

## » Reliable embedded KISS family «

KONTRON  
INTELLIGENT  
SILENT  
SERVER

**KISS**

### Reliable embedded IPC Family

- » Reduced time to market
- » Long life support
- » Reduced TCO
- » Flexible customization
- » Next-Gen processor architectures





## KISS Benefits



**Life-Cycle Management**



**Extended Warranty**



**System availability  
5 to 7 years**



**Extended temperature**



**Designed for con-  
tinuous operation**



**Extremely reliable**



**Low Noise Design**

## Generic specifications\*

### Temperature

- » Operating:  
0 to 50°C (32°F to 122°F) up to 55°C (131°F) at 10% POH per month
- » Non operating:  
-20°C to 70°C (-4°F to 158°F)

### Humidity

- » Operating:  
10-90 % rel. humidity, non condensing
- » Non operating:  
10-95% rel. humidity, non condensing

### Shock

- » Operating:  
15g, 11ms, half sine, 3 shocks per axis
- » Non operating:  
30g, 11ms, half sine, 3 shocks per axis

### Vibration

- » Operating:  
10-500 Hz, 1g, 1 oct/min,  
duration 8 sweeps/4 cycles
- » Non operating:  
10-500 Hz, 2g, 1 oct/min,  
duration 8 sweeps/4 cycles

### Protection Class

- » Front: IP 20, optional IP 52

### Noise

- » 35 dBA ~40 dBA for redundant PSU

### MTBF

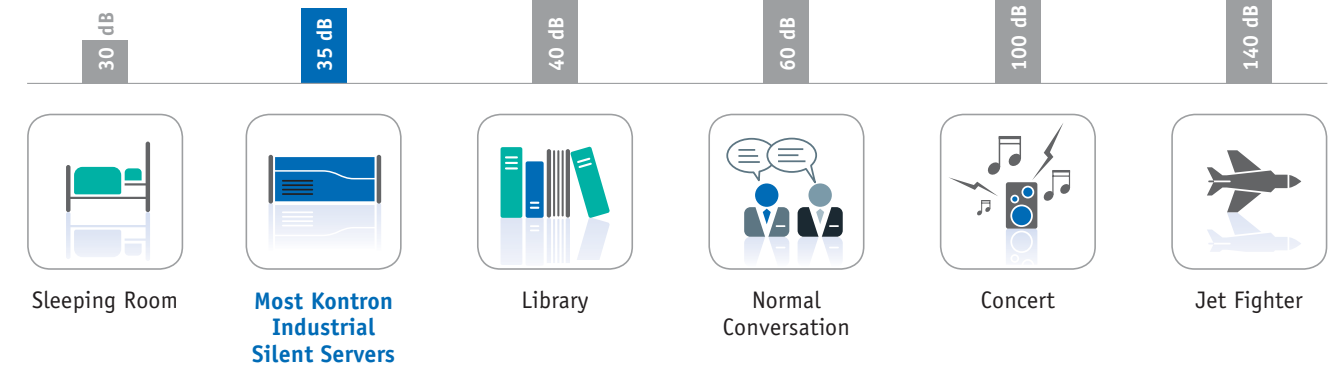
- » 50,000 h

### Certification

- » CE, designed to meet UL

**KISS**

... not louder than a whisper!



### Automation

- » CE mark
- » Environmental simulations according 60068-xx

### Energy

- » Continuous performance
- » Connectivity

### Military

- » MIL-STD-461 E
- » MIL-STD-810 F

### Transportation

- » EMC according EN50121-3-2:2006
- » EN50155:2001
- » Environmental simulations according EN50155

### Image Processing

- » Full integration service

### KISS family



### Building Automation

- » Application SW ready

### Medical

- » Medical grade components

\* applies to most KISS systems





# KISS Vertical

When generic doesn't fit

Based on generic specification and configurations the KISS family fits into many applications. By adding certain vertical specifications, approvals and needed functionality, some KISS systems can be approved for vertical tasks.

## Automation

Powerful  
all around

- » Industrial Grade
- » Less maintenance
- » Continuous operation
- » Connectivity



## Building Automation

Facility  
Management

- » Low Noise
- » Good price performance ratio
- » Application-SW ready



## Energy

Central Data  
acquisition

- » Continuous performance
- » Reduced downtime
- » Less maintenance
- » Connectivity



## Image-processing

Full integration  
services

- » Graphic cards
- » Illumination hardware
- » Cameras
- » Cabel design
- » Software driver development



## Medical

Visualization and  
control subsystem

- » Medical LAN card
- » Medical rated power supplies
- » Low Noise
- » Life-cycle management



## Military

Rugged servers for  
harsh environments

- » MIL Std 810F
- » MIL Std 461E
- » Military Grade



## Transportation

Passenger  
Infotainment

- » High performance
- » Extreme shock and vibration resistance
- » EN50155 Certified







## Application Stories

### Stage Tec servers now even more silent

**Kontron Industrial Silent Server for use in recording studios and broadcast vehicles**

For use in the recording studio, Stage Tec sought a rackmount server that was not only extremely robust and long-term available, but also particularly quiet. In use today is the whisper quiet Kontron Industrial Silent Server, which was also made even quieter for Stage Tec in a special version.

The developers at Stage Tec were so impressed that they now use the server even in broadcast vehicles, as its performance significantly exceeds all other known systems, according to the Stage Tec developers.

### Single Fastjet Pilot Flies Multiple Aircrafts

**Rugged VME and CompactPCI hardware platform controls multiple unmanned aircraft**

During March 2007 a series of QinetiQ research activities culminated with a Royal Air Force (RAF) pilot successfully controlling multiple unmanned aircraft from the cockpit of a Tornado military jet. For this series of flight trials, QinetiQ's sophisticated control software was hosted on a dedicated Kontron platform comprising a mix of standard, off-the-shelf boards based on 3U CompactPCI® and VME embedded computing form factors as well as Kontron Industrial Silent Servers.

### Agent software from Asentics with multicore Kontron Industrial Silent Servers

**A successful symbiosis for industrial image processing**

The new agent-based software architecture from Asentics for industrial image processing on surface inspection applications, such as PCB inspection, takes full advantage of the performance offered by Kontron Industrial Silent Servers equipped with x86-based multicore processors.

At the same time, the highly flexible agent-based software architecture accelerates the application-specific configuration of Asentics' image processing systems. The combined solution is a successful symbiosis of the latest hardware technology and the related software.

### Highly available embedded server for secure teleservices

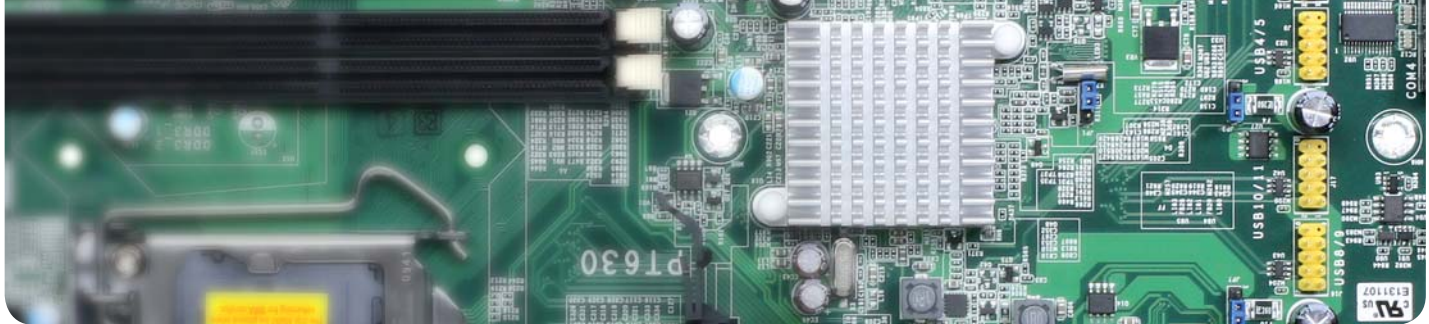
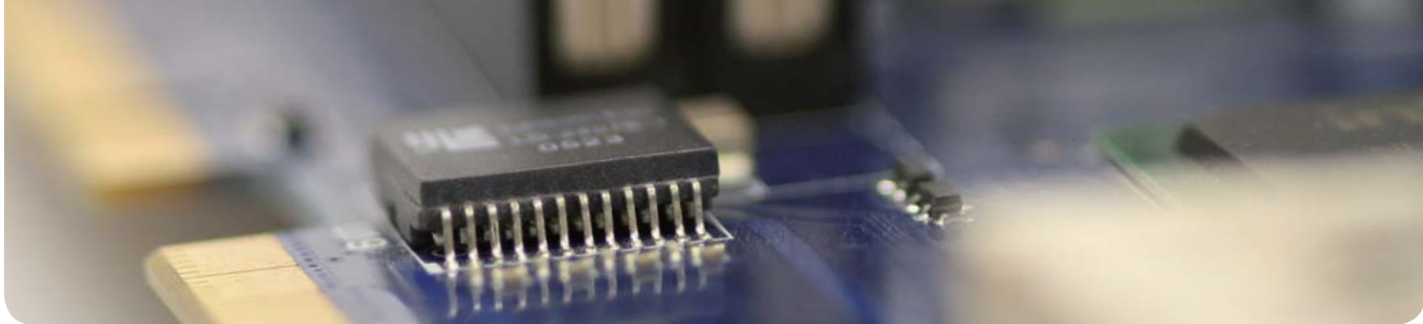
**Kontron Industrial Silent Servers in use as a high-end firewall and VPN gateway for industrial teleservices**

For secure remote maintenance and diagnosis of machines and systems via the Internet, Innominate has developed a highly-available 19-inch network security solution, which is used in service centers as a high-end firewall and VPN gateway. There it handles the specific requirements for building VPNs and then maintains these secure virtual private network connections to remote industrial systems.

Because this node is responsible for up to 1,000 simultaneous VPN connections, the highest availability requirements are placed on it. For this reason, server hardware from Kontron is utilized. It meets availability requirements that are usually only found in carrier-grade telecommunications platforms, but at industry-standard pricing.







Flexible KISS Systems

Performance and Configuration are based on Kontron’s extensive range of CPU boards and backplanes which allows them to be adapted to meet a very wide range of requirements.



Slot CPUs



PCI-960



PCI-760



PCI-759



PCI-761

| System        |                |   |   |   |
|---------------|----------------|---|---|---|
| KISS 1U       | X              | X |   | X |
| KISS 1U Short |                |   |   |   |
| KISS 2U       | X              | X | X | X |
| KISS 2U Short |                |   |   |   |
| KISS 4U       | X <sup>1</sup> | X | X | X |
| KISS 4U Short |                |   |   |   |

Coming soon!

<sup>1</sup> North America only

Mainboards



KTQ45 Flex



KTQ45 ATX



KT695 Flex



KT965 ATX



986 MITX

| System        |   |   |                |                |   |
|---------------|---|---|----------------|----------------|---|
| KISS 1U       |   |   |                |                |   |
| KISS 1U Short |   |   |                |                | X |
| KISS 2U       | X |   | X              |                | X |
| KISS 2U Short | X |   | X              |                | X |
| KISS 4U       |   | X |                | X <sup>1</sup> |   |
| KISS 4U Short | X |   | X <sup>1</sup> |                |   |

<sup>1</sup> North America only

Mainboards



KT GM Mini ITX



Q57 ATX



KTC 5520

| System        |   |   |   |
|---------------|---|---|---|
| KISS 1U       |   |   |   |
| KISS 1U Short | X |   |   |
| KISS 2U       |   |   |   |
| KISS 2U Short |   |   |   |
| KISS 4U       |   | X | X |
| KISS 4U Short |   |   |   |

Backplanes



xBP-6E5P0



xBP-6E2P3



xBP-13E8P3



xBP-13E5P7\_2

others on request

| System  |   |   |   |   |
|---------|---|---|---|---|
| KISS 2U | X | X |   | X |
| KISS 4U |   |   | X | X |





## Certified KISS Accessories

### Rugged Hardware RAID subsystems

#### KISS Stor 1

High-performance and extremely flexible solution for RAID1 disk mirroring.

- » RAID 1 Subsystem
- » SATA I
- » Integrated RAID Controller
- » Industrial Specification
- » Plug and Play



With a cost effective SATA approach, the KISS-Stor 1 mirrors data to the other disk drive simultaneously and delivers optimized performance. If one drive fails, data is secured by the other drive and alarm sounds to alert you. Featuring intelligent online recovery, KISS-Stor 1 lets you hot swap a failed drive and it automatically rebuilds the data to the new drive without any system down time. The KISS-Stor 1 RAID box features a user-friendly rack design that lets you easily install a backup drive, or replace a drive that fails. Each hard drive carrier supports a one-inch high 3.5 inch for factor disk drive. Additional data security is provided by a key-locking system, that prevents unauthorized access to each disk drive.

#### KISS Stor 0/5

High-performance and extremely flexible solution for RAID0/5.

- » RAID 0/5 Subsystem
- » SATA I
- » Integrated RAID Controller
- » Industrial Specification
- » Plug and Play



With a cost effective SATA approach, the KISS-Stor 0/5 mirrors data to the other disk drive simultaneously, and delivers optimized performance. If one drive fails, data is secured by the other drive and alarm sounds to alert you. Featuring intelligent online recovery, KISS-Stor 0/5 lets you hot swap a failed drive and it automatically rebuilds the data to the new drive without any system down time. The KISS-Stor 0/5 RAID box features a user-friendly rack design that lets you easily install a backup drive, or replace a drive that fails. Each hard drive carrier supports a one-inch high 3.5 inch for factor disk drive. Additional data security is provided by a key-locking system, that prevents unauthorized access to each disk drive.

#### KISS Stor slim

Compact 3.5" size RAID1 Subsystem for 2.5" HDD or SSD



- » Ultra Slim Industrial RAID 1 solution
- » Just 3.5" size
- » HW RAID Controller integrated
- » Plug and play



### Rugged HDD cannisters

#### KISS DA 135

A better place for HDDs

This HDD cannister is made for the deployment of an additional SATA HDD in the KISS server.



- » Fanless cooled
- » Durable aluminum construction
- » SATA to SATA interface
- » Plug & Play and Hot Swappable



#### KISS DA 335 and DA 435

Flexible solution for KISS

KISS DA 335 and 435 delivers a flexible solution for KISS, to expand its data storage capacity within limited space. The compact size only requires 2x CD-ROM space for KISS DA 335 and 3x CD-ROM Space for KISS DA 435.



- » Fan cooled
- » Over temperature indicator
- » Over temperature alarm
- » Fan speed control



#### KISS DA 425

A unique drive cage solution

Designed to fit inside the space of a standard 5.25" drive bay, the new KISS DA 425 Disk Array is a unique drive cage solution that can accommodate up to four 2.5" SATA hard drives.



- » Plug & play
- » Hot swappable
- » Point to point, free from master/slave setting
- » Cooling fan: two 40x40x20mm fans
- » Innovative lock mechanism for drive insertion/removal





# PC CONDITION MONITORING



## PCCM – PC Condition Monitoring

PCCM for Industrial PCs – Detecting Errors Before They Occur



### Avoiding system failures with dynamic maintenance intervals

Automatic monitoring was once only available on expensive server systems, but now, PCCM brings professional monitoring capabilities to today's industrial systems.

### Constant Monitoring

Only constant monitoring of vital operating parameters such as processor temperature, fan speeds, system voltages, power supply units and hard drive condition allows possible malfunctions in hardware and software to be detected early and suitable measures to be taken.

Special solutions can also be drawn up for OEMs in order to satisfy the OEM product range and the special needs of its clientele. The OEM user thus gets increased reliability without additional expense.

### MONITORING

- » System temperatures
- » Fan speed
- » Hard drives
- » KISS Stor RAID status
- » All supply voltages
- » Redundant power supply units

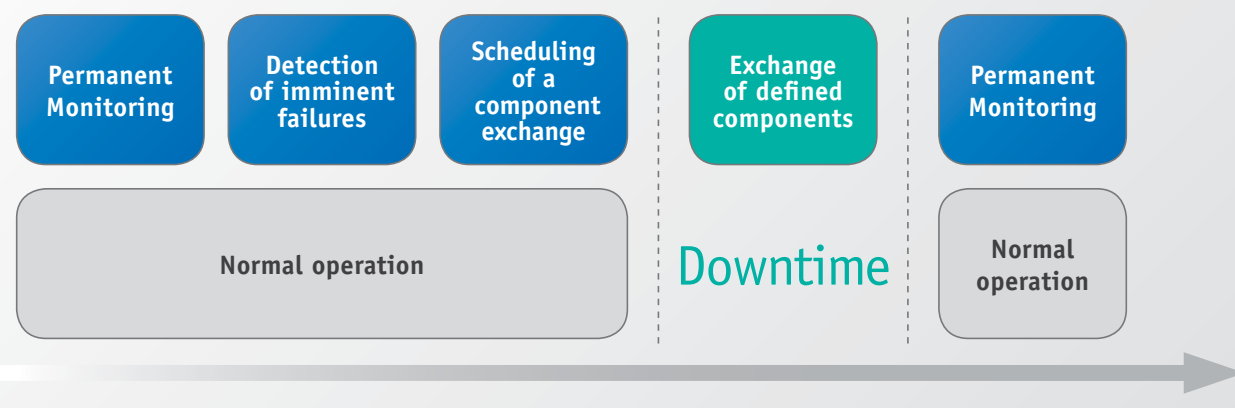
### REPORTING

- » SNMP
- » SMS
- » POPup
- » Mail
- » Local:  
acoustically and visually

### EVALUATION

- » Access to historical data
- » Memory:  
min/max/average values
- » Graphic representation

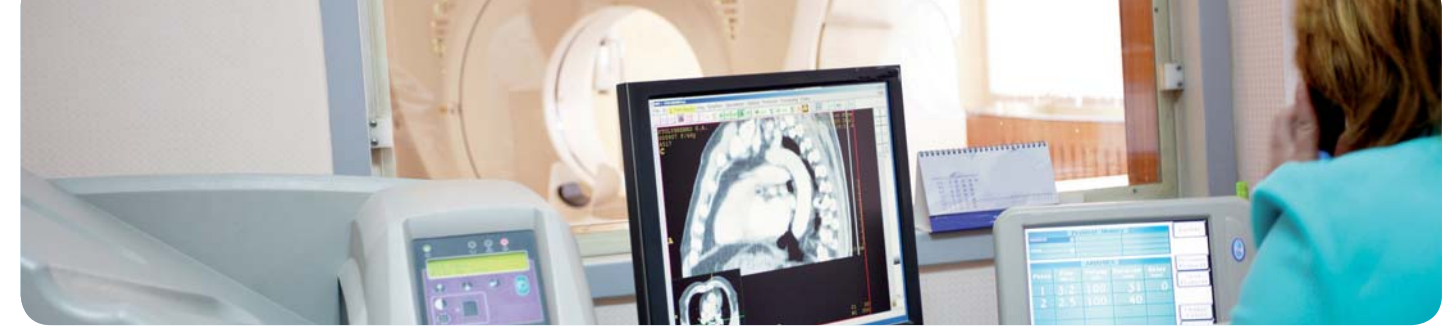
### Planned maintenance = reduced downtime with PCCM



### Uncalculable downtime without PCCM





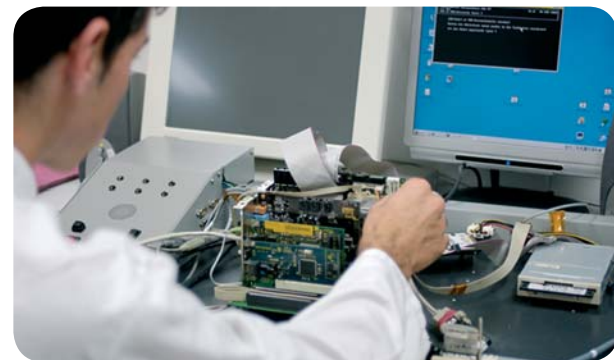


# Total Integration Management (TIM)

A complete solution for Control, Deployment and Management of business critical computer systems

## System Definition

TIM starts with defining the most suitable and cost effective platform to meet your application requirements. Kontron will work with you to identify the system configuration that satisfies both your budgetary and technical criteria.



## Revision Control

We understand that the key in deploying business critical computer systems is to ensure the delivery of both a reliable and consistent configuration. Consider the potential pitfalls of supporting your application in the field without the assurance of having a standard system configuration. TIM offers Kontron's customers the ability to define and control configuration consistency for both the system components and their respective set up. As a manufacturer and Premier member of the Intel® Embedded Alliance, Kontron is able to control revisions of key system elements such as the CPU card, BIOS and backplane. TIM looks after not only your current requirements but your future needs as well. On learning of an upcoming component change that will affect your frozen configuration, we can give timely notification to ensure that compatibility testing can be performed in good time. This ensures a seamless transition to the future proposed configuration.

## Complete System Integration

### Hardware:

TIM has been put together to offer customers not only a consistent configuration but also a complete integration solution. Our relationships with leading manufacturers in the fields of medical, automation communications, I/O and multimedia enable Kontron to install, configure and provide one stop pre and post sales support.

### Operating System and Applications:

If your configuration requires a Microsoft, Sun, Linux or indeed any other main O/S vendor's product to be installed we will take care of it. Custom application software loads are also catered for – so why not let us take responsibility for loading that image as well?



## Support and Training

### Support:

Having a relationship with a single supplier enables your company to draw on a central point of contact for technical support. With fully integrated systems supplied by Kontron, it's our responsibility to support what we have delivered.

### Training:

In addition to our backup technical support, we offer training on the system architecture and how to best support your system configuration in the field.



## Customization and OEM Services

However unique your requirements, whether for mechanical and systems engineering, machines or automated systems or for applications in medical or safety technology, we will define and develop a system solution that precisely meets your requirements.

We assume full system development responsibility and guarantee long-term availability to allow you to concentrate on your own core competency. We set the highest quality standards for industrial requirements or sensitive demands in medical technology. Define your requirements. We'll be glad to show you a suitable certified reference system.

From mechanical construction to industrial design, we'll give your product a unique look. A user interface is an important visiting card for any OEM customer. Design, ergonomics and functionality shape images and promote sales. For instance we offer various and individually customized face-plate colors, special housings and freely programmable function keys to meet your specific needs.



### Software Competence:

Kontron offers enhanced, complex software support for customers to migrate from single-core to multicore platforms for all important operating systems such as Windows 7, Linux and VxWorks.

## Engineering Services at a glance

- » Consulting
- » Studies / specifications
- » Semi- / full custom designs
- » Assigned project managers
- » Total integration Management (TIM)
- » Software engineering
- » Certification / approvals
- » Ruggedization, conformal coating
- » Extended temperature qualification
- » Supply chain management
- » Life-cycle management
- » Training
- » Onsite integration support
- » Maintenance, Technical Support
- » Long life time support >5 years

## Enabled technologies at a glance

- » Intel® vPro™
  - » TXT & TMP, AMT, VT
- » Intel® Trusted Execution Technology with TPM
  - » Intel® Active Management Technology (AMT)
  - » Intel® Virtualization Technology (VT)
- » Hypernate Modi
- » Increased memory space by 64 Bit OS
- » Damage free intelligence
- » IPMI
- » USB 3.0



## About Kontron

Kontron, the global leader of embedded computing technology, designs and manufactures standards-based and custom embedded and communications solutions for OEMs, systems integrators, and application providers in a variety of markets. Kontron engineering and manufacturing facilities, located throughout Europe, Americas, and Asia-Pacific, work together with streamlined global sales and support services to help customers reduce their time-to-market and gain a competitive advantage. Kontron's diverse product portfolio includes: boards and mezzanines, Computer-on-Modules, HMIs and displays, systems, and custom capabilities.

Kontron is a Premier member of the Intel® Embedded Alliance.

For half-a-decade now, Kontron has been named a VDC *Platinum Embedded Board Vendor*. Based entirely on user feedback, industry professionals evaluate vendors on over 45 non-product related criteria. Kontron is only one of two companies to receive the Platinum award 5-years running.

Kontron is listed on the German TecDAX stock exchange under the symbol "KBC".

For more information, please visit: [www.kontron.com](http://www.kontron.com)

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