

PR,VR and DR – the IPC platform for maximum efficiency in automation

flexible | robust | easy to connect



Compact design and flexible use

Industrial PCs are a key element for increasing productivity and efficiency in manufacturing. In automation, robustness, adaptability, energy efficiency, long-term availability and maximum cost efficiency are called for. Based on many years of application experience, the new IPC family from Rexroth has been optimized for these goals and offers high flexibility in all industrial applications for the low to medium power range. The range impresses with its low overall cost, good scalability and long service availability.

Scalable with state-of-the-art technology

With its consistent hardware design, the new product family of industrial PCs and displays provides scaled performance, high system availability and a variety of configuration options. The performance-graduated PR box PCs are available in conjunction with the DR multi-touch displays (positioned at intervals of up to 100 meters) or combined as VR panel PCs.

Use of the latest generation of Intel ATOM and Core i processors with lower power losses gives the product family a fanless, energy-efficient design and a great price/performance ratio. The future-oriented Windows 10 IoT Enterprise LTSB is preinstalled.

The expandability of the box PCs using option modules and displays scaled in size from 12 to 21 inches enables customized solutions for various requirements.

As a special service, now individualized designs are also offered, for example, the imprint of the OEM logo.

High economic efficiency and investment protection

The new product family's design particularly caters to the high demands of the industry in terms of reliable continuous operation and long-term availability. During the manufacturing process, the devices are all tested using special test procedures to ensure that they comply with specifications.

Rexroth's comprehensive quality assurance system ensures a high level of reliability for all components in the field, even in demanding ambient conditions. The availability of the devices is guaranteed for at least five years, followed by a further five years of service and spare parts availability.

Expanded connectivity and increased data security

A wide range of expansion options and numerous interfaces can be selected to customize connectivity.

In addition, hardware extensions with PCIe slots are possible. High-performance, robust and RAID-capable SSD memories increase system availability and data backup.



Advantages resulting from special product features

- ▶ High performance thanks to the latest Intel ATOM and Core i processor generations
- ▶ Energy-efficient design with low power losses
- ▶ Extremely service friendly and zero maintenance
- ▶ Maximum compatibility for long-term use, even in tough ambient conditions
- ▶ Long-distance display interface CDI+ as a single-cable solution with Direct Boot for distances up to 100 meters

Ready for Industry 4.0

For networked environments and data-intensive i4.0 tasks, all models feature cycle-synchronous Intel i210 chipsets. They form the basis for real-time-capable Ethernet communication with controllers or higher-level systems in order to make production more flexible or shorten cycle times. The TPM 2.0 modules for security-by-design, which are also installed throughout the system, are used for secure, non-manipulable operation of the industrial PCs from the boot process through to the running application as well as for the internal storage of certificates, keys and other protective mechanisms.

In the future, Rexroth's IPC platform will be expanded to include further variants and also designed to perform direct control and motion tasks.

PR – scaled box PCs

The range of box PCs consists of the enclosure versions PR2, PR3 and PR4 featuring a compact and consistent design. Intel's newest processor generations Apollo Lake and Skylake provide excellent system performance as well as cost efficiency. The multitude of available standard interfaces simplifies integration in various automation concepts. The expansion with option modules enables a high number of unit configurations. The box PCs are suitable for either horizontal or vertical installation.

- ▶ Performance-scaled product variants with identical device properties
- ▶ High system availability and data security
- ▶ Flexible range of applications thanks to expansion options and a variety of interfaces
- ▶ Real-time-capable Ethernet communication via synchronous Intel i210 chipsets
- ▶ Universal installation positions and mounting options



Technical data

Type		PR2100	PR3100	PR4100	PR4200	PR4300
Processor						
CPU	GHz	INTEL Atom E3815 1 x 1.46	INTEL Atom E3940 4 x 1.6	INTEL Core i3-6100U 2 x 2.3	INTEL Core i5-6300U 2 x 2.4	INTEL Core i7-6600U 2 x 2.6
Graphic	GPU	Intel® HD Graphics	Intel® HD Graphics 500	Intel® HD Graphics 5200		
Operating system		Linux Ubuntu*	Windows 10 IoT Enterprise LTSB, Windows Embedded Standard 7	Windows 10 IoT Enterprise LTSB, Windows Embedded Standard 7		
Hardware						
PCIe slots		–	–	1		
mPCIe slots (internal)		–	–	1 x (connection to integrated antenna socket)		
mPCIe slots (external)		1 x (connection to interface module)	1 x (connection to interface module)	1 x (connection to interface module)		
mPCIe expansion (internal)		–	–	WLAN/Bluetooth 4 G: LTE/HSPA+/GPRS und GPS		
mPCIe expansion (external)		2 x Gbit/RJ45/Intel i350 2 x RS-232/DB9 2 x RS-422/485/DB9 4 G: LTE/HSPA+/GPRS WLAN/Bluetooth BLE"	2 x Gbit/RJ45/Intel i350 WLAN 2 x RS-232/DB9 2 x RS-422/485/DB9 4G: LTE/HSPA+/GPRS and GPS 16 DI, 8 DO	2 x Gbit/RJ45/Intel i350 2 x RS-232/DB9 2 x RS-422/485/DB9 4 G: LTE/HSPA+/GPRS and GPS 16 DI, 8 DO		
Solid State Disk SSD		32 GB eMMC	32 GB/256 GB (MLC/standard)	32 GB/256 GB (MLC/standard)		
Solid State Disk SSD (RAID 1)		–	–	2 x 256 GB (option)		
CFast slot		–	1 (option)	1 (option)		
Hard disk		–	320 GB (option)	320 GB (option)		
Hard disk (RAID 1)		–	–	2 x 320 GB (option)		
Memory						
Application	GB	4 (standard)	4 (standard), 8 (option)	8 (standard), 16 (option)		
Interfaces						
Type		2 x Gbit LAN 1 x USB3.0	2 x Gbit LAN (i210) 2 x USB2.0 2 x USB3.0 1 x RS232 1 x RS232/422/485	2 x Gbit LAN (i210) 1 x Gbit LAN (i219) 2 x USB2.0 2 x USB3.0 1 x RS232 1 x RS232/422/485		
Video		1 x HDMI, supports 1,920 x 1,080 @ 60Hz	Display port (standard), long distance video CDI+ (option)	Display port (standard), long distance video CDI+ (option)		

* PR2100 as the basis for Rexroth's IoT Gateway for easy networking of new and existing machines to Industry 4.0 environments.

VR – compact panel PCs

The VR range of compact panel PCs combines all the features of PR and DR. Great scalability, high performance, a wide range of expansion options and standard interfaces make VR the ideal platform solution for all HMI-based applications. Through their security by design by means of the integrated TPM 2.0, the robust devices are ideally suited to Industry 4.0. The panel PCs are suitable for either horizontal or vertical application.

- ▶ High-resolution widescreen displays in 15.6 and 21 inch sizes
- ▶ Consistent device design with low installation depth
- ▶ Excellent reliability thanks to high electromagnetic compatibility and shock and vibration resistance
- ▶ Optimized for horizontal and vertical installation positions and simple one-person assembly
- ▶ Customized design



VR – the panel PCs from Rexroth

Technical data

Type		VR3115	VR3121	VR4115	VR4215	VR4315	VR4121	VR4221	VR4321
Processor									
CPU	GHz	INTEL Atom E3940 4 x 1,6	INTEL Atom E3940 4 x 1,6	INTEL Core i3-6100U 2 x 2.3	INTEL Core i7-6600U 2 x 2.6	INTEL Core i7-6600U 2 x 2.6	INTEL Core i3-6100U 2 x 2.3	INTEL Core i5-6300U 2 x 2.4	INTEL Core i7-6600U 2 x 2.6
Graphic	GPU	Intel® HD Graphics 5200		Intel® HD Graphics 5200					
Operating system		Windows 10 IoT Enterprise LTSB, Windows Embedded Standard 7		Windows 10 IoT Enterprise LTSB, Windows Embedded Standard 7					
Display									
Size		396 mm (15.6“) widescreen	546 mm (21“) widescreen	396 mm (15.6“) widescreen			546 mm (21“) widescreen		
Colors		16 Mio	16 Mio	16 Mio			16 Mio		
Resolution	Pixel	1,366 × 768	1,920 × 1.080	1,366 × 768			1,920 × 1,080		
Material		Hardened glass front		Hardened glass front					
Operation									
Type		Capacitive 10 point multi-touch		Capacitive 10 point multi-touch					
Hardware									
PCIe slots		–		1					
mPCIe slots (internal)		–		1 x (connection to integrated antenna socket)					
mPCIe slots (external)		1 x (connection to interface module)		1 x (connection to interface module)					
mPCIe expansion (internal)		–		WLAN/Bluetooth 4 G: LTE/HSPA+/GPRS and GPS					
mPCIe expansion (external)		2 x Gbit/RJ45/Intel i350 WLAN 2 x RS-232/DB9 2 x RS-422/485/DB9 4 G: LTE/HSPA+/GPRS and GPS 16 DI, 8 DO		2 x Gbit/RJ45/Intel i350 2 x RS-232/DB9 2 x RS-422/485/DB9 4 G: LTE/HSPA+/GPRS and GPS 16 DI, 8 DO					
Solid State Disk SSD		32 GB/256 GB (MLC/standard)		32 GB/256 GB (MLC/standard)					
Solid State Disk SSD (RAID 1)		–		2 x 256 GB (option)					
CFast slot		1 (option)		1 (option)					
Hard disk		320 GB (option)		320 GB (option)					
Hard disk (RAID 1)		–		2 x 320 GB (option)					
Memory									
Application	GB	4 (standard), 8 (option)		8 (standard), 16 (option)					
Interfaces									
Type		2 x Gbit LAN (i210) 2 x USB2.0 2 x USB3.0 1 x RS232 1 x RS232/422/485		2 x Gbit LAN (i210) 1 x Gbit LAN (i219) 2 x USB2.0 2 x USB3.0 1 x RS232 1 x RS232/422/485					
Video		Display port (standard), long distance video CDI+ (option)		Display port (standard), long distance video CDI+ (option)					

DR – multi-touch displays

The DR capacitive multi-touch displays are available in different sizes and versions for horizontal or vertical applications. They are connected to the PR range of box PCs via the standard interfaces DisplayPort/USB or the long-distance interface CDI+ as a single-cable solution with Direct Boot for distances up to 100 meters. Up to three devices from the DR range can be networked to form a multi-display network.

- ▶ High-resolution widescreen displays measuring from 12 to 21 inches
- ▶ Capacitive multi-touch with five-finger detection for precise operation
- ▶ Anti-reflective and scratch-resistant panel surface
- ▶ Optimized for horizontal and vertical installation positions and simple one-person assembly
- ▶ Can also be used in harsh, demanding ambient conditions
- ▶ Line networking of up to 3 displays
- ▶ Customized design



Technical data

Type		DR0012	DR0015	DR0018	DR0021
Display					
Type		TFT			
Size		307 mm (12.1") widescreen	396 mm (15.6") widescreen	470 mm (18.5") widescreen	546 mm (21.5") widescreen
Colors		16 Mio			
Resolution	Pixel	1,280 × 800	1,366 × 768	1,366 × 768	1,920 × 1,080
Material		Hardened glass front			
Operation					
Type		Capacitive 10 point multi-touch			

Operating system and software tools – durable and efficient

An essential component of the new IPC platform is the use of Windows 10 IoT Enterprise Long Term Servicing Branch (LTSB) as the operating system. It was specifically developed by Microsoft for networking intelligent devices from a diverse range of platforms. Unlike standard Windows, function updates are not mandatory, which means the functional compatibility of intelligent devices is ensured over the entire lifecycle.

The manufacturer guarantees a 10-year availability period for Microsoft security updates and patches, which is an important product attribute, especially when used in networked environments. At the same time, users can decide for themselves whether and which updates they use since updates and patches are not obligatory.

Rexroth has also pre-installed software tools for servicing and diagnosing the unit. In addition, high-performance software packages are available for visualization, data processing, analysis and networking, as well as backup and restore for data.

- ▶ 64-bit operating system for industry applications
- ▶ Language extensions: German, English, French, Italian, Spanish, Portuguese and Swedish
- ▶ Embedded and security features
- ▶ LTSB:
 - 10 year availability of Microsoft security updates and patches
 - Updates and patches neither mandatory nor automatic
 - Function update only for new version firmware



Comprehensive services – technology and service under one roof

We offer a complete range of drive and control solutions backed up by in-depth consultancy expertise and an individual service portfolio ranging from conceptual development and commissioning to modernization. We help you maximize your machines' lifecycle.

Project planning and application support

Our branch experts support and advise you, both in the planning and construction phases.

Software and hardware engineering

Rexroth provides expert advice and support to assist you during development of your production systems and networks. IEC-compliant PLC function modules for almost all industries are available in our software library.

Inbetriebnahme

Our technical support experts are right at your side whenever you need fast, professional assistance during the commissioning phase. Each of our teams is made up of service engineers who specialize in a particular industry.

Service

Our service team supports you throughout the planning, installation, commissioning, operation and extended service life:

- ▶ Technical support/help desk
- ▶ Field service
- ▶ Repair service
- ▶ Spare parts service
- ▶ Retrofit and modernization
- ▶ Training



More detailed information:

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