

# ***RAC6000 Industrial Computers and Monitors***



## ***Consider the Possibilities***

Allen-Bradley RAC6000 Industrial Computer and Monitor products from Rockwell Automation continue to evolve to meet the demanding industrial control requirements of the shop floor. Unlike standard office PCs and monitors, the RAC6000 family is built for speed, reliability, flexibility, ease of upgrade and rugged operation in hazardous environments.

RAC6000 products are flexible enough to meet your application needs both today and in the future. They are built on an open platform with common operating systems. You configure your computer and monitor solution to fit your needs. RAC6000 products are built to order, easily upgradeable and ultimately robust.

## **Industrial Computers**

### **RAC6180 Industrial Computers**

The RAC6180 Industrial Computers are the flagships of our fleet. These full-featured computers offer space-saving integral active matrix TFT displays with wide viewing angles and resolutions up to 1024x768 for extraordinary application flexibility. RAC6180 Industrial Computers have outstanding resistance to shock and vibration, dirt, washdowns and high temperatures.

### **RAC6181 Industrial Computers**

Considerably smaller than many workstations, the Pentium®-class RAC6181 Industrial Computer packs plenty of options into its slim profile. Outfitted with an integral color thin film transistor (TFT) active matrix flat panel display, the RAC6181 is a fully industrial computer with a shock-mounted hard drive and shock, vibration, and temperature resistance.

### **RAC6182 Industrial Computers**

The RAC6182 Industrial Computer is the first Allen-Bradley computer designed specifically for the Windows® CE operating system. The RAC6182 is a 100% solid state computer – it has no hard drive or floppy drive, no fans or other moving parts – for a significant increase in reliability and dependability. With the popular Windows CE operating system, the RAC6182 makes use of Flash memory technology for fast, easy software installation and upgrades.

You can use the RAC6182 with RSView Machine Edition HMI Suite for Windows CE, or with OEM applications developed in-house using industry standard development tools (Visual Basic, C++). Rockwell Automation also provides a RAC6182 Software Development Kit (6189-SDK) on CD-ROM for Windows CE developers.

### **RAC6155 Industrial Workrack Computers**

For sheer computing power and application flexibility, look to the Allen-Bradley RAC6155 Industrial Workrack Computer. These high-performance computers can be mounted in many orientations, including a standard 19 in. rack, to accommodate even unusual requirements. At only 7 in. tall, it can squeeze in where most other computers can't. Add an Allen-Bradley industrial monitor for a truly powerful industrial computer solution.

## **Industrial Monitors**

### **RAC6185 Industrial TFT Flat Panel Monitors**

For heavy-duty applications, our RAC6185-B, -C and -D active matrix TFT LCD monitors are ideal. Their crisp displays work well in industrial applications when space is limited. Available in 12.1 in., 15 in. and 18.1 in. versions respectively, with resolutions up to 1280x1024, these RAC6185 monitors will withstand the most abusive environments and operating conditions, including extremes of temperature, humidity, dust and shock. They use a standard video interface and are Plug & Play compliant. A variety of touchscreen options are available to match your application needs.

The RAC6185-H, -J and -K flat panel monitors are ideal for moderate industrial environments. They include 15 in. and 17 in. TFT LCD displays in panel (NEMA 4/4X/12) and rack mount enclosures. They are economically priced, feature a wide viewing angle and offer the popular five-wire, analog resistive touchscreen as an option.

### **RAC6185 Versa Mount Monitor**

The 18.1" RAC6185 Versa Mount Monitor is specifically designed for light industrial environments. The multiple mounting capabilities of the Versa Mount allow it to be used in various configurations such as benchtop, arm pendant and yoke mounted unit. The ergonomic, fully enclosed chassis is lightweight but rugged with a NEMA 1 rating.

The RAC6185 Versa Mount monitor employs active TFT technology for crisp images and a wide viewing angle of 170 degrees. The Versa Mount monitor offers a variety of touchscreen options with resolutions up to 1280x1024.

### **RAC6186 Flat Panel Monitors (Coming in 2002)**

The RAC6186 high-performance TFT LCD flat panel monitors are being developed to withstand harsh factory floor conditions, where extreme temperatures, shock and vibration could be a problem. These monitors will boast multiple video interfaces, making them ideal for almost any video application.

Planned for release, full range dimming and long-life backlights, RAC6186 monitors will be ideal for applications requiring round-the-clock operation without screen savers because of the critical data being displayed. They will feature easy serviceability and extensive monitor diagnostics to simplify system analysis and minimize downtime.





### **RAC6157 Industrial CRT Monitor**

The 19 in. RAC6157 Industrial CRT pure-flat-screen monitor gives you the bright display and crisp screen images associated with flat-panel monitors, at a CRT price.


Producing exceptional images at all resolutions from 640x480 to 1600x1200, the RAC6157 CRT has wide viewing angles and is a great drop in replacement for traditional 20 in. CRTs. With a variety of touchscreen and Sync options (composite sync, sync-on-green, separate sync) you can apply this versatile monitor almost anywhere.

# Industrial Computers Selection Guide

## Industrial Computers

	RAC6155	RAC6180	RAC6181	RAC6182
				
<b>Description</b>	Rack-Mount Industrial Computer	Industrial Computer with Integrated Flat Panel Display	Industrial Compact Computer with Integrated Flat Panel Display	Industrial Embedded Computer with Integrated Flat Panel Display
<b>Processor Type &amp; Speeds*</b>	Long-Life Motherboards and State-of-the-Art High-Performance Pentium III Processors	Long-Life Motherboards and State-of-the-Art High-Performance Pentium III Processors	Intel Pentium and Pentium III Processors Available in Speeds Up to 866MHz	MIPS, 225MHz RISC
<b>Backplane Types</b>	Active 6 slot ATX motherboards	Active 6 slot ATX motherboards	Passive backplane with 2 or 4 expansion slots	Integrated System Board
<b>Number of Expansion Slots</b>	3 PCI, 2 ISA, 1 Shared PCI/ISA, 1 AGP Video Slot	3 PCI, 2 ISA, 1 Shared PCI/ISA, 1 AGP Video Slot (1 ISA slot used by KIC card)	2 Slot: 1 PCI, 1 Shared PCI/ISA (half-length); 4 Slot: 2 PCI, 1 ISA, 1 Shared PCI/ISA (half-length)	1 PCA (half-length)
<b>I/O</b>	2 Serial Ports, 1 Parallel Port, 2 PS/2 Ports, 2 USB Ports	2 Serial Ports, 1 Parallel Port, 2 PS/2 Ports (keyboard and mouse), 2 USB Ports, IrDA Port	2 Serial Ports (1 used with touchscreen option), 1 Parallel Port, 2 PS/2 Ports (keyboard and mouse), 2 USB Ports, 1 10/100BaseT Ethernet Port, 1 Video Port	2 Serial Ports, 1 Parallel Port, 2 PS/2 Ports (keyboard and mouse), 2 USB Ports, 1 10/100BaseT Ethernet Port, 1 Video Port
<b>Number &amp; Type of Drive Bays</b>	Two 3.5" internal hard drive bays Three 5.25" Front Access drive bays One 3.5" Front Access drive bay	Two 3.5" hard drive bays One 5.25" drive bay (lower) One 3.5" drive bay (upper)	One 3.5" hard drive bay One 3.5" drive bay	Two PCMCIA Type II Card slots
<b>RAM</b>	64MB to 512MB	64MB to 512MB	32MB to 256MB	32MB to 256MB
<b>Other Features</b>	Soft-start power supply, locking front access door, front and rear keyboard ports, front and rear filtered fans, fits EIA 19 rack	Soft-start power supply, locking gold connectors on critical connections, embedded hardware diagnostics (voltage monitor, thermal monitor, cooling fan tachometer input), removable front bezel	Locking gold connectors on critical connections, embedded hardware diagnostics (voltage monitor, thermal monitor, cooling fan tachometer input)	Operating system embedded on Disk-On-Chip, 32MB – 256MB flash ROM, 128KB battery-backed SRAM
<b>Display Types &amp; Sizes</b>	Requires External Monitor	10.4" Color TFT LCD, 800x600 Resolution; 12.1" Color TFT LCD, 800x600 Resolution; 15" Color TFT LCD, 1024x758 Resolution	10.4" Color TFT LCD, 640x480 Resolution; 12.1" Color TFT LCD, 800x600 Resolution;	7.7" Color STN LCD, 640x480 Resolution; 12.1" Color TFT LCD, 800x600 Resolution;
<b>Touchscreen</b>	N/A	Optional Resistive Analog Touchscreen, Optically Bonded to Display Window	Optional Resistive Analog Touchscreen	Optional Resistive Analog Touchscreen
<b>Keypad Type</b>	N/A	Tactile polyester membrane keypad with user-programmable, re-legendable function keys	Tactile polyester membrane keypad with user-programmable, re-legendable function keys available	Tactile polyester membrane keypad with user-programmable, re-legendable function keys
<b>Pointing Device</b>	N/A	Integral force-resistive panel mouse on 10.4" and 12.1" bezels	STD PS-2 compatible mouse (external)	STD PS-2 compatible mouse (external)
<b>Video Interface</b>	8MB AGP Video Card	8MB AGP Video Card; 4MB AGP Video Card	Embedded 2MB PCI Video (Pentium CPU), Integrated Video (Pentium III CPU)	Embedded 2MB PCI Video
<b>Hard Drive</b>	Standard EIDE (30+ Gbyte); Large EIDE (60+ Gbyte)	Standard EIDE (30+ Gbyte); Large EIDE (60+ Gbyte)	Standard EIDE (30+ Gbyte); Large EIDE (60+ Gbyte)	Disk-On-Chip Storage Card, 32MB to 256MB
<b>Removable Media Options</b>	1.44MB 3.5" floppy drive DVD-ROM drive CD-RW / DVD-ROM drive	1.44MB 3.5" floppy drive DVD-ROM drive CD-RW drive	1.44MB 3.5" floppy drive DVD-ROM drive CD-RW drive	PCMCIA Type III card slot
<b>Pre-installed Operating Systems</b>	Windows 98, Windows NT 4.0 Workstation, Windows 2000	Windows 98, Windows NT 4.0 Workstation, Windows 2000	Windows 98, Windows NT 4.0 Workstation, Windows 2000	Windows CE 3.0
<b>Pre-installed Software</b>	See Bulletin 6183 products	See Bulletin 6183 products	See Bulletin 6183 products	RSView Machine Edition

## Industrial Monitors

	RAC6157-C	RAC6185-B,C, & D	RAC6185-H,J, & K	RAC6185-V	RAC6186*
					
<b>Description</b>	19" Pure Flat Industrial CRT Monitor	Standard Industrial Flat Panel Monitor	Cost-Effective Industrial Flat Panel Monitor	Industrial Flat Panel Monitor in Versa-Mount Enclosure	High-Performance Industrial Flat Panel Monitor
<b>Operating Temperature</b>	0°C to 40°C	0°C to 50°C	0°C to 40°C	0°C to 40°C	0°C to 45°C, 50°C, or 55°C depending on model*
<b>Storage Temperature</b>	-20°C to 60°C	-20°C to 60°C	-20°C to 60°C	-20°C to 60°C	-20°C to 60°C
<b>Operating Shock</b>	10G max. (1/2 sine wave of 11ms duration)	20G max. (1/2 sine wave of 11ms duration)	10G max. (1/2 sine wave of 11ms duration)	10G max. (1/2 sine wave of 11ms duration)	20G max. (1/2 sine wave of 11ms duration)
<b>Non-Operating Shock</b>	20G max. (1/2 sine wave of 11ms duration)	30G max. (1/2 sine wave of 11ms duration)	20G max. (1/2 sine wave of 11ms duration)	20G max. (1/2 sine wave of 11ms duration)	30G max. (1/2 sine wave of 11ms duration)
<b>Operating Vibration</b>	0.003in. p-p, sine, 5 to 57Hz; 0.5g peak, sine, 57 to 640Hz.	0.015in. p-p, sine, 10 to 53Hz; 2.0g peak, sine, 53 to 640Hz.	0.006in. p-p, sine, 5 to 57Hz; 1.0g peak, sine, 57 to 640Hz.	0.003in. p-p, sine, 5 to 57Hz; 0.5g peak, sine, 57 to 640Hz.	0.015 in. p-p, sine, 5 to 53 Hz; 2.0g peak, sine, 53 to 640 Hz.
<b>Non-Operating Vibration</b>	0.006in. p-p, sine, 5 to 57Hz; 1g peak, sine, 57 to 640Hz.	0.015in. p-p, sine, 10 to 53Hz; 2.0g peak, sine, 53 to 640Hz.	0.006in. p-p, sine, 5 to 57Hz; 1g peak, sine, 57 to 640Hz.	0.006in. p-p, sine, 5 to 57Hz; 1g peak, sine, 57 to 640Hz.	0.015 in. p-p, sine, 5 to 53 Hz; 2.0g peak, sine, 53 to 640 Hz.
<b>Compliances Certifications</b>	UL195, c-UL 950, CE, Australian C-Tick, FCC Class A, DHHS X-Ray Radiation	UL 1950, c-UL 950, CE, Australian C-Tick, FCC Class A, UL 1604 Class 1 Div 2	UL 1950, c-UL 950, CE, Australian C-Tick, FCC Class A	UL 1950, c-UL 950, CE, Australian C-Tick, FCC Class A	UL 1950, c-UL 950, CE, Australian C-Tick, FCC Class A, UL 1604 Class 1 Div 2
<b>Display Types &amp; Sizes</b>	19" Pure Flat CRT 640x480 to 1600x1200 Autosync 0.25mm Dot Pitch	12" Color TFT LCD, 800x600, 256K Colors; 15" Color TFT LCD, 1024x768, 256K Colors; 18.1" Color TFT LCD, 1280x1024, Full Color	15" Color TFT LCD, 1024x768, 256K Colors; 17" Color TFT LCD, 1280x1024, 16M Colors	18.1" Color TFT LCD, 1280x1024, Full Color	15" Color TFT LCD, 1024x768, 16M Colors; 18.1" Color TFT LCD, 1280x1024, 16M Colors
<b>Touchscreen</b>	Optional 5-Wire Resistive Analog Touchscreen; Optional Capacitive Touchscreen	Optional 5-Wire Resistive Analog Touchscreen; Optional Capacitive Touchscreen on Some Models	Optional 5-Wire Resistive Analog Touchscreen	Optional 5-Wire Resistive Analog Touchscreen; Optional Capacitive Touchscreen	Optional 5-Wire Resistive Analog Touchscreen; Optional Capacitive Touchscreen on Some Models
<b>Control Panel</b>	Front Controls: Brightness, contrast, image size and position, manual degauss, pin cushion, trapezoid, and parallelogram. Rear keypad option available	Front Controls: Luminance controls (some models) Rear Controls: brightness, contrast, size, position	Front Controls: Brightness, contrast, setup menu Rear Controls: Auto setup (OSD)	Front controls: Brightness, contrast, monitor set up (OSD)	Front controls: Brightness, monitor setup, auto setup (OSD)
<b>Nominal Display Area</b>	14.2"Hx10.6"V	6185-B (12.1"): 9.7"Hx7.3"V 6185-C (15.0"): 12.0"Hx9.0"V 6185-D (18.1"): 14.1"Hx11.3"V	6185-H (15.0"): 12.0"Hx9.0"V 6185-J/K (17.0"): 13.3"Hx10.6"V	6185-V (18.1"): 14.1"Hx11.3"V	15.0": 12.0"Hx9.0"V 18.1": 14.1"Hx11.3"V
<b>Other Features</b>	Automatic degaussing and separate composite & sync-on-green video support	Integral industrial power supplies (AC and DC), full-range dimming option	Rack mount adapter brackets available for the 6185-H.		Accepts virtually any video format, including: <ul style="list-style-type: none"> <li>• Digital DVI</li> <li>• RGB Sync-on-green</li> <li>• RGB Composite Sync &amp; Separate Sync</li> <li>• PAL, NTSC &amp; S-Video</li> </ul>
<b>Enclosure Type</b>	NEMA-4/4X/12 Panel-Mount; 19" EIA Rack-Mount 9U	NEMA-4/12 Panel-Mount; NEMA-4X Stainless on Some Models; 19" EIA Rack-Mount 9U Available for 18.1" and 15" Models	NEMA-4/4X/12 Panel-Mount; 19" EIA Rack-Mount 9U	NEMA-1 Enclosure VESA FPM/PMI-Compliant Mount; Optional Articulated Arm Available; Accepts Standard VESA FPM/PMI Yoke and Arm Mounting	NEMA-4/4X/12 Panel-Mount, Rack-Mount, Versa-Mount
<b>Video Interface</b>	HD-15 (RGB, HS, VS); 5 BNC Using Adapter Cable	HD-15 (RGB, HS, VS); 5 BNC Using Adapter Cable	HD-15 (RGB, HS, VS); 5 BNC Using Adapter Cable	HD-15 (RGB, HS, VS); 5 BNC Using Adapter Cable	HD-15 (RGB, HS, VS); NTSC/PAL; S-Video; DVI; 5 BNC Using Adapter Cable
<b>Operating System Compatibility</b>	Windows 95/98, Windows 2000, Windows NT V4.0, QNX, Linux	Windows 95/98, Windows 2000, Windows NT V4.0, QNX, Linux	Windows 95/98, Windows 2000, Windows NT V4.0, QNX, Linux	Windows 95/98, Windows 2000, Windows NT V4.0, QNX, Linux	Windows 95/98, Windows 2000, Windows NT V4.0, QNX, Linux
<b>Plug-and-Play</b>	Yes	Yes	Yes	Yes	Yes

\* The RAC6186 is currently in development. Please contact the factory for most current features, specifications and availability.