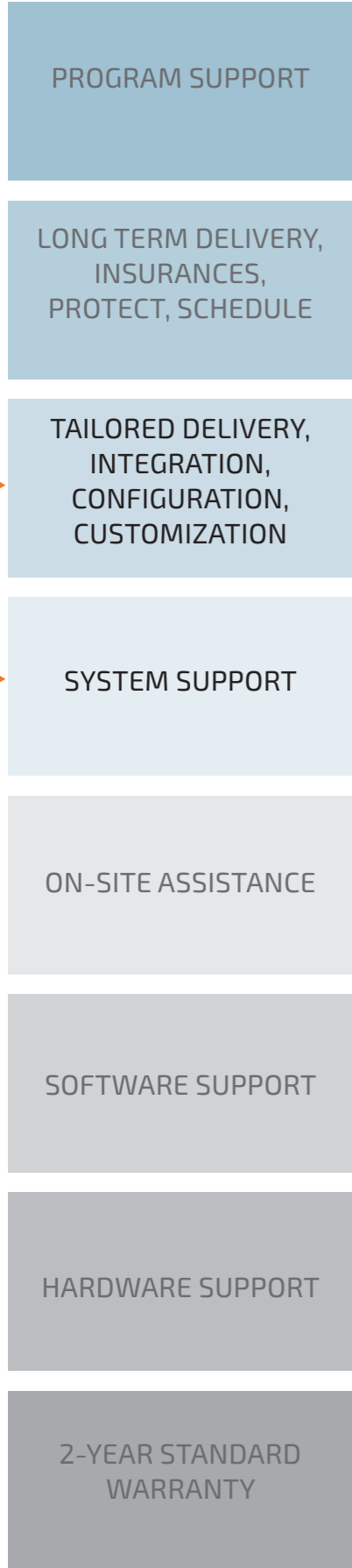
{D} duration in years: 1 to 10

**LTS-WATCH-{D}**

{D} duration in years: 1

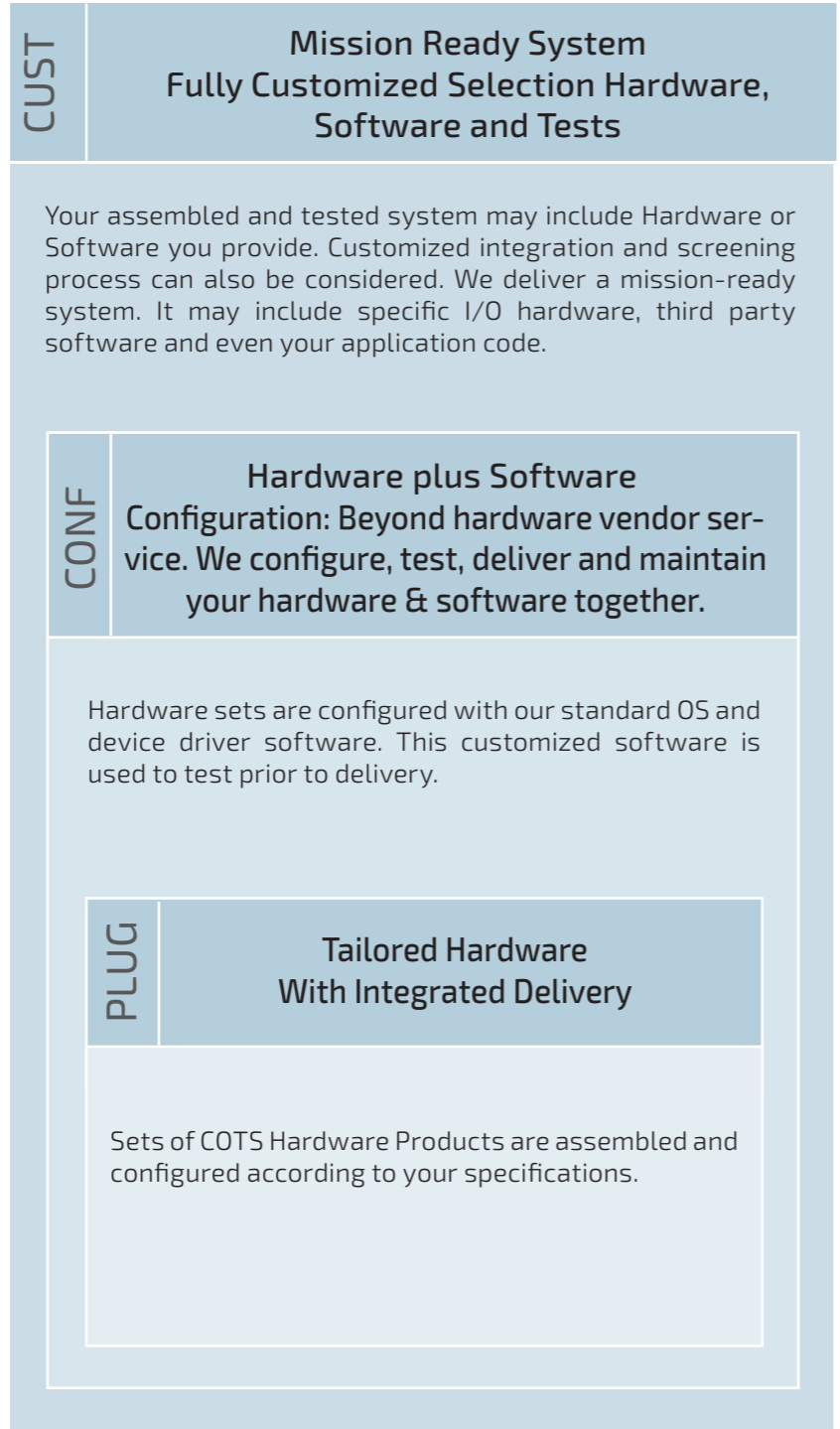
## LTS-SCHEDULE AND LTS-PROTECT BENEFITS

|                   | PRODUCT AVAILABILITY      | DELIVERY TIME      | CASH FLOW                           | WARRANTY                        | MAXIMUM END OF WARRANTY |
|-------------------|---------------------------|--------------------|-------------------------------------|---------------------------------|-------------------------|
| STANDARD PURCHASE | General Availability (GA) | Standard delivery  | Standard invoice                    | Standard 2 years                | 2 years after GA        |
| LTS-PROTECT       | 5 more years after GA     | On demand delivery | Yearly fee and invoice if delivery  | Standard 2 years after delivery | 7 years after GA        |
| LTS-SCHEDULE      | 10 more years after GA    | Planned delivery   | Upfront fee and invoice at delivery | Standard 2 years after delivery | 12 years after GA       |



**TAILORED DELIVERIES**

Beyond the traditional COTS approach, this service offers products specifically configured to fulfill your operational needs and screening requirements. Tailored deliveries range from simple products with component level requirements (frozen configurations) up to fully configured machines including your pick of OS software and drivers. We can also manage your choice of third party products.



**TAILORED DELIVERIES**

*Tailored Delivery service is a two-step process: first, a dedicated information package is created (DEF) out of the list of customer requirements. Then all further deliveries are made using the procedure defined in this information package. Throughout the life of the information package, all usual services (repair, hotline, software and hardware support) are tailored with this program specific information to provide a service at the LRU or system level.*

Tailored deliveries include three levels:

- ▶ PLUG covers hardware assemblies,
- ▶ CONF is used for hardware and software managed as a single object,
- ▶ CUST covers full customer-defined process which may also include third party products and customer procured items.

**▶ PLUG**

Instead of delivering our base boards, I/O mezzanine cards and enclosures separately, we assemble them according to your requirements prior to delivery.

This service can process a simple LRU made of one base board and its I/O mezzanine, or more complex systems with enclosure and attached peripherals.

The PLUG service is available for all hardware parts included in the Kontron product list.

**▶ CONF**

CONF includes PLUG service configuration of your assembly augmented with standard software from Kontron.

With this service, your equipment is configured for and tested with its software. This typically includes a version of one of our supported OSs (Linux, VxWorks, LynxOS) and the necessary device drivers. Our standard unit test software (a subset of our complete product Q&A process) is used to validate the assembly.

The information included with CONF allows us to use a software environment similar to the end user's. Whatever its origin, this software is packaged on a recovery CD called BSS (Basic Software Suite) for ease of installation. Software updates and fixes are included periodically in the BSS by mutual agreement.

**▶ CUST**

CUST is a CONF service with more customisation, including assembly and configuration of hardware and software from other vendors. Our delivery and test process can also be tailored with a CUSTxxx- DEF order.

*Example:* you can ask us to run your own acceptance test suite at a specific temperature. You may want to add I/O mezzanine of your choice or a different enclosure.

**▶ HOW TO ORDER**

On the same order as the base COTS items, the following order codes are used for tailored deliveries:

**{what}-{typ}-DEF** is purchased once to create the information package and deliver the first sample.

**{what}-{typ}** is to be used in all following orders for the tailored product as defined in the information package.

**{what}** is PLUG, CONF or CUST.

**{typ}** is LRU (specially configured board with optional I/O mezzanines) or MACH (complete computer system). Examples: PLUG-LRU-DEF, CUST-MACH, CONF-MACH-DEF.

**▶ CUSTOMER INPUTS**

In order to proceed with tailored deliveries, we need some information from you.

**PLUG:** you provide the list of hardware items and how to configure them. EC level information (minimal, mandatory) is also needed

**CONF:** same as in PLUG plus detailed information about the software configuration requirements

**CUST:** Your detailed requirements. From that information, we create the information package along with the production of a first sample.

**▶ DELIVERABLES**

The information package contains:

**PLUG-DEF:** BOM for hardware and firmware; assembly instruction check list.

**CONF-DEF:** same + list of OS, drivers, software configuration items (IP addresses, interfaces linking several LRUs, network topologies)

**CUST-DEF:** same + specific test plan (like QTP, ATP, ETP) definition and specific deliverables. We also offer test software development and customisation, to handle specific requirements such as:

- ▶ Hardware items BIT information
- ▶ Bandwidth requirements
- ▶ Stress tests
- ▶ Specific environmental tests, ...

**With each tailored delivery you receive:**

**PLUG:** certificate of conformity, executed check list.

**CONF:** same + standard test report.

**CUST:** same + your requirements such as acceptance test reports, burn in reports, ...

|                               | HW/SW REVISION   | CONFIGURATION CONTROL                            | CUSTOMER REFERENCE PLATFORM                  | INFORMATION PACKAGE                                    | MANUFACTURING PROCESS   |
|-------------------------------|--|--|--|--|---|
| <b>STANDARD COTS PURCHASE</b> | Default: The current HW EC is delivered                              | Default: Base boards are managed in our database | Default: No reference platform               | NA   | Standard  |
| <b>PLUG</b>                   | Frozen EL level if needed or mutually agreed policy                  | Complete LRU or systems are tracked              | Optional reference platform                  | Detailed integration procedure for HW configuration    | Standard + specific inspection                                |
| <b>CONF</b>                   | Software fixes can update the information package at customer demand | Complete LRU or systems are tracked              | We maintain for you a reference platform     | Integration procedure includes specific software tests | Our choice of test configured for the target equipment and OS |
| <b>CUST</b>                   | Any policy fitting the program profile                               | Complete LRU or systems are tracked              | We host a jointly defined reference platform | Everything fitting the program profile                 | + Acceptance tests  |

PROGRAM SUPPORT

LONG TERM DELIVERY,  
INSURANCES,  
PROTECT, SCHEDULE

TAILORED DELIVERY,  
INTEGRATION,  
CONFIGURATION,  
CUSTOMIZATION

SYSTEM SUPPORT

ON-SITE ASSISTANCE

SOFTWARE SUPPORT

HARDWARE SUPPORT

2-YEAR STANDARD  
WARRANTY

## SOFTWARE SUPPORT - ON-SITE ASSISTANCE

Computing efficiency can only be achieved with optimal integration of hardware and software. See how Kontron addresses your software issues at the best level. From Hotline to On-Site assistance, this guide helps you select the adequate level of service.

### HTL-PTS 12x5 Hotline and Knowledge Base Access

Speed up your development and leverage our knowledge base by letting our Help Desk manage your issues

- ▶ Unlimited number of calls/emails to the Kontron Hotline
- ▶ Access Kontron' product information and knowledge base
- ▶ Access Kontron software patches and updates databases
- ▶ Download hardware and software technical manuals
- ▶ Single point of contact for complete computer (hardware and software)

▶ Entered at Purchase time and renewed yearly

### HTL-PLUS Prepaid Help

Purchase a quota of expert assistance days for a year.

Pre-purchase days for on-site expert assistance for:

- ▶ Software installation
- ▶ Platform maintenance
- ▶ Complex problem solving at the operating system level

▶ Anytime inside a Hotline Contract

### ASSIST On-Demand On-Site Help

Three levels of service according to the complexity of the issue are also accessible outside any HTL-PTS agreement.

- ▶ Technician
- ▶ Engineer
- ▶ Expert

▶ Anytime until the End of the Repair Only Period

## TECHNICAL SUPPORT & HOTLINE

### ▶ PROGRAM TECHNICAL SUPPORT: HTL-PTS

**Unique Entry point:** [GSS-ATD-Toulon@kontron.com](mailto:GSS-ATD-Toulon@kontron.com) to open an unlimited number of hotlines on the associated program.

Each hotline is reviewed on a weekly basis until it is closed:

- ▶ "Immediate" acknowledgement with a hotline number
- ▶ Full traceability on all email exchanges associated with the Hotline
- ▶ Support entry point always available (during company working hours) responding to a request for status or escalation of the resolution to meet the customer's changing requirements.

Hotline support includes :

- ▶ Fully understanding the customer's question or problem
- ▶ When necessary, direct contacts (phone conference calls for instance) with our best experts regarding your issue.
- ▶ Tests and investigations with a comparable configuration built with our reference platform in order to reproduce the issue in our facilities. This may require complementary testing by the customer in their own environment.
- ▶ Providing any additional information, help, fixes on software delivered for this program, that can solve or provide a workaround for the issue.

More complex hardware or software issues (requiring more than 4 hours of work) are completed under Service Plus.

**Remark:** When no HTL-PTS service is valid, Kontron will still open and register hotlines for any customer call. Simple responses will be provided as far as possible (updated documentation for instance), or a quotation for starting HTL-PTS service will be sent.

### ▶ SERVICE PLUS: HTL-PLUS

#### USE AND COVERAGE

SERVICE PLUS covers all installation, maintenance or complex problem solving at the computer level. It is intended for all customers, even with large and/or complex system, sometimes including hardware and software components from multiple vendors.

SERVICE PLUS answers the need for swift response times when support is requested at critical phases of a program's development schedule.

SERVICE PLUS is a critical asset when issues cannot be tracked to a specific component of a system prior to expert investigation, leaving the customer in a delicate situation where no single vendor is willing to take responsibility, suspecting the other vendor supplied devices to be defective.

SERVICE PLUS is offered as a quota of pre-purchased days of support expertise that can be allocated to issues at any time (travel and expenses are charged separately for on site assistance).

#### DETAILS AND PREREQUISITES

Access to SERVICE PLUS requires an active subscription to Kontron PROGRAM TECHNICAL SUPPORT (HTL-PTS) for the Customer's program.

SERVICE PLUS may be ordered at any time while HTL-PTS is active and is purchased in 5 day batches.

Purchased SERVICE PLUS days are allocated to the program/location/company point of contact and remain valid until:

- ▶ The purchased time was consumed by support tasks authorized by the customer
- ▶ The PTS subscription expired (PTS can be renewed as long as the customer needs it)

In the event that the quota of SERVICE PLUS pre-paid days is exhausted, an order for additional days, offered at the same terms and conditions as the initial order can be placed.

SERVICE PLUS can also be delivered on-site (travel and expenses charged separately). Should the need for on-site support arise, the customer provides Kontron with the details.

[www.kontron.com](http://www.kontron.com)



When the root cause is solely linked to a design defect found in a product purchased from Kontron, the investigation time is not taken off the quota SERVICE PLUS days (this clause is only applicable during the initial warranty period for the component. This clause does not apply to "On Site" SERVICE PLUS, or when specific customer parts like peripherals are involved: investigations in such cases always decrement the quota).

#### RESTRICTIONS

There is no result guaranteed by Kontron with the SERVICE PLUS program, and issues linked with the following particular cases will always decrement the Service Plus quota:

- ▶ Systems for which failure is due to improper material handling by the customer.
- ▶ Systems for which failure is due to the physical, mechanical or electrical environment at the customer's site.
- ▶ Access to defective systems or information on such systems is made abnormally difficult for the Kontron support team.
- ▶ Restrictions described for the Kontron HOT LINE contract also apply, in whole, for the SERVICE PLUS contract.

#### ▶ BASIC ACCESS (FREE)

Kontron Hotline is available via Email at:

[GSS-ATD-Toulon@kontron.com](mailto:GSS-ATD-Toulon@kontron.com)

All Kontron customers are entitled to access Kontron Hotline Basic Access services.

Kontron Hotline gives free access an issue tracking system (hotline tickets numbered hl #nnnnn ) to cover the following topics:

- ▶ **Purchase/Deliveries:** management of hotline tickets for delivery issues
- ▶ **Documents/Manuals:** management of hotline tickets for more detailed information on Kontron products, provide up to date manuals and guidance
- ▶ **Getting Started:** management of hotline tickets for customer first steps with our products. No customer should loose time "getting started" with a Kontron product.
- ▶ **Warranty/Repairs:** management of hotline tickets for repair issues. Our hotline uses the product serial number to retrieve information from our central database of deployed products. This is used to assess a product detailed status (EC level, firmware rev.) its warranty coverage, etc. Repairs are also managed using hotline tickets. Each RMA is linked with a hotline number. All information about a current status for an RMA is accessible.

All contacts and requests for information are managed by Kontron with the Hotline Basic Access. Hotline tracking numbers are used to track all customer interaction and a complete history of each issue is maintained in our database. Customer confidentiality is maintained.

## ON-SITE ASSISTANCE

### ▶ ASSIST

Assistance from Kontron is always available on demand with the ASSIST service. Three different levels of services:

- ▶ Installation, maintenance operations, and board replacement services that can be handled by a technician.
- ▶ uning, complex problem solving and help with software ports that can be handled by a support engineer.
- ▶ Tuning, complex problem solving and help with software ports or hardware design that require the intervention of an R & D engineer.

#### ORDER CODE

ASSIST-SAV Technical Level  
ASSIST-S&S Engineer Level  
ASSIST-R&D Expert Level

PROGRAM SUPPORT

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SOFTWARE SUPPORT

HARDWARE SUPPORT

2-YEAR STANDARD  
WARRANTY

## WARRANTY EXTENSIONS & REPAIRS

When a two-year warranty is not enough, extensions are available  
Purchasing them with the product is cost efficient.

### XHW – Board Level Maximize Product Availability

- ▶ Extend the standard warranty for 1, 2 or 3 more years.
  - ▶ Purchased with the product

### LRU-XHW – LRU Level Extend the Warranty Umbrella to a Complete Hardware Assembly

- ▶ Extend the standard warranty for 1, 2 or 3 more years.
- ▶ We manage issues at the LRU level, so you do not have to worry about the building blocks individually.
  - ▶ Purchased with the product

### HWM Purchase Extra Years of Hardware Support

- ▶ Extend the maintenance period to match your Program Lifetime.
  - ▶ Purchased before the End of the Warranty Period

### REPAIR On-Demand One-Time Repair

- ▶ Individual product repairs over a 10-year period.
  - ▶ Purchased at Any Time

## WARRANTY EXTENSIONS AND REPAIRS

Hardware products are covered by a two-year return to factory warranty. Under this warranty, defective products are upgraded to the latest engineering change level (EC level) and repaired or exchanged. For specific EC level products, see the Tailored Deliveries page. Read below how you can extend the warranty and manage product repairs outside support.

### ▶ XHW: STANDARD WARRANTY EXTENSIONS

Time extensions for the standard warranty are proposed for 1, 2 or 3 years starting at the end of the standard 2-year warranty. This service can be purchased for boards and LRUs (Line Replaceable Units) to extend the warranty to a 5-year period. Our standard warranty covers peripherals such as mouse, keyboard, screen, CD drives and HDD during 1 year. Extra coverage can be considered in Global Program Support packages.

### ▶ HWM: EXTRA MAINTENANCE

Longer maintenance service for products is available. This service starts after the warranty and shall be purchased before the end of the existing standard warranty or extensions. The maintenance period cannot exceed the end of the product Restricted Availability period.

### ▶ REPAIRS

Covers one-time repair service outside the warranty or service contract period. You can also ask for a preliminary DIAGnostic. *Note: this diagnostic is mandatory for products in the Repair Only period.*

### ▶ REPAIR PROCEDURE

- All defective parts must be returned to one of the Kontron Repair Centers following the Return Material Authoriz-ation (RMA) process:
- 1- Contact our support (telephone or email) and receive a hotline ticket number.
  - 2- From its serial number, we retrieve your product information (Firmware revision, EC level, previous history, ...) and complete the RMA, adding the most detailed information on the defect.
  - 3- At this point, if the products is not covered by some warranty, a repair quote will be sent for you to order the repair.
  - 4- You receive the RMA form containing the repair center information.
  - 5- You send the defective product with the RMA form to the repair center.
  - 6- After repair or exchange, the product is returned, with a repair report and a Certificate of Conformity.
  - 7- The hotline ticket is closed.

### ▶ THINGS TO KNOW

Kontron pays the shipping costs incurred to return products following INCOTERMS D.D.U. (Delivery Duty Unpaid) conditions. The customer pays transfer costs to the Kontron Repair Center. For out of warranty situations, returned products are covered by a new 3-month standard warranty.

If the anomaly cannot be reproduced the product is returned 'as is' and the repair fee is charged. Products that should be repaired with non-standard criteria will be processed as LRUs.

### ▶ HOW TO ORDER

Warranty extensions (XHW) can only be ordered at initial product purchase with the following order codes:

*XHW-A{D}-{CL}-ST or LRU-XHW-A{D}-{CL}-ST*

Hardware maintenance (HWM) can be purchased later but before the end of standard warranty or extension period:

*HWM-{P}1-{CL}-ST*

Repairs can be purchased until the end of the RO (Repair Only) period:

*ONE-REP-{CL}-ST*

*{D}* is a duration: 1, 2 or 3 years.

*{CL}* is the hardware class: SA, CA (Coated SA), WA, RA or RC.

*{P}* is the product life cyce period: A for GA, B for and RA and C for RO product life period

*{WHAT}* can be HW for base boards and LRU for board with mezzanine cards or specific requirements.

► CORPORATE OFFICES

**EUROPE, MIDDLE EAST  
& AFRICA**

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