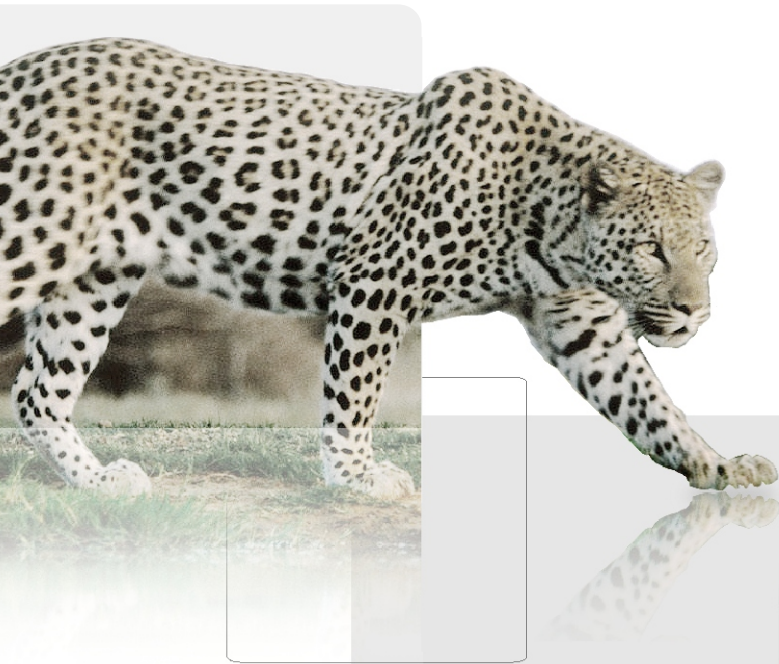


Connect to Success



RISE series

the Pioneer
in **Industrial
Controlling** Applications

Din Rail PC Q7 Embedded technologies

powered by Qseven Module
scalable performance
compact design
multiple customer options
wide operating temp.
low power consumption



www.vscom.de

RISE series

Qseven based Industrial DIN-Rail Embedded PC

The RISE series of DIN-Rail PC are designed for harsh industrial environments. It features fanless and cableless, low power consumption and operating over wide temperature ranges. Its reliable design allows to withstand with mechanical vibrations, extremely hot or cold environments, power failures or environmental electrostatic discharges.

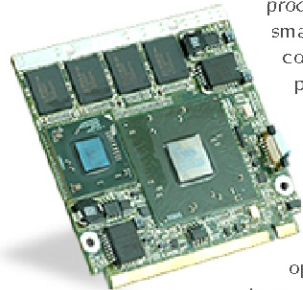
The RISE series has a modular and reliable design based on the newly emerged standard of Qseven core modules, which supports both Intel's Atom Z5xxP and Via's Nano/Eden high performance CPUs. The RISE series integrates a rich choice of connectivity devices, such as multiple LANs, USB and serial ports, VGA, digital I/O and optionally WLAN, Bluetooth, 3G/GPRS modems, CAN and POE+ to match different industrial application requests.

FEATURES

- > 500MHz ~ 1.6 GHz Processor
- > 512 MB - 1GB DDR2 SDRAM
- > Optional WLAN, Bluetooth
- > USB 2.0 on Express card 34 slot
- > HD Audio, speaker and microphone
- > HDD/SSD drive bay
- > 2 x Giga LAN
- > Digital and Analogue I/O
- > Optional CAN Bus 1Mbit/s

Powered by Qseven Module

RISE series uses VScom's Qseven-modules for the CPU core to take advantage of the of the latest processor technology towards smaller size, low power consumption and higher performance CPUs.



The performance of RISE series swaps over processors range with 0.5-1.6GHz with 0.5-1GB memory. This flexible design allows to optimally configure the system to exactly match the application requirements and offer compactness and cost-efficiency.

Scalable Performance

The RISE 3000 family is based Intel's Atom Menlow Z5xxP CPUs in 1.10-1.60GHz speed range and 512MB memory on board with overall power consumption of 18-22Watts.

The RISE 4000 family uses Via's Nano/Eden family with CPUs in 0.5-1.6GHz speed range and 1GB memory on board with overall power consumption of 18-28Watts. Using up to 6 CPUs the performance of the RISE systems is widely scalable to match and grow with the application demands.

RISE Model	Intel	RISE Model	VIA
RISE 3300	Atom 1.60GHz	RISE 4300	Nano 1.3GHz
RISE 3200	Atom 1.33GHz	RISE 4200	Nano 1.0GHz
RISE 3100	Atom 1.10GHz	RISE 4100	Eden 0.5GHz

Multiple Customer Options

RISE family offers a rich set of both standard interfaces, such as LANs, USB, VGA, RS232/422/485 ports, and dedicated interfaces, such as DI/DO channels, I2C, Timer/Counter and ADC channels. Moreover, the customer can optionally plug in additional devices, such as WLAN, Bluetooth, 3G/GPRS modem, to support his application task. Some models optionally support CAN Bus and POE+.

Wireless LAN

A MiniPCIexpress socket with both PCIe 1xLane and USB interfaces accepts minicards to support 802.11b/g wireless standard. Half- and longsize minicards can be used.

Bluetooth

The same MiniPCI socket can be used with a two-in one WLAN&BT minicard, where the Bluetooth channel interfaces over the USB port. The RISE system provides two antenna holes on the front side.

3G/GPRS

The 34 Express Card slot (USB driven) can be used by the user to insert 3G/HSDPA/UMTS/GPRS/GSM modems and achieve data and voice mobile access to internet for applications where wired ADSL internet is not available or possible.



CAN Bus

The CAN-Bus option provides a 1MBit/s high speed interface to connect to industrial CAN networks. Using the delivered API and CAN-Library the user easily can interface to CAN-Open. The CAN Bus option is a manufacturing option.

Power over Ethernet (PoE+)

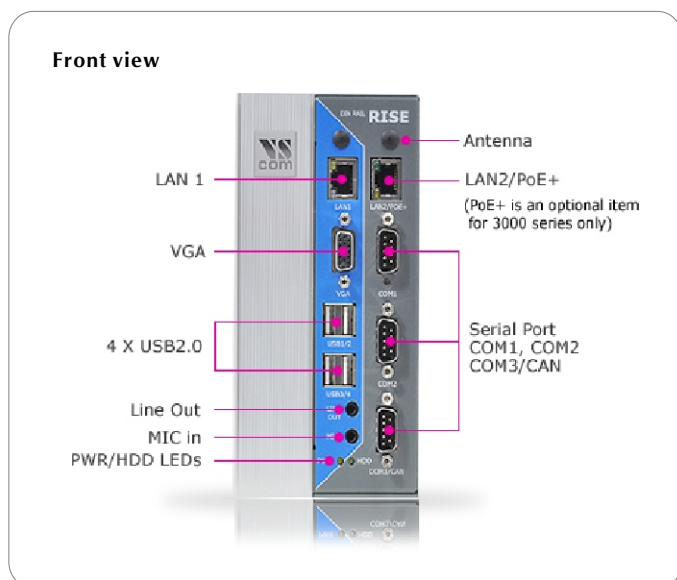
For the case the AC and/or DC power is not available at the application place the RISE systems can be completely powered over Power over Ethernet interface at the Giga LAN#2. The interface complies with PoE+ and supplies max. 25Watts. PoE+ option is a manufacturing option for RISE 3000 family.

The RISE series offer a rich connectivity set of interfaces And peripherals and act as a flexible and versatile All-in-One solution for industrial control applications.

All-in-One Solution

Equipped with a rich set of interfaces the RISE systems can be deployed in versatile applications. Besides standard PC interfaces, including 2 GigaLAN, 4 USB, 4 serial ports, VGA, High Definition Audio, 34 Express card slot, MiniPCle socket, CF expansion slot and 1.8" HDD/SSD bay, the RISE systems provide also dedicated industrial interfaces, such as I2C, DI/DO channels, Timer/Counter and ADC.

Moreover, the user can optionally plug in devices, such as WLAN, Bluetooth, GPS or 3G/HDSPA/UMTS/GPRS/GSM-modems to cope with additional requirements of his applications. CAN Bus and POE+ are model options.



Wide Operating Temperature

RISE systems are built in with an efficient power dissipation design and software power management for power saving standby modes. The RISE series are able to withstand extremely hot or cold environments Ranging from -20° to 60°C.



This makes it possible to operate them in harsh temperature locations, such as road sites or off shore power plants.

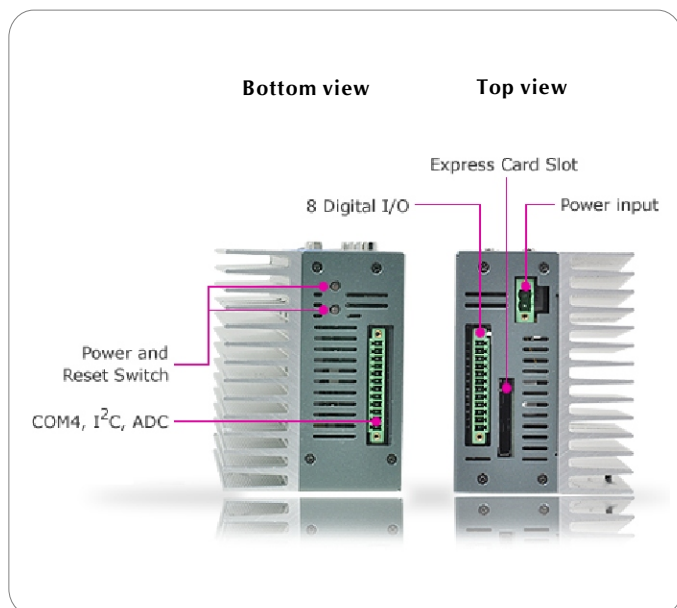


dissipation surface

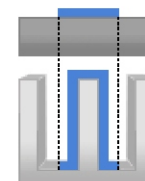
Efficient Heat Dissipation Design

RISE systems use a sophisticated fanless aluminum heatsink design, with dedicated thermal coupling and 9.5 times more cooling surface area for the heat dissipation.

Software power management allows the user to configure a multistage standby system throttling, which allows power saving and reducing of the power dissipation.



Traditional design



Efficient design

RISE series

Qseven based Industrial DIN-Rail Embedded PC

	RISE 3000 series	RISE 4000 series
CHASSIS		
Construction	Full size SECC stainless steel, Aluminum cooling plate with fins	
Mounting configuration	DIN Rail	
Cooling system	Passive heatsink, fanless	
LED indicator	Power on/off, HDD access, LAN access	
Expansion slot	1 x Mini PCI Express, PCIe x1, USB signals 2.0 High Speed only; 1 x Express Card 34, USB 2.0 High Speed	1 x Mini PCI Express, PClex 1; 1 x Express Card 34 (USB driven), USB2.0 and 1.x
Dimensions	163 x 111 x 83 (mm)	
Reset and Power Switch	Bottom side	
HARDWARE		
Processors	Intel Atom Z530P @ 1.6GHz, 533MHz FSB Intel Atom Z520 @ 1.3GHz, 533MHz FSB Intel Atom Z510 @ 1.1GHz, 400MHz FSB	VIA NANO 64 bit @ 1.3GHz, 800MHz FSB VIA NANO 64 bit @ 1.0GHz, 800MHz FSB VIA Eden @ 500MHz, 500MHz FSB
Cores	2 by Hyperthreading	
CPU socket	Q7 module	
BIOS	Phoenix-Award	
Chipset	US15WP	
MEMORY		
Memory type	DDR2 512MB	DDR2 1GB
Memory socket	Soldered onto Q7 module	
BIOS	8MBit SuperFlash	
VIDEO		
VGA Controller	Graphics Memory Controller Hub integrated In US15WP	VIA Chrome9™ HC3 integrated graphics
Video RAM	up to 128MB frame buffer	up to 256MB frame buffer
Interface	VGA	VGA
Resolution	Up to 1280 × 1024 / 32bit	Up to 1024 x 768 / 32bit
Extras	MPEG-2, MPEG-4, VC1, WMV9 & H.264 video decoding acceleration	MPEG-2, MPEG-4, VC1 and DiVX video decoding acceleration
INTEGRATED DEVICES		
HDD/SSD Bay	1 x 1.8" SATA HDD or SSD	
CF card slot	1 x CF card in True IDE mode	
Audio	Mic-in, 1 x Speaker-out	
Real Time clock	Standard	
Keyboard/Mouse	Connect at USB, Internal pin header for PS/2 Keyboard and Mouse	
CONNECTIVITY		
LAN	2 x RJ45 GigaLAN	
USB	4 x USB 2.0, Supports boot function from USB	
VGA	1 x 15-pin connector	
Com Ports	2 x RS232 DB9 male, max. 115.200bps 1 x RS232 DB9 male, max. 500.000bps. Replaceable by CAN 1 x RS422/485 on terminal block	
RS422/485	Up to 1 Mbit/s (theor. 12 MBit/s) RS422 Full-Duplex RS485 bus mode configured by DIP switch RS485 Automatic Transceiver control Signals on Terminal Block	
HD-Audio	Line-in (Mic-in) Line-out ear-jet connectors	

The RISE series of DIN-Rail PC are designed for harsh industrial environments. It features fanless and cableless, low power consumption and operating over wide temperature ranges. Its reliable design allows to withstand with mechanical vibrations, extremely hot or cold environments, power failures or environmental electrostatic discharges.

The RISE series has a modular and reliable design based on the newly emerged standard of Qseven core modules, which supports both Intel's Atom Z5xxP and Via's Nano/Eden high performance CPUs. The RISE series integrates a rich choice of connectivity devices, such as multiple LANs, USB and serial ports, VGA, digital I/O and optionally WLAN, Bluetooth, 3G/GPRS modems, CAN and POE+ to match different industrial application requests.

DIGITAL and ANALOGUE I/O		RISE 3000 series	RISE 4000 series																																																
Input		4 x Digital, TTL level (0.0 to 0.8V, 2.0 to 5.0V) Wake-Up Capability																																																	
Output		4 x Digital, TTL level Source: 32mA@High (2.0 to 5.0V) Sink: 64mA@Low (0.0 to 0.6V)																																																	
Counter		2 x TTL level, programmable count period																																																	
ADC		2 x Single Ended, 0.0 to 10.0V Input, 10 Bit																																																	
I ² C		1 x for external Wake-Up																																																	
Connectors		Terminal Blocks on Top and Bottom																																																	
POWER SUPPLY																																																			
Power supply		DC 10-30V	DC 10-30V																																																
Consumption		Min. 17W	Min. 21W																																																
ENVIRONMENT																																																			
Operating Temp.		-20° to +60°C	-20° to +55°C																																																
Storage Temp.		-20° to +80°C	-20° to +80°C																																																
SUPPORTED OS																																																			
Windows		Win XP, Win XPE, Win 7	Win XP, Win XPE, Win 7																																																
Linux		Kernel 2.4 / 2.6	Kernel 2.4 / 2.6																																																
CAN INTERFACE (optional)																																																			
Speed		CAN High Speed (up to 1Mbit/s) for transmit/receive																																																	
Signals		CAN_H, CAN_L, CAN_GND, CAN_V+, GND																																																	
Controller		SJA1000 (Philips)																																																	
Transceiver		TJA1050 (Philips)																																																	
Standards		CAN 2.0A and 2.0B, ISO11898																																																	
CAN Listen mode		Passive receive of CAN Frames, neither ACK bits nor Error Frames																																																	
Connector		DB9 male, replaces RS232 port 3																																																	
Library		Functions for simple access																																																	
CANFestival		CANopen examples showing Master/Slave communication																																																	
PoE+ (optional)																																																			
Standards		802.3at																																																	
Levels		25W																																																	
Approvals																																																			
EMC		FCC Class A, CE Class A																																																	
Environment		RoHS																																																	
ORDERING INFORMATION																																																			
Art.No		3880 (RISE 3300)	3870 (RISE 4300)																																																
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Packing list		RISE series Embedded System Terminal blocks for Digital-I/O and Power supply, CD, English documentation																																																	
Optional Accessories		mPCIe module for Wireless LAN Express card module for 3G/UMTS/HSDPA/GPRS/GSM mPCIe module for Bluetooth																																																	

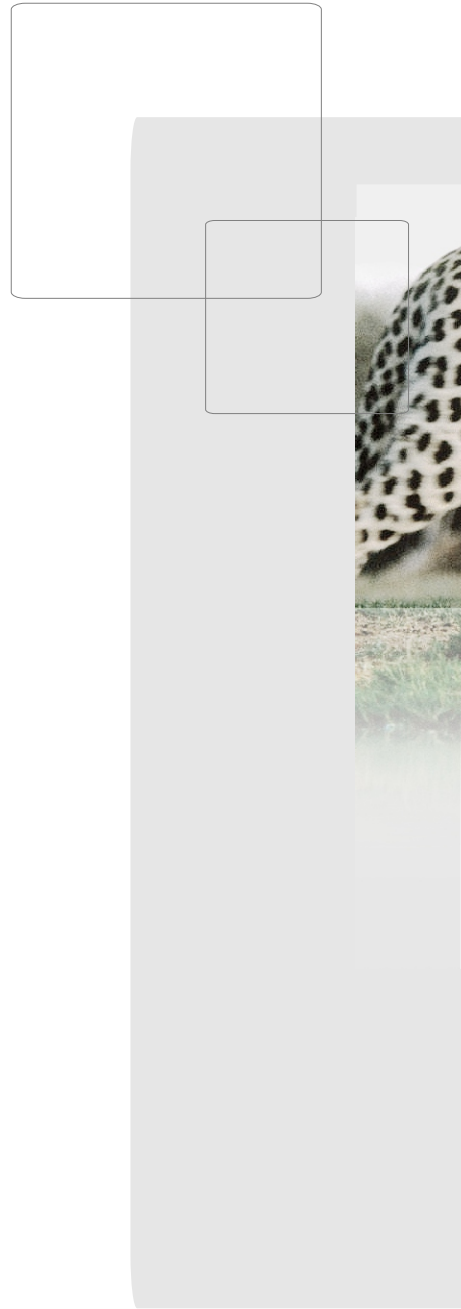
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