janztec
Industrial Computing Architects

Custom-built Industrial Computers and Secure Appliances

- Embedded Computing
- Industrial PC
- Boards
- CODESYS
- Secure Appliance
- Systems Engineering

Industrial Computing Architects


Industrial
Computing
Architects

Janz Tec AG – Custom-built Industrial Computers and Secure Appliances
For 30 years Janz Tec AG has been one of the leading producers of embedded computers, industrial PCs and components. Our highly qualified staff devise hardware and software for industrial computers and secure appliances, all exclusively produced in Germany. Industrial Security is an important aspect of the appliances and guarantees secure transfer and storage of information for industrial applications. In our Systems Engineering division, we make available our longstanding experience in the areas of expertise – conception, design and integration of our customers' complex technical systems.

Industrial Computing Architects
The staff of Janz Tec AG see themselves as *Industrial Computing Architects* – they devise, develop and produce components and systems on the basis of standards customised to the customer's individual requirements. This unique combination of specialists in the areas of hardware and software engineering as well as information technology enables us to design every industrial computer, control unit and component in accordance with the customer's technological application and specific requirements. Our chief concerns in this are sustainability in the climate of IoT, long-term availability and highest quality.

Integration of Secure Appliances
Janz Tec offers a variety of interfaces for the integration of individual systems, sensors and actuators from different producers within complex system layouts, at the same time guaranteeing highest functional reliability and industrial security. Our industrial computer systems are distinguished by their highly modular, open architecture which ensures reduced integration outlay and unified information access. Industrial security is assured as an integral part of our solutions.

Your Partner for Highest Technological Demands
We will fulfil your highest technological demands. We train our highly qualified employees for this and ensure they receive continuous further training. Additionally we keep up with the changing trends, both economic and technological, by being involved with different organisations. Our aim is the optimal solution for your application.

Quality management *Quality at Work*
The very highest quality is our benchmark. We have been living and improving our process-oriented quality management system *Quality at Work* for many years. Our certification according to EN ISO 9001:2008 supports us in successfully realising demanding automation tasks. This demand for quality is also seen in the consequent training and further development of our employees. A highly-trained team guarantees high customer satisfaction.

Take advantage of over 30 years of experience and the far-reaching know-how of our *Industrial Computing Architects*.

Michael Rennerich and Matthias Stute, Management of Janz Tec AG

Milestones

1982 Michael Janz founds Janz Elektronik GmbH in Lichtenau.

1985 The successful start-up becomes Janz Computer AG after the investment of the Stute family.

1987 The company obtains a larger industrial location.

1990 Partnerships with foreign representatives expand the distribution network worldwide.

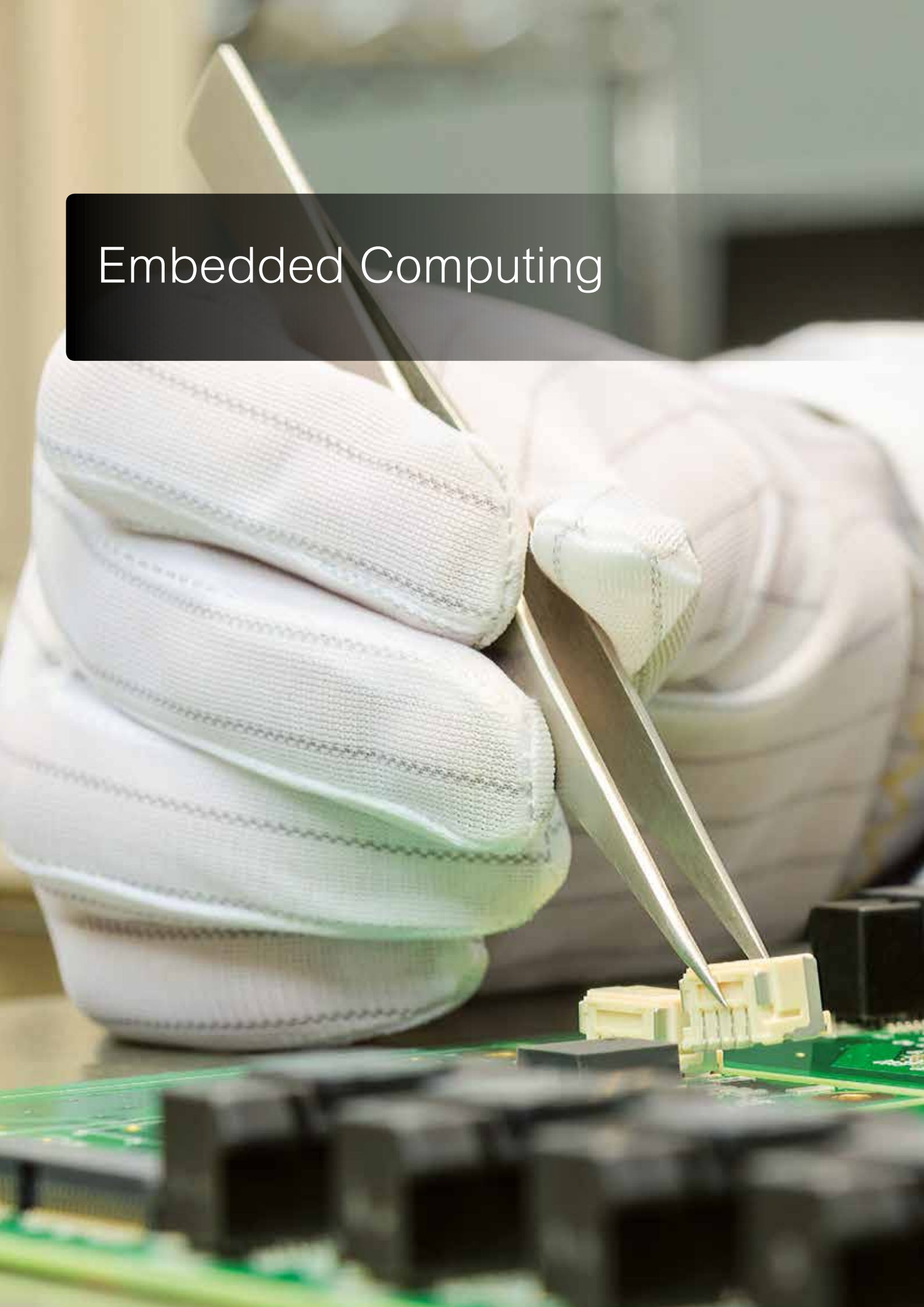
2001 Janz grows further: The operative companies Janz Informationssysteme AG and Janz Automationssysteme AG are founded.

2005 Expansion of production areas at Paderborn headquarters.

2011 Janz Automationssysteme AG operates under the name Janz Tec AG.

2015 A second facility starts in Bad Lippspringe and the production area is doubled.

Embedded Computing



emPC emVIEW emWEB

Reliable Embedded Computing Solutions

With their robustness and reliability, Janz Tec's embedded computing systems, also called emPC's, are made for industrial applications in all different branches and applications. Each application has different requirements for controlling systems such as, for example, passive cooling, zero maintenance, flexible storage media and communication interfaces.

ARM and x86-based computing systems are available in flexible performance ranges and with different operating systems.

Additionally, all emPC's can be equipped with industrial grade touch displays in different diagonals and with resistive or capacitive touchscreens. These panel PC's are known under the label emVIEW. Customer-specific designs are also available in smaller quantities.

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Fanless Embedded PC

Embedded PC System, ARM based

emPC-A/RPI

Processor
› Based on Raspberry Pi 2, Model B
› Broadcom BCM2836 processor
› Quad-Core CPU based on ARM Cortex-A7 with 900 MHz
› Fanless cooling concept
› Realtime clock, battery buffered

Memory
› System memory 1 GB DDR2
› External accessible µSD card slot

Interfaces
› 1 x 10/100 Mbit/s Ethernet
› 4 x USB (v2.0)
› 1 x 9-pin D-SUB connector for serial debug console
› 1 x CAN (ISO/DIS 11898-2 opto-isolated, termination settings via jumper)
› 1 x RS232 (Rx, Tx, RTS, CTS) or switchable to RS485 (Half Duplex; termination settings via jumper)

Power Supply
› Input 9 … 32 V_{DC}

Physical
› Ambient operating temperature 0 °C ... 45 °C
› Non-operating temperature range from -20 °C … 75 °C
› Humidity 0 % ~ 80 %, non-condensing
› Dimensions (w x d x h): 99.8 x 30.0 x 96.7 mm
› Weight approx. 0.4 kg

Supported Operating Systems
› Linux

emPC-A500

Processor
› Freescale i.MX515 application processor with 600 MHz
› Fanless cooling concept
› 32 kB instruction and data caches
› Unified 256 kB L2 Cache
› Vector floating point co-processor

Memory
› System memory 256 MB DDR2
› Boot Flash 2 MB, with boot loader
› Battery-free NVRAM 32 kB
› CompactFlash Socket, Type I/II

Interfaces
› 2 x 10/100 Mbit/s Ethernet (RJ45 connectors)
› 2 x USB (v2.0), with 500 mA power supply capability
› Up to 2 x RS232 serial interfaces
› Up to 2 x CAN/CANopen interfaces
› 15-pin VGA graphic interface on front panel

Power Supply
› Input 9…34 V_{DC}
› Power consumption ca. 6 W

Physical
› Ambient operating temperature -40 °C ... +70 °C
› Non-operating temperature range from -40 °C … 75 °C
› Humidity 0 % ~ 80 %, non-condensing
› Dimensions (w x h x d): 111 x 62 x 104 mm
› Weight approx. 0.8 kg

Supported Operating Systems
› Windows CE 6.0
› Linux
› Other operating systems on request

Option
› CODESYS IEC61131-3 runtime environment
› integrated I/O modules

Embedded PC System x86 based, with Intel Atom E3815/25

emPC-A/iMX6

Processor
› Freescale i.MX6 application processor
› Dual- or Quad-Core CPU based on ARM Cortex-A9 800 MHz, with ARMv7™, Neon, VFPv3 and Trustzone support
› Fanless cooling concept

Memory
› System memory 2 GB DDR3
› Battery-free NVRAM 128 kB
› Internal CFast Socket for SATA SSD

Interfaces
› 2 x 10/100/1000 Mbit/s Ethernet
› 2 x USB (v2.0), with 500 mA power supply capability
› Up to 2 x RS232 serial interfaces
› Up to 2 x CAN/CANopen interfaces
› Serial port with RTS/CTS only
› Reset push button
› DVI-D graphic interface on front panel (single link)

Power Supply
› Input 9…34 V_{DC}
› Power consumption ca. 9 W

Physical
› Ambient operating temperature -40 °C ... 60 °C
› Non-operating temperature range from -40 °C … 75 °C
› Humidity 0 % ~ 80 %, non-condensing
› Dimensions (w x h x d): 111 x 62 x 104 mm
› Weight approx. 0.8 kg

Supported Operating Systems
› Linux
› Other operating systems on request

Option
› CODESYS IEC61131-3 runtime environment
› integrated I/O modules

emPC-X

Processor
› Intel Atom E3825 (2 x 1.33 GHz, 1 MB L2 Cache)
› Intel Atom E3815 (1 x 1.46 GHz, 512 kB L2 Cache)

Memory
› 2 GB DDR3L system memory with 1.067 GT/s
› 128 kB battery-free NVRAM
› Internal CFast Socket for SATA SSD

Interfaces
› 2 x 10/100/1000 Mbit/s Ethernet
› 3 x USB (v2.0)
› Up to 2 x RS232 serial interfaces
› Up to 2 x CAN/CANopen interfaces
› Reset push button

Power Supply
› Input 9...34 V_{DC}
› Power consumption < 12 W

Physical
› Ambient operating temperature 0 °C ... 50 °C
› Non-operating temperature range from -20 °C … 75 °C
› Humidity 0 % ~ 80 %, non-condensing
› Dimensions (w x h x d): 111 x 62 x 104 mm
› Weight approx. 0.8 kg

Supported Operating Systems
› Windows Embedded Compact (WEC) 7
› Windows Embedded Standard (WES) 7
› Windows 7, Windows 8
› Linux
› Other operating systems on request

Option
› CODESYS IEC61131-3 runtime environment
› Integrated I/O modules

Flexible Embedded PC Systems

emPC-CX+

Interfaces
› 2 x 10/100/1000 Mbit/s Ethernet, RJ45 connectors
› 4 x USB host connection, USB 2.0 or USB 3.0
› Up to 2 x isolated CAN/CANopen ports
› Up to 2 x RS232 ports
› DVI-I connector

Power Supply
› Input 9/14…34 V_{DC}

Physical
› Ambient operating temperature range: see table
› Non-operating temperature range: -20°C…75°C
› Humidity: 0 ~ 80 %, non-condensing
› Dimensions excl. wall mounting pads (w x h x d):
› 0 slot version: 96 x 171 x 230 mm
› 2 slot version: 147 x 171 x 230 mm
› 4 slot version: 179 x 171 x 230 mm

Supported Operating Systems
› Windows Embedded Compact (WEC) 7
› Windows Embedded Standard (WES) 7
› Windows 7, Windows 8
› Linux
› Other operating systems on request

Options
› CODESYS IEC61131-3 runtime environment
› Customized IO expansion with personality board
› Up to 4 either PCI or PCIexpress slots

Processor	
Frequency	
max. RAM	
L2 Cache	
Chipset	
PCI slots	
PCIe (x1)slots	
Hard Disk (internal, 2,5") / SSD	
CFast socket (external)	
CAN / CANopen	
Ethernet (MBit/s)	
USB (v2.0 / v3.0)	
RS232	
RS485	
Power Supply	
Ambient operating temperatur range	with fan without fan

Intel®Atom™ › Intel®Celeron™ › Intel®Core™ i3 / i7

emPC-CX+/A-E3827	emPC-CX+/C-1047UE	emPC-CX+/i3-3217UE	emPC-CX+/i3-3120ME	emPC-CX+/i7-3517UE
Intel Atom E3827	Intel Celeron 1047UE	Intel i3-3217UE	i3-3120ME	Intel i7-3517UE
2 x 1.75 GHz	2 x 1.4 GHz	2 x 1.6 GHz	2 x 2.4 GHz	2 x 1.7/2.8 GHz
8 GB DDR3L	16 GB DDR3	16 GB DDR3	16 GB DDR3	16 GB DDR3
1 MB	2 MB	3 MB	3 MB	4 MB
integrated in SoC	HM76	QM77	QM77	QM77
0/2	0/2	0/2	0/2	0/2
0/2	0/2/4	0/2/4	0/2/4	0/2/4
S-ATA	S-ATA	S-ATA	S-ATA	S-ATA
yes	yes	yes	yes	yes
2/1*	2/1*	2/1*	2/1*	2/1*
2 x 10/100/1000	2 x 10/100/1000	2 x 10/100/1000	2 x 10/100/1000	2 x 10/100/1000
4/1	4/4	4/4	4/4	4/4
1/2*	1/2*	1/2*	1/2*	1/2*
on request	on request	on request	on request	on request
9 … 34 V_{DC}	9 … 34 V_{DC}	14 … 34 V_{DC}	14 … 34 V_{DC}	14 … 34 V_{DC}
		0 °C...50 °C	0 °C...50 °C	0 °C...50 °C
0 °C...50 °C	0 °C...50 °C	0 °C...45 °C	0 °C...45 °C	0 °C...45 °C

* These options are available on request. Please contact our regional sales office for further information.

EXTREME

Particularly Robust Systems for Use in Extreme Environment

IP67

emPC-CXR – Rugged Embedded PC Systems
Rugged and high-quality computer platform
Made in Germany

› COM Express embedded processor modules
› New housing design and new cooling concept
› Extreme requirements in reference to temperature, ingress protection, shock and vibration.
› High-performance computer platform for the fields marine, mining industry, military, aircraft industry, construction machines and navy.
› Rugged communication computers specifically designed for heavy vehicles working in harsh environments.

Made in Germany

Rugged Embedded PC System

emPC-CXR

Processor
› Intel Core i7-3517UE (Dual Core Technology with up to 1.7 GHz, 4 MB L2 Cache)
› Intel Celeron 1047UE (Dual Core Technology with up to 1.4 GHz, 2 MB L2 Cache)

Interfaces
› 2 x M12 connectors for CAN or serial ports
› 2 x M12 connectors for 10/100/1000 Mbit/s Ethernet
› 2 x M8 connectors for USB v2.0
› 1 x M12 power supply connector
› 1 x M12 with 4 digital input/outputs
› 1 x 15 pin DSUB VGA connector (waterproof)

Physical
› Ambient operating temperature range from -40°C …+ 70°C
› Dimensions (w x h x d): 270 x 200 x 90 mm (not including M connector overhang)
› Shock (operational): IEC60068-2-27, 50G, half sine, 11ms duration
› Vibration (operational): IEC60068-2-64, 5Grms, random, 5-500Hz, 1Oct/min, 1hr/axis
› IP67 environmental protection

Supported Operating Systems
› Windows Embedded Standard (WES) 7
› Linux
› Other operating systems on request

Options
› CODESYS IEC61131-3 runtime environment
› OLED display with 2 x 20 characters
› 4 free programmable buttons

emPC-CX+/ET

Processor
› Intel Core i7-3517UE (Dual Core Technology with up to 1.7 GHz, 4 MB L2 Cache)
› Intel Celeron 1047UE (Dual Core Technology with up to 1.4 GHz, 2 MB L2 Cache)

Interfaces
› 2 x 10/100/1000 Mbit/s Ethernet, RJ45 connectors
› 4 x USB host connection, USB 2.0 or USB 3.0
› Up to 2 x isolated CAN/CANopen ports
› Up to 2 x RS232 ports
› DVI-I connector

Physical
› Ambient operating temperature -40°C…+70°C
› Non-operating temperature range from -40°C…85°C
› Humidity 0 ~ 80 %, non-condensing
› Dimensions excl. wall mounting pads (w x h x d): 96 x 171 x 230 mm
› Shock (operational): IEC60068-2-27, 50G, half sine, 11ms duration
› Vibration (operational): IEC60068-2-64, 5Grms, random, 5-500Hz, 1Oct/min, 1hr/axis

Supported Operating Systems
› Windows Embedded Standard (WES) 7
› Linux

Options
› CODESYS IEC61131-3 runtime environment
› Customized IO expansion with personality board

Web Panel

emWEB-7

7“ web panel with HTML5 browser support and optional CODESYS environment

Display
› 7” WSVGA TFT display
› Resolution 1024 x 600

Touch Screen
› 4-wire resistive touch screen (standard)
› Capacitive touch screen (PCT) optionally available

Processor
› Freescale i.MX6 Solo (1 x 800 MHz)

System
› Fanless cooling
› 4 free programmable buttons at front site (optional)

Power Supply
› Input 9…34 V_{DC}

Interfaces
› 1 x RJ45 connector for 10/100BaseT Ethernet
› 1 x USB 2.0

Physical and Housing
› Solid metal sheet housing for industrial usage
› IP65 at front side, IP20 at rear side
› Ambient operating temperature range 0°C … + 55°C
› Customized front design possible

Software
› Minimal Debian Linux operating system
› HTML5 browser application automatically starting in full screen mode after system boot up

Option
› CODESYS v3.x IEC61131-3 runtime environment
› Further display sizes are available on request

Industrial TFT LCD Displays

emVIEW Displays

Interfaces
› 5 rear side control buttons for Power (On/Off), OSD (activating), Confirm (for OSD menu), Up and Down (navigation within OSD menu)
› VGA and DVI-D graphic port
› RS232 and USB touchscreen port
› power connector for 14...32 V_{DC} power supply

Touch Screen
› resistive or capacitive touch screen

Housing
› Aluminum front panel with front foil for corporate design (standard is Janz‘ design)
› dimensions and weights see table

	Size (Format)	Dimension (w x h x d)	Resolution	Luminance (typ.)	Contrast Ratio (typ.)
emVIEW-8T/D	8.4“ (4:3)	257 x 190 x 38	800 x 600	400 cd/m²	500:1
emVIEW-12T/D	12.1“ (4:3)	320 x 260 x 43	800 x 600 (opt.1024 x 768)	450 cd/m²	700:1
emVIEW-15T/D	15.0“ (4:3)	382 x 306 x 46	1024 x 768	450 cd/m²	700:1
emVIEW-15WT/D	15.6“ (16:10)	427 x 279 x 45	1366 x 768	300 cd/m²	500:1
emVIEW-19T/D	19.0“ (4:3)	460 x 386 x 46	1280 x 1024	270 cd/m²	800:1

Further display sizes are available on request.

Panel PC Systems

emVIEW

The scalable product series from emVIEW systems offers a wide spectrum of processor performance and display sizes. Customer-specific solutions can be implemented at any time for optimal adaptation to your task requirements.

Housing

› Aluminum front panel with front foil for corporate design (standard is Janz‘ design)
› dimensions and weights see table

Touch Screen

› resistive and/or capacitive touch screen

Additional PC Features:

› depend on the emPC model:
emPC-A500
emPC-A/iMX6
emPC-X
emPC-CX+
emPC-CX+/ET

	6.5“
used in	emVIEW-6T
Backlight	LED
Resolution	640 x 480
Format	4:3
Luminace (typ.)	700 cd/m²
Contrast (typ.)	600:1
Colors	256k
View (hor.)	160°
View (vert.)	140°
Resistive Touch Screen	yes
Capacitive Touch Screen	no
Front Protecion	IP65

	6.5“	8.4“	12.1“	15.0“	15.6“	19.0“	Custom
emPC-A500	X	X	X	–	–	–	on request
emPC-A/iMX6	X	X	X	on request	on request	–	on request
emPC-X	X	X	X	X	X	–	on request
emPC-CX+	–	–	X	X	X	X	on request
emPC-CX+/ET	–	–	X	X	X	X	on request

This table shows the availability of the emVIEW displays with the emPC systems.
If there are some missing items, or questions, please contact your regional sales office.

8.4“	**12.1“**	**15.0“**	**15.6“**	**19.0“**
emVIEW-8WT	emVIEW-12T	emVIEW-15T	emVIEW-15WT	emVIEW-19T
LED	LED	LED	LED	LED
800 x 600	800 x 600	1024 x 768	1366 x 768	1280 x 1024
4:3	4:3	4:3	16:10	4:3
400 cd/m²	450 cd/m²	750 cd/m²	300 cd/m²	e270 cd/m²
500:1	700:1	700:1	500:1	800:1
256k	16.7 Mio.	16.7 Mio	16.7 Mio.	16.7 Mio
160°	160°	160°	170°	170°
140°	140°	140°	165°	160°
yes	yes	yes	yes	yes
on request	yes	on request	on request	on request
IP65	IP65	IP65	IP65	IP65

Panel PC Solution for Maritime Application

emVIEW-26/M

Processor:
› 6th generation Intel Core i7-4700EQ (4 x 2.4 GHz)

Memory:
› up to 16 GB DDR3

Interfaces:
› up to 6 x 10/100/1000 Mbit/s Ethernet
› 2 x Video outs (DVI-D und DVI-I graphic interface)

Expansion:
› 1 x PCIe X16 slot for short length PCI cards
› 1 x PCIe mini card
› 1 x internal expansion board for customizable serial port expansion with up to 4 additional D-SUB connectors

Integrated TFT Monitor:
› 26“ panel size, with 1920 x 1200 resolution
› ECDIS color calibration data stored on internal USB memory stick
› Build-in buzzer
› easily replaceable and temperature controlled fans
› glass front
› dimmable brightness
› up to 5 definable buttons on front panel

Physical:
› Environmental compliance to EN 60945
› Dimensions (w x h x d): 684 x 497 x 113 mm

Your Maritime Grade Panel PC for Commercial Shipping and Mega Yachts

› IEC 60945 compliant

› High-performance CPU i7 quad core

› 26“ wide screen

› 2 additional displays connectable

› Customer specific front panel optional

› Touch Screen optional

Embedded Computing Reference

Advanced Airport Navigation Lighting Controllers for Safe Landings

Challenge: The challenge for Janz Tec was to find a controller for navigation lights at airports like runways and gate signals, indicators for taxiways etc. These navigation lights need the utmost reliability and they feature redundant systems in most cases.

Solution: To allow simple integration in new as well as existing installations, the dimensions of this controller had to be compact. With dimensions of 134 x 185 x 90 mm, this PC offers the highest performance available in this configuration. Easy unit serviceability was also very important, so connections were provided above and below the system. The new system upgrades the front display and a more powerful processor as well as rapid Ethernet interfaces. Featuring the usual industrial controller interfaces (3 x GigabyteEthernet ports, 4 x USB2.0 ports, 2 x serial interfaces and 1 x DVI-I-Interface), additionally CANopen and several analogue and digital I/Os have been added to provide a perfect custom solution.

Pro Janz Tec: Requiring a long-term availability (as far as 10 years) this company searched for a reliable partner with a high level of controller expertise. Janz Tec AG's development competence, together with requirements resulted in a decision to make a custom, jointly developed controller system.

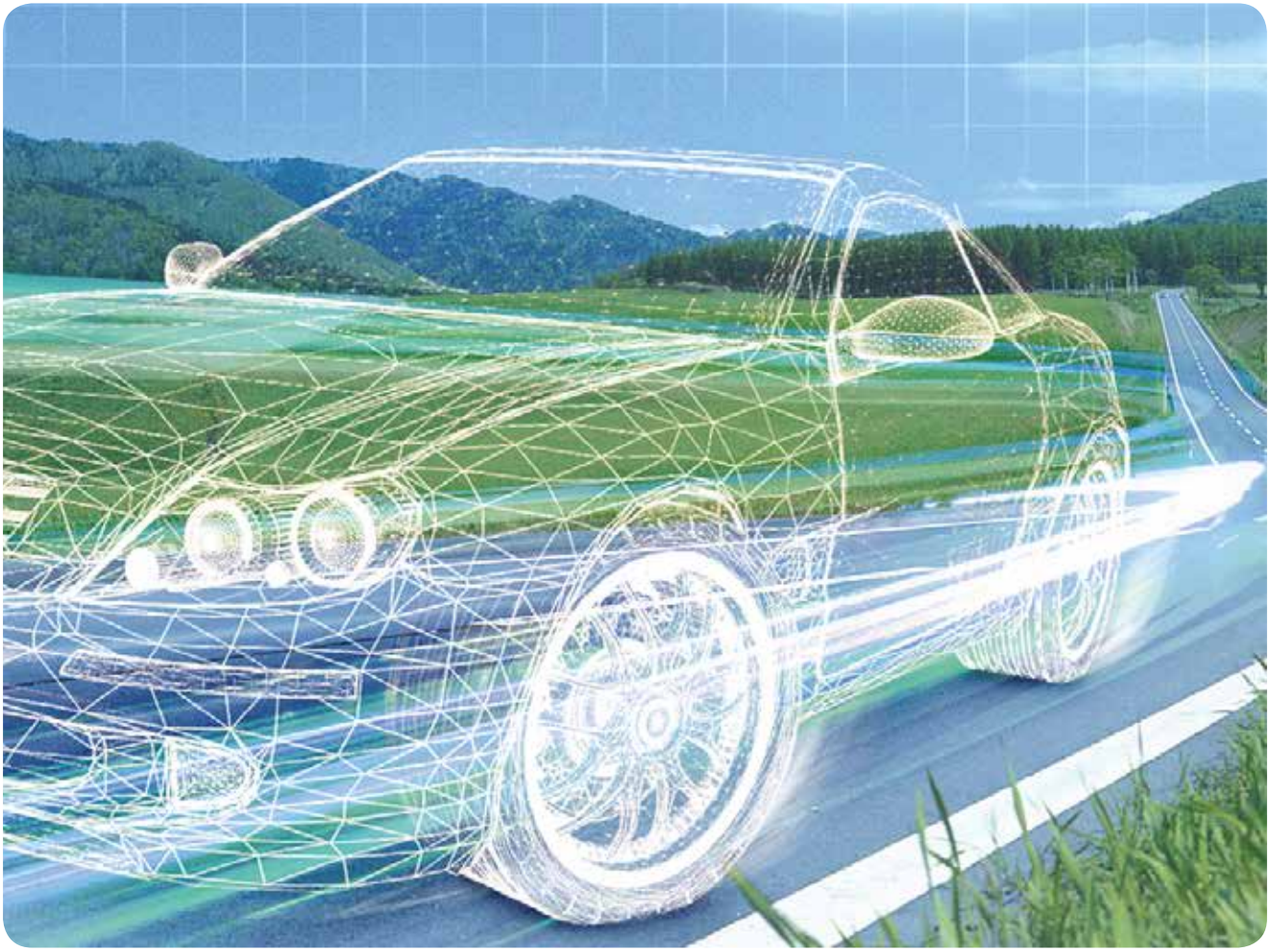
Embedded Computing Reference

SoftMotion – System-integrated Control Software

Challenge: To stay ahead as a system supplier and maintain the position of a global leader in the technology sector, top performance is required in the drive technology industry in many ways. Besides developing new products, a company must also demonstrate the ability to tailor previously developed solutions to a customer's specific requirements. Our customer has always been aware of this challenge and took up the gauntlet in three specific core target industries.

Solution: Thus, they chose to base their system on the high-performance EtherCAT at an early stage, which is why the MC6 motion controller also relies on EtherCAT – an Ethernet-based synchronous bus system. Today, the machine tool industry cannot survive without drive technology. Reliability, precision and a high load capacity must be guaranteed at all times. The drives of our customer ensure that plant and machinery operate smoothly – even in the most difficult operating conditions.

Pro Janz Tec: They not only found a control system manufacturer in the Paderborn-based company, Janz Tec, but also a qualified partner for EtherCAT issues. Janz is known for its reliability and expertise – qualities that have been shaping our customer for years. Thanks to Janz Tec, the compact size of the MC6 means it can be used in a wide range of applications.



Embedded Computing Reference

Unique Embedded Development System for Automotive Environments

Challenge: The challenge for Janz Tec was to build a customer specific embedded computer system for the MicroAutoBox (MABX), which is an example of a world-implemented Real-time development platform in Rapid-Control-Prototyping.

Solution: As an extension for MicroAutoBox II the individual embedded computer system was designed. The integrated Gigabit-Ethernet-Switch realizes the communication between the PowerPC MABX II and the Janz Tec Embedded-PC, which is powered by a passively-cooled Intel® CPU – though more powerful COM Express module can be used. To incorporate WLAN, mobile communications or FireWire®, the computer unit offers an internal PCIe-Mini-Card-slot and an Express-Card-socket on at the rear, and three Gigabit Ethernet connections on the front. One internal 2.5“ form factor SATA connector allows using ruggedized SSDs as well as high capacity hard disks.

Pro Janz Tec: This customer was looking for a partner who could offer intelligent, individualized solutions. With the Micro-AutoBox II and its embedded computing expansion, users now have a unique development system offering great versatility, compact configuration and almost unlimited possibilities.

The Senior Product Manager at our customer says: “Because of Janz Tec AG`s Embedded know-how, we were able to offer an extension option for the MicroAutoBox II within just a few months. The cooperation was straightforward and issues arising could be dealt with promptly. In Janz Tec AG we found a regional partner with obvious competence in Embedded PC technology.“

Embedded Computing Reference

Latest Generation Aircraft Tow Tractor uses Janz Tec emVIEW Systems

Challenge: The challenge for Janz Tec was to build the customer specific HMI system, with a display which is suitable for daylight operation (sunny conditions) in aircraft tow tractor cabins. Low power operation even in adverse environmental conditions is essential for fanless operation.

Solution: At the beginning of the project a standard Janz Tec emVIEW-6T/A400 was selected, a small compact ARM based Panel PC with a 6.5“ display. Important factors in selecting these systems were the full CAN/CANopen support and the use of Soft-SPS CODESYS as IEC 61131-3 control software. Based on a standard emVIEW-6T/A400, a customer specific product was designed, with a display suitable for daylight operation and customer CI front panel design.

Pro Janz Tec: Since the tractors are equipped with very large windows, and thus have a lot of ambient light in the cabins, a normal display is often difficult to read and Janz Tec was able to offer a small HMI system with a display technology suitable for this application. The decision to use Janz Tec for the series launch was based on several reasons – significantly the fast, flexible response to additional requests from the customer. This decision insured that a system could be delivered that could cope with wide temperature ranges.

Industrial PC

JIPSY
Janz Tec Industrial PC Systems

Flexible Industrial PC Systems

Janz Tec Industrial PC Systems, short: JIPSY, are industrial computing systems for different applications in industrial environment.

19” rack and wall mount housings are available, as well as customer-specific variants. Particular attention is paid to the selection of suitable components which are available long-term. Likewise, special certifications such as EN 60945, EN 50121 are possible as well as certifications according to customer specifications.

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Flexible Industrial Computing Systems

Janz Tec Industrial PC Systems (JIPSY) are known as highly flexible units which, in most cases, come as specially customized solutions. Janz Tec is able to configure every system exactly to the customer's requirements. Additionally, we make sure to use only industrial-grade components. Long-term availability of up to 10 years is very often required.

All our computing components (e. g. mainboards or SBCs) are sourced from worldwide leading manufacturers. The newest generation of processors, called Skylake from Intel®, has been launched in Q3/2015. Janz Tec is one of first companies in the world to offer systems that support this newest technology!

Skylake is the code name for the Intel® processor micro-architecture that is the successor to the Broadwell microarchitecture. Most Skylake products are branded as 6th Generation Intel® Core™ processors. Skylake is built on Intel's 14 nm manufacturing process and delivers breakthroughs in performance and power efficiency over previous-generation microarchitectures for high-performance graphics, stunning high-resolution video playback, great system performance, responsiveness and stronger security.

These features make it easy to offer some new computing systems for industrial environments. The JIPSY systems can be offered as 19" rack-mounted systems or as wall-mounted systems. Different housings with special features and various options can be supplied as well.

19'' 2U Rack Mounting System

JIPSY
Janz Tec Industrial PC Systems

ATLANTIS/2/MB/721

Platform
› 6th Generation Intel® Core™
› Intel® Q170 Chipset platform
› Life Cycle > 2022

Processor
› Intel® Core™ i7-6700TE
› Embedded Roadmap Processor
› 8 MB Cache
› up to 3.40 GHz

Memory
› 2 x 4 GB DDR4 2133MHz DIMM

Power Supply
› 500 W Bronze Single
› 100 ~ 240 VAC (Full-Range) Power Supply

Storage Medium
› 2 x 1 TB Hot-Swap SATA; 6 Gbit/s; 24/7
› 7200 rpm; 64 MB Cache
› MTBF of 1 M hours
› Intel® RAID 1 Mirroring

Optical Drives
› DVD-RW
› max. 8 x DVD±R Write Speed
› max. 24 X CD Write Speed
› M-DISC Support

Graphics
› Intel® HD Graphics 530

Ethernet
› LAN1: 10/100/1000 Mbit/s (Intel I219LM)
› LAN2: 10/100/1000 Mbit/s (Intel I211AT)

Front I/O and Front LED
› 2 x USB 3.0
› LED: Power, HDD, Fan, Temp, LAN1 and LAN2

Rear I/O
› 1 x VGA, 2 x DVI-D
› 2 x Ethernet (RJ45)
› 2 x USB 2.0, 4 x USB 3.0
› 2 x Audio (Mic-in, Line-out)
› 3 x Serial Port (RS-232)

Expansion Slots
› 2 x PCI (32-bit / 33 MHz)
› 1 x PCIexpress x16 (Gen3)

Cooling
› 1 x Fan (Ø 8 cm / 47 CFM) incl. Air Filter
› 2 x Fan (Ø 6 cm / 28 CFM) for Storage incl. Air Filter

Dimensions (w x h x d)
› 482 x 88 x 525 mm

Operating System
› Windows 7 Ultimate SP1 Embedded Systems
or Windows 8.1 Pro

All images for informational purposes only.

19'' 3U Rack Mounting System

ATLANTIS/3/MB/731

Platform
› 6th Generation Intel® Core™
› Intel® C236 Chipset platform
› Life Cycle > 2022

Processor
› Intel® Core™ i7-6700TE
› Embedded Roadmap Processor
› 8 MB Cache
› up to 3.40 GHz

Memory
› 2 x 4 GB DDR4 2133MHz DIMM

Power Supply
› 500 W Bronze Single
› 100 ~ 240 VAC (Full-Range) Power Supply

Storage Medium
› 2 x 1 TB Hot-Swap SATA; 6 Gbit/s; 24/7
› 7200 rpm; 64 MB Cache
› MTBF of 1 M hours
› Intel® RAID 1 Mirroring

Optical Drives
› DVD-RW
› max. 8 x DVD±R Write Speed
› max. 24 x CD Write Speed
› M-DISC Support

Graphics
› Intel® HD Graphics 530

Ethernet
› LAN1: 10/100/1000 Mbit/s (Intel I219)
› LAN2: 10/100/1000 Mbit/s (Intel I210AT)

Front I/O and Front LED
› 2 x USB 3.0
› Power, HDD, LAN1 and LAN2

Rear I/O
› 1 x VGA, 2 x DVI-D
› 2 x Ethernet (RJ45)
› 4 x USB 3.0
› 2 x Audio (Mic-in, Line-out)
› 3 x Serial Port (RS-232)

Expansion Slots
› 3 x PCI (32-bit / 33 MHz)
› 2 x PCIexpress x4 (Gen2)
› 2 x PCIexpress x8/x16 (Gen3)

Cooling
› 2 x Fan (Ø 8 cm / 141 CFM)
› 1 x Fan (Ø 6 cm / 27.72 CFM) incl. Air Filter

Dimensions (w x h x d)
› 426.4 x 132.2 x 480 mm

Operating System
› Windows 7 Ultimate SP1 Embedded Systems or Windows 8.1 Pro

19'' 4U Rack Mounting System

ATLANTIS/4/MB/421

Platform
› 6th Generation Intel® Core™
› Intel® Q170 Chipset platform
› Life Cycle > 2022

Processor
› Intel® Core™ i7-6700TE
› Embedded Roadmap Processor
› 8 MB Cache
› up to 3.40 GHz

Memory
› 2 x 4 GB DDR4 2133MHz DIMM

Power Supply
› 650W 80 PLUS Gold Single
› 100 ~ 240 VAC (Full-Range) Power Supply

Storage Medium
› 2 x 1 TB Hot-Swap SATA; 6 Gbit/s; 24/7
› 7200 rpm; 64 MB Cache
› MTBF of 1 M hours
› Intel® RAID 1 Mirroring

Optical Drives
› DVD-RW
› max. 24 x DVD±R Write Speed
› max. 28 x CD Write Speed
› M-DISC Support

Graphics
› Intel® HD Graphics 530

Ethernet
› LAN1: 10/100/1000 Mbit/s (Intel I219LM)
› LAN2: 10/100/1000 Mbit/s (Intel I211AT)

Front I/O and Front LED
› 2 x USB 2.0
› Power, HDD, LAN1 and LAN2

Rear I/O
› 1 x VGA, 2 x DVI-D
› 2 x Ethernet (RJ45)
› 2 x USB 2.0, 4 x USB 3.0
› 2 x Audio (Mic-in, Line-out)
› 3 x Serial Port (RS-232)

Expansion Slots
› 3 x PCI (32-bit / 33 MHz)
› 3 x PCIexpress x4 (Gen3)
› 1 x PCIexpress x16 (Gen3)

Cooling
› 1 x Fan (Ø 12 cm) incl. Air Filter

Dimensions (w x h x d)
› 430 x 176 x 445 mm

Operating System
› Windows 7 Ultimate SP1 Embedded Systems or Windows 8.1 Pro

All images for informational purposes only.

19'' 4U Rack Mounting System

JIPSY
Janz Tec Industrial PC Systems

ATLANTIS/4/BP/4F1

Platform
› 6th Generation Intel® Core™
› Intel® Q170 Chipset platform
› Life Cycle > 2022

Processor
› Intel® Core™ i7-6700TE
› Embedded Roadmap Processor
› 8 MB Cache
› up to 3.40 GHz

Memory
› 2 x 4 GB DDR4 2133MHz DIMM

Power Supply
› 650 W 80 PLUS Gold Single
› 100 ~ 240 VAC (Full-Range) Power Supply

Storage Medium
› 2 x 240 GB SATA Data Center SSD; 6 GBit/s
› MTBF of 2 M hours
› Intel Raid 1 Mirroring

Optical Drives
› DVD-RW
› max. 24 x DVD±R Write Speed
› max. 28 x CD Write Speed
› M-DISC Support

Graphics
› Intel® HD Graphics 530

Ethernet
› LAN1: 10/100/1000 Mbit/s (Intel I219LM)
› LAN2: 10/100/1000 Mbit/s (Intel I211AT)

Front LED
› Power, HDD

Front I/O
› 1 x VGA, 2 x DisplayPort
› 2 x Ethernet (RJ45)
› 2 x USB 2.0, 1 x USB 3.0
› 2 x Serial Port (RS-232)
› 2 x PS/2 (1 x KB / 1 x Mouse)

Expansion Slots
› 4 x PCI (32-bit / 33 MHz)
› 1 x PCIexpress x4 (Gen2), 2 GBit/s per direction
› 1 x PCIexpress x16 (Gen3), 16 GBit/s per direction

Cooling
› 3 x Fan (Ø 8 cm)

Dimensions (w x h x d)
› 482 x 177 x 445 mm

Operating System
› Windows 7 Ultimate SP1 Embedded Systems
or Windows 8.1 Pro

All images for informational purposes only.

ENDEAVOUR/B2000/1

Platform
› 6th Generation Intel® Core™
› Intel® H170 Chipset platform
› Life Cycle > 2022

Processor
› Intel® Core™ i7-6700TE
› Embedded Roadmap Processor
› 8 MB Cache
› up to 3.40 GHz

Memory
› 2 x 4 GB DDR4 2133MHz SO DIMM

Power Supply
› 150 W Single
› 100 ~ 240 VAC (Full-Range) Power Supply

Storage Medium
› 1 x 120 GB SATA Data Center SSD; 6 Gbit/s
› MTBF of 2 M hours

Optical Drives
› DVD-RW
› max. 8 x DVD±R Write Speed
› max. 24 x CD Write Speed
› M-DISC Support

Graphics
› Intel® HD Graphics 530

Ethernet
› LAN1: 10/100/1000 Mbit/s (Intel I219LM)
› LAN2: 10/100/1000 Mbit/s (Intel I211AT)

Front I/O and Front LED
› 2 x USB 2.0
› Power, HDD

Rear I/O
› 1 x VGA, 1 x HDMI, 1 x DisplayPort
› 2 x Ethernet (RJ45)
› 4 x USB 3.0
› 3 x Audio (Mic-in, Line-out, Line-in)
› 1 x Serial Port (RS-232)

Expansion Slots (Low Profile)
› 1 x PCIexpress x16 (Gen3), 16 Gbit/s per direction

Cooling
› 2 x Fan (Ø 7 cm / 39.45 CFM) incl. Air Filter

Dimensions (w x h x d)
› 250 x 98 x 255 mm (9.84” x 3.86” x 10.04”)

Operating System
› Windows 7 Ultimate SP1 Embedded Systems or Windows 8.1 Pro

All images for informational purposes only.

Compact Wall Mounting Systems

ENDEAVOUR/FSI1/1

Platform
› 6th Generation Intel® Core™
› Intel Q170 Chipset Platform
› Life Cycle > 2022

Processor
› Intel® Core™ i7-6700TE
› Embedded Roadmap Processor
› 8 MB Cache
› up to 3.40 GHz

Memory
› 2 x 4 GB DDR4 2133MHz DIMM

Power Supply
› 650 W 80 plus Gold Single
› 100 ~ 240 VAC (Full-Range) Power Supply

Storage Medium
› 1 x 240 GB SATA Data Center SSD; 6 Gbit/s
› MTBF of 2 M hours

Optical Drives
› DVD-RW
› max. 24 x DVD±R Write Speed
› max. 28 X CD Write Speed
› M-DISC Support

Graphics
› Intel® HD Graphics 530

Ethernet
› LAN1: 10/100/1000 Mbit/s (Intel I219LM)
› LAN2: 10/100/1000 Mbit/s (Intel I211AT)

Front LED
› Power, HDD

Front I/O
› 1 x VGA, 2 x DisplayPort
› 2 x Ethernet (RJ45)
› 2 x USB 2.0, 1 x USB 3.0
› 2 x Serial Port (RS-232)
› 2 x PS/2 (1 x KB / 1 x Mouse)

Expansion Slots
› 4 x PCI (32-bit / 33 MHz)
› 1 x PCIexpress x4 (Gen2), 2 Gbit/s per direction
› 1 x PCIexpress x16 (Gen3), 16 Gbit/s per direction

Cooling
› 3 x Fan (Ø 8 cm)

Dimensions (w x h x d)
› 482 x 177 x 445 mm

Operating System
› Windows 7 Ultimate SP1 Embedded Systems or Windows 8.1 Pro

All images for informational purposes only.

ENDEAVOUR/7130/1

Platform
› 6th Generation Intel® Core™
› Intel® H170 Chipset platform
› Life Cycle > 2022

Processor
› Intel® Core™ i7-6700TE
› Embedded Roadmap Processor
› 8 MB Cache
› up to 3.40 GHz

Memory
› 2 x 4 GB DDR4 2133MHz DIMM

Power Supply
› 400 W Single
› 100 ~ 240 VAC (Full-Range) Power Supply

Storage Medium
› 2 x 1 TB HDD; Hot-Swap SATA; 6 Gbit/s; 24/7
› 7,200 rpm; 64 MB Cache
› MTBF of 1 M hours
› Intel Raid 1 Mirroring

Optical Drives
› DVD-RW
› max. 24 x DVD±R Write Speed
› max. 28 x CD Write Speed
› M-DISC Support

Graphics
› Intel® HD Graphics 530

Ethernet
› LAN1: 10/100/1000 Mbit/s (Intel I219LM)
› LAN2: 10/100/1000 Mbit/s (Intel I211AT)

Front I/O and Front LED
› 2 x USB 2.0
› Power, HDD, Temp, Fan

Rear I/O
› 1 x VGA, 2 x DVI-D
› 2 x Ethernet (RJ45)
› 2 x USB 2.0, 6 x USB 3.0
› 2 x Audio (Mic-in, Line-out)
› 3 x Serial Port (RS-232)

Expansion Slots
› 4 x PCI 32-bit / 33 MHz
› 1 x PCIexpress x1 (Gen2), 500 Mbit/s per direction
› 1 x PCIexpress x4 (Gen2), 2.0 Gbit/s per direction
› 1 x PCIexpress x16 (Gen3), 16 Gbit/s per direction

Cooling
› 1 x Fan (Ø 12 cm / 73.8 CFM)
› 1 x Fan (Ø 6 cm / 21.2 CFM) incl. Air Filter

Dimensions (w x h x d)
› 200 x 320 x 480 mm

Operating System
› Windows 7 Ultimate SP1 Embedded Systems or Windows 8.1 Pro

All images for informational purposes only.

Industrial PC Reference

Top Quality Mobile Equipment for Concentrated Feed Mixing

Challenge: Janz Tec was required to provide a reliable controller to be used in feed-mix machinery, where exact dispensing of feed formulations is essential for the safe feeding of domestic animals. Progressive customer requirements and the latest technology in food processing also require advanced control technology in these stationary and mobile mixing plants.

Solution: A Janz-sourced computing system communicates with two displays installed in the vehicle. One 12.1“ display with touch screen is installed in the cab close to the driver to allow easy parameter setting at customer sites. From here, all control, service, and maintenance work can be performed for the entire mixer. This information is also registered at the rear of the truck by an additional display, which makes the equipment extremely user-friendly. Great care was taken in selecting and mounting the correct display for readability even in bright sunlight. This required the surface of the display to be specially treated with an anti-reflective coating. CODESYS – a Soft PLC programming tool (IEC 61131-3) – was selected as the most convenient user interface, since this has proven ideal in similar applications.

Pro Janz Tec: This customer was looking for a competent manufacturer of control systems with a good track record, longevity, and expertise. Janz Tec was able to meet all of the customer’s special requirements, such as presenting different display contents on the two monitors.

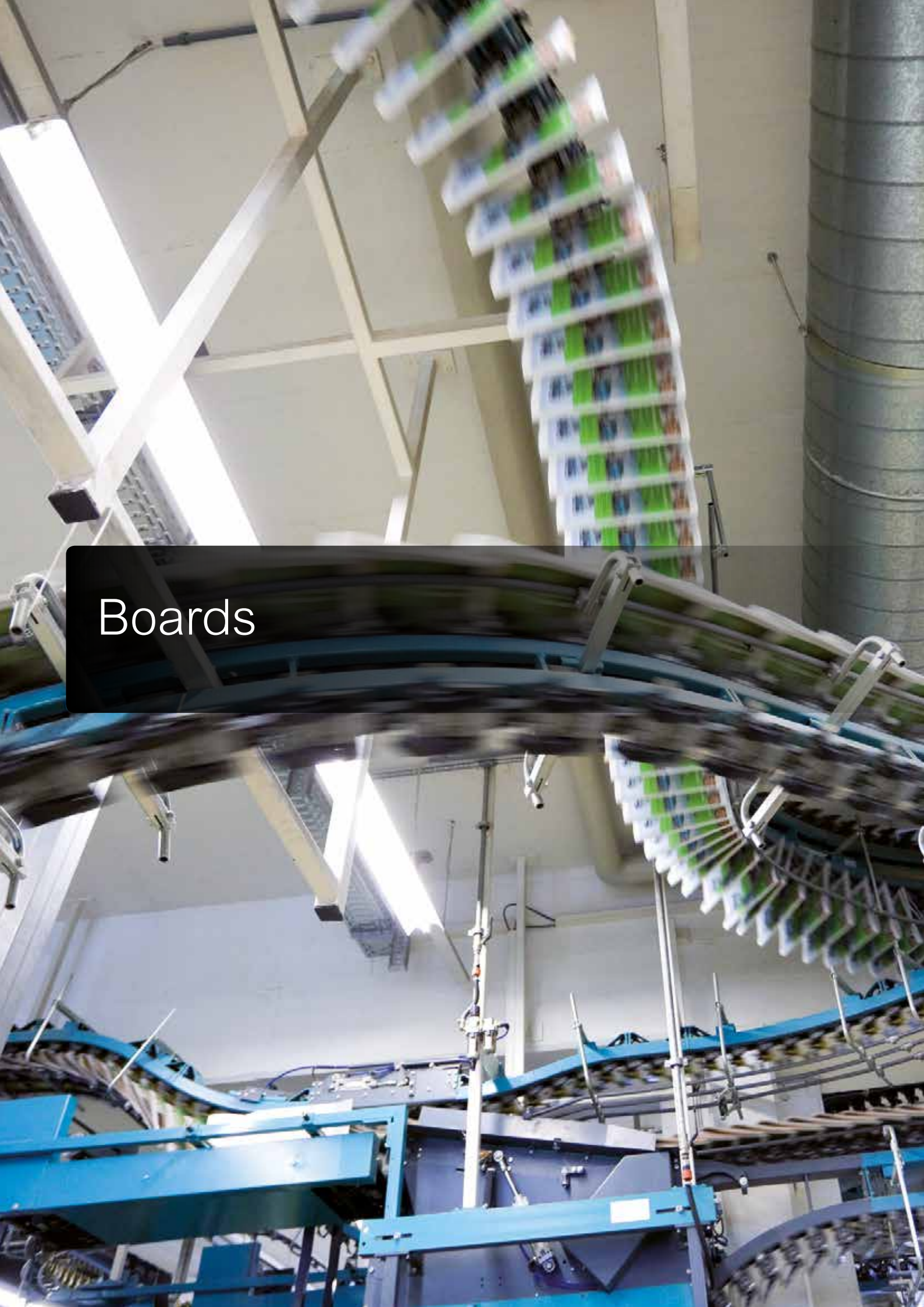
Industrial PC Reference

IEC 60945-Certified 'ECDIS' PC

Challenge: One or more 19"-rack mounted PC systems in multiscreen mode provide the ship's central information display and command control inputs, since this is more suitable for marine applications. Ergonomics and design requirements for ship bridges (especially yachting) increasingly make it necessary to use smaller and more adaptable computers. Due to the complex software required, our customer could not accept any limitations with computer performance, so a Core2Duo processor was selected.

Solution: It was necessary to develop a custom computer with the manufacturer of interated bridge systems because a) the company uses special IO boards with own designed connectors and b) the housing should be as small as possible. The combined experience of the customer and Janz Tec AG was needed!

Pro Janz: We succeeded in reducing the volume of the unit by 60 % compared to the previous generation unit. The number of internal connectors, a potential fault source, could be reduced at the same time. For the customer it is also vital that the computer has long-term availability, with even longer term after-sales service for spare parts and repairs. Since many of the components chosen come from Janz Tec directly, this reduces the 'guaranteed availability' issues.



Boards

Standardized Board Solutions

In addition to system solutions, Janz Tec develops board-level products for different bus systems such as VME or PCI. The focus is on communication interfaces, e. g. CANopen and process I/O boards. The software support for the connection of the respective boards into the system environment is extensive.

A further forte is the customer-specific board development e. g. of components with different processors (SoC).

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Overview CAN Host Interfaces

CAN
CANopen®

CAN-PCI2

CAN-USB

CAN-104

CAN-PCIL

CAN-PCIeL

CAN-mPCIeL

CAN-104L

CAN-104L+

		CAN-PCI2
System Architecture		PCI
CAN Controller		NXP SJA 1000
CAN Channels	1 Channel	X
	2 Channels	X
	4 Channels	
CPU onboard		MC68332
CAN Specification	CAN 2.0A (11 bit identifier)	X
	CAN 2.0B (29 bit identifier)	X
	CANopen	X (1ch)
	ISO/DIS 11898-2	X
	opto-isolated	X
Operating System Support	Windows 2000/XP/7/8	X
	Windows CE 6.0	
	Windows Embedded Compact 7	
	Windows Embedded Standard 7	X
	Linux	X

CAN-104	CAN-PCIL	CAN-PCIeL	CAN-mPCIeL	CAN-104L	CAN-104L+	CAN-USB
PC/104	PCI	PCIe	PCIe mini card	PC/104	PCI/104	USB
NXP SJA 1000	NXP SJA 1000	NXP SJA 1000	NXP SJA 1000	NXP SJA 1000	NXP SJA 1000	NXP SJA 1000
X	X	X	X	X	X	X
X	X	X		X	X	
	X	X				
MC68332	none	none	none	none	none	AVR
X	X	X	X	X	X	X
X	X	X	X	X	X	X
X (1ch)	X	X	X	X	X	X
X	X	X	X	X	X	X
X	X	X	X	X	X	X
X	X	X	X	X	X	X
	X	X	X	X	X	X
	X	X	X	X	X	X
X	X	X	X	X	X	X
X	X	X	X	X	X	X

CAN FD Boards

High-Performance PCI Interface

CAN-PCIH/FD

› high-performance PCI CAN field bus controller
› local intelligence with Xilinx Zynq
› PCI interface bus master capable
› 4 independent CAN FD IP Cores in Zynq FPGA (40 MHz clock)
› 2x 9-pin D-SUB connector
› 2 additional CAN interfaces can be field installed via transceiver cable
› ISO/DIS 11898-2
› optionally opto-isolated CAN interfaces
› ICANOS firmware on-board
› CANopen optionally available
› software drivers for various operating systems available

High-Performance Interface for PMC Sockets

CAN-PMC/FD

› high-performance PMC CAN field bus controller
› local intelligence with Xilinx Zynq
› PCI interface bus master capable
› 4 independent CAN FD IP Cores in Zynq FPGA (40 MHz clock)
› 25-pin D-SUB connector
› all I/Os are available at front and at Rear I/O
› ISO/DIS 11898-2
› optionally opto-isolated CAN interfaces
› ICANOS firmware on-board
› CANopen optionally available
› software drivers for various operating systems available

VMEbus Boards

Simple VME FMC Carrier (SVEC)

VME64x SVEC

› two Low-Pin Count FMC slots
› no dedicated clock signals from Carrier to FMC (as only available on HPC pins and use LPC)
› FMC connectivity: all 34 differential pairs connected,1 GTP transceiver with clock, 2 clock pairs, JTAG Xilinx FPGAs
› application FPGA: Spartan-6 XC6SLX150T-FGG900
› direct connection to all resources such as VME64x, memories and FMC connectors
› system FPGA: Spartan-6 XC6SLX9-2FTG256C Provides VME bootloader, early oscillator/PLL config Configuration Flash memory for both Main FPGA and Application FPGA configuration FPGA configuration from SPI flash or via VME Clocking resources
› 1x 10-280 MHz I2C Programmable XO Oscillator, starts up at 100 MHz (Silicon Labs Si570, freely usable)
› 1x 25 MHz TCXO controlled by a DAC with SPI interface (AD5662, used by White Rabbit PTP core)
› 1x 20 MHz VCXO controlled by a DAC with SPI interface (AD5662, used by White Rabbit PTP core)
› 2x low-jitter frequency synthesizer/fanout (TI CDCM61004, fixed configuration, Fout=125 MHz, used by White Rabbit PTP core) On-board memories
› 2x 256 MByte (2 Gbit) DDR3 (16-bit bus, M41J128M16HA-15E)
› 1x 128 Mbit SPI flash for FPGA firmware storage
› 64kbit EEPROM (24AA64T-I/MC) connected for storing application parameters
› 1x I2C configuration EEPROM (24LC64) Miscellaneous
› on-board thermometer IC (DS18B20U+)
› unique 64-bit identifier (DS18B20U+) Front panel
› 1x SFP port (White Rabbit compatible)
› 4x LEMO/SMC programmable I/Os capable of driving 3.3V @ 50 ohm
› 2x mini displayPort connectors for high-speed serial GTP links (not for video)
› 8x Programmable LED
› reset push button

32-Channel Digital Power I/O

VDOT-32

› double Eurocard form factor (6U) with VMEbus interface
› 32 opto-isolated inputs/outputs
› outputs with high-side power switch (BTS721)
› voltage ranges 12V/24V
› output current max. 2.5A, short circuit, overvoltage, overload and overheating protected
› outputs can be read back; each 8 bit group usable as inputs
› LED display, simulation sockets for each channel each channel current-limited
› undervoltage and overvoltage shutdown with auto-restart and hysteresis
› counter/timer with trigger/gate activation
› change-of-state and pattern recognition interrupt
› front-panel and P2 connection for input lines

64-Channel Digital I/O

VDIO-64

› double Eurocard form factor (6U) with VMEbus interface
› 32 digital inputs and 32 digital outputs
› input/output voltage ranges 12V/24V, other voltages optionally available
› opto-isolated outputs optionally available
› output current max. 2.5A, short circuit, overvoltage, overload and overheating protected
› LED and interrupt error indication
› counter/timer with trigger/gate activation
› change-of-state and pattern recognition interrupt
› front panel connection of I/O lines

CODESYS

CODESYS - Development Software for Industrial Control Systems

More than 300 well-known manufacturers from different industries rely on the hardware-independent CODESYS programming system from 3S-Smart Software Solutions. This makes CODESYS the market leader in IEC 61131-3 development software for industrial control systems in automation technology. Janz Tec AG offers its customers pre-configured CODESYS runtime environments for all emPC, emVIEW, emWEB and JIPSY systems.

Access to bus systems, internal IOs and NVRAM and the integration of available interfaces are already included and can be used directly from the development environment.

CODESYS on Janz Tec systems is highly universal and therefore very versatile. Hence, the systems are used in many industries for many different purposes.

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CODESYS

CODESYS has a wide range of industrial bus protocols that are already included in the environment. Users can easily integrate bus communication into their applications. The configuration of the bus systems is already integrated in the CODESYS development environment. Depending on the system type, Janz Tec AG provides the following industrial bus protocols for their devices:

Modbus

PROFIBUS®

CANopen®

PROFINET®

EtherCAT®

Real-time Machine Control

Real-time Environment

Machine control requires a real-time processing unit in most cases. Janz Tec AG provides a complete environment for real-time processing based on CODESYS, the leading IEC 61131-3 programming environment in the world. We provide both CODESYS V2 as well as CODESYS V3, each pre-installed and exactly adapted to the system on which it is running. Peripheral interfaces, bus systems and I/Os are already configured and usable when a customer starts the system the first time. Real-time environment, installation, and configuration are combined into one single package – available for all Janz Tec systems.

Since interfaces are nearly identical, customers can easily choose between several system types for their range of projects. Hardware can even be changed if more performance is needed or if machines need more complexity over time, with correspondingly more complex programming. Modular machines can be equipped with a system that meets the exact perfomance and cost needed.

SoftMotion

For integrating motors and drives into a system, CODESYS SoftMotion expansion provides function blocks standardized by the PLCopen organization. SoftMotion is available as an option. Naturally, SoftMotion also comes pre-configured and pre-licensed.

Wide range of supported operating systems

The emVIEW systems are especially suitable for visualization and monitoring purposes.

OPC server

CODESYS V3 always contains a free OPC server. So it is easy to provide data from the real-time environment to all relevant applications. Simply define a variable to be exported in the OPC namespace – that's all! Because OPC is standardized, access from OPC clients of all types is possible, either locally installed or running on a remote system.

SCADA system integration

Integrating a system from Janz Tec into complex SCADA software is as easy as it can be. Using the OPC server, each SCADA system can be configured to access real-time data via this interface.

CODESYS

V2/V3


Secure Appliance

More Security for Industrial Applications

Industrial Security is a central issue in the implementation of the new production and business models in the climate of IoT. With our Secure Appliance we offer a platform solution which was developed to ensure maximum protection for your networked data. Its modular architecture means it can be easily tailored to your requirements.
The availability of different connectors to enterprise platforms and industrial interfaces facilitates a seamless integration into your particular system environment.

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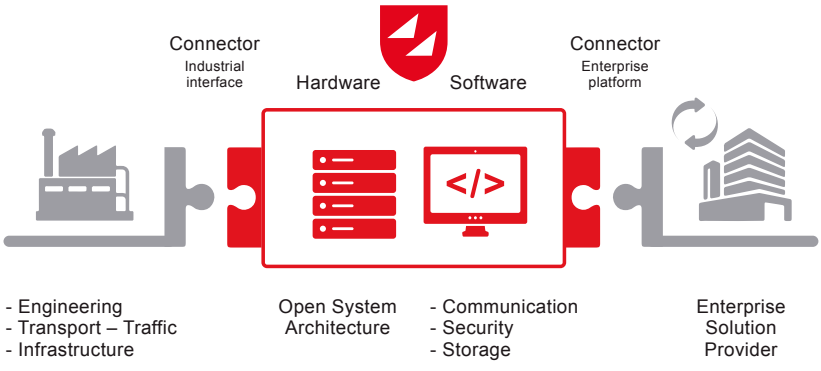
Secure Appliance

Your Benefits

1. **The bridgehead for your IT infrastructure:**
   Data and IT services available everywhere – securely and reliably.
2. **Modular design:**
   Select the hardware and software modules that are relevant for your individual application.
3. **Seamless integration into your system environment:**
   Numerous industrial interfaces and connectors to various enterprise platforms are available and simplify integration into the customer's system environment.

Platform Solution Secure Appliance



Security Features

Tamper Protection:
The appliance detects unauthorised access to device electronics and tampering activity.

Remote AAA Infrastructure:
Use your company's authentication, authorisation, and accounting (AAA) infrastructure to control access to appliances and their resources – even when offline.

Encrypted communication:
Data in transit is encrypted using state-of-the-art technology and protocols.

Secure storage:
Data at rest is always encrypted to provide a safe haven for your data.

High Assurance Boot:
To prevent tampering, the device only executes signed and certified software.

Secure multi-channel network access:
Access to local networks or the internet is provided through different channels (Landline, LTE, UMTS etc.), subject to availability.

GPS-based location control:
The device can only be operated at the intended location, preventing unauthorised transport and abuse.

Remote access and configuration:
The secure appliance can be monitored and configured from your headquarters, regardless of its location.

Customer-specific Modular Design

Hardware Modules
The use of different hardware modules allows the adaptation of the secure appliance to the particular intended purpose. The communication capacity of the system can be modularly broadened, for example, to cover such different channels as Wi-Fi, mobile or satellite communication.

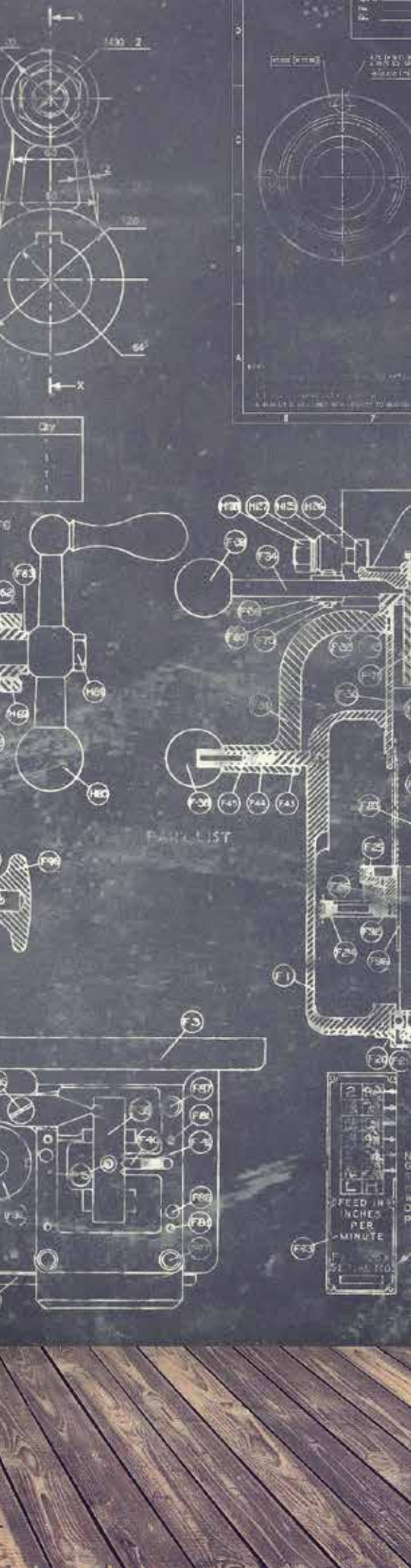
In scenarios where a system is physically accessible by third parties it is necessary to prevent unauthorised manipulation. Accordingly, the installation of suitable protective measures as components is available.

Software Modules
As with the hardware the Secure Appliances provide a modular software architecture. Different communication and security components can be applied depending on the intended purpose. These facilitate for example encrypted data transmission, fine granular control of application and service authorisation or an audit of device location. Ensuring the tamper protection of the software is a key element.

Connectors to enterprise platforms
Data collection and transmission is only meaningful if those data are subsequently processed and profitably applied. The Secure Appliance supports the most diverse application scenarios by means of connectors to different platforms, visualisations and evaluation applications.
Furthermore, data pre-processing functions can be made available on the Secure Appliance.

Connectors to industrial interfaces
Integration of industrial interfaces has been a core competence of Janz Tec AG since its inception. Machinery, equipment and vehicles can be connected over standardised interfaces like CAN, CANopen RS232/485 or OPC UA without difficulty.


Systems Engineering



Perfect System Integration for Complex Technical Facilities

Systems engineering denotes the multidisciplinary development of complex technical systems. Janz Tec combines competence and experience in the fields of mechanical design, hardware development, and software engineering to successfully implement challenging projects together with customers and business partners.

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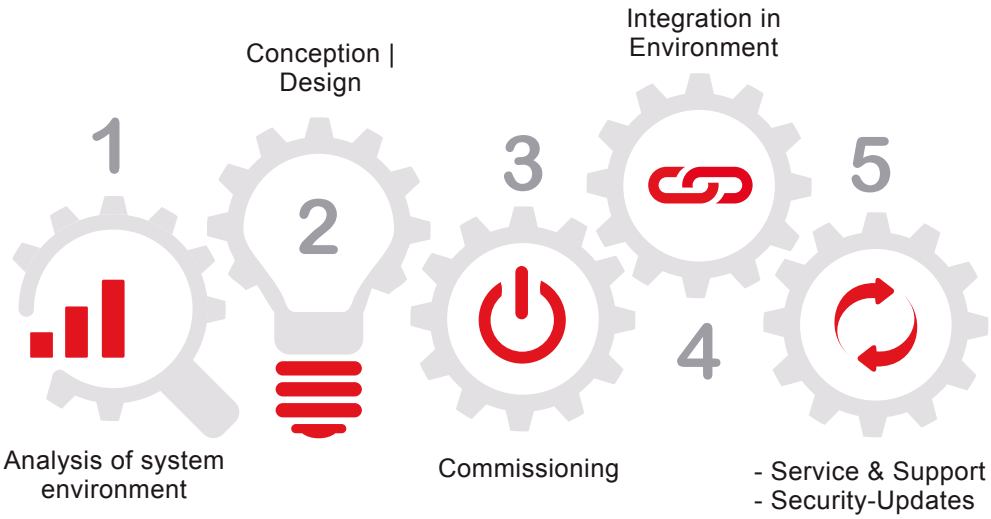
Systems Engineering

Your Benefits

1. **Multidisciplinary know-how under one roof:**
   Mechanical design, hardware development and software engineering with extensive experience from Janz Tec.
2. **Solution architecture for complex business models:**
   Together with you, we will successfully implement challenging projects from vision via conception to the solution design.
3. **Perfect system integration into your infrastructure:**
   Our detailed analysis of your system environment plus integration tests mean we can offer you a secure and reliable system which won't let you down.



Multidisciplinary Know-how

Hardware development
For 30 years Janz Tec has been expert in the development of tailor-made industrial computer systems. These include both the adaptation of existing solutions based on individual customer requests as well as completely new system design. Our focus is on the long term availability of our solutions and on highest quality.

Software development
In the area of software, Janz Tec also stands for the development of tailor-made solutions that are oriented to the customer's requirements. The area of communication and industrial security is a particular focus for us.

Our portfolio furthermore comprises assembly, configuration and adaptation of customer specific software environments as well as the development of individual drivers for our hardware components.

Solution architecture
As solution architects we support our customers in the implementation of their vision for tomorrow's business models. We provide support with ideation, conception, recording of requirements and the solution design. Depending on the individual application, we also work with third party solution providers.

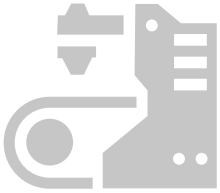
System integration
The integration of individual systems into a dedicated solution or of systems into an existing environment is one of the primary tasks that can be solved by Systems Engineering. To do this, Janz Tec analyses the system environment, records all interfaces and works out an integration design. Building on this the integration proceeds that can be implemented by Janz Tec in collaboration with its partners. In conclusion, correct operation is verified by means of integration tests. Should the customer wish, Janz Tec can also take over the management of the integration issues.

Our services also include new concept development for communication scenarios, as well as analysis and assessment of existing integrations in regard to security.


11

Industrial Computer Systems for Your Industry

Machine and Unit Construction



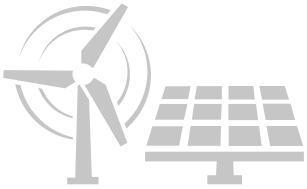
Machine Tools

Special Machines

Test Stand Systems

Logistics

Power and Energy

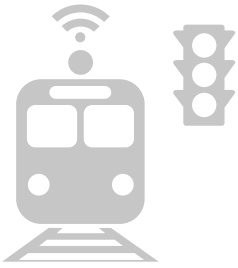


Transport and Distribution

Smart Grids

Renewable Energies

Transport and Traffic



Traffic Guidance Systems

Railway Technology

Transport Systems

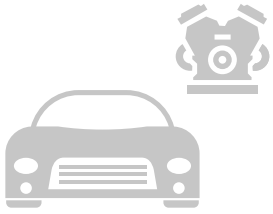
Medical Technology

Computer Tomography

Bioreactors

Laser Systems

Automotive



Driver Technology

Control Systems

Control Systems (with closed loop)

Maritime Applications and Ship Construction

Addresses and Contacts

Janz Tec has a worldwide network of sales and service contacts. Please feel free to contact them directly. Or contact us, and we will help you to find the right contact person.

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