

# Graphics Display Controller

Graphics Products		Application	Part Number	Features
GDC		Car Navigation System, Amusement System, FA System	CREMSON MB86290A	<ul style="list-style-type: none"> <li>• Include various kinds of 2D/3D graphics acceleration functions (@100MHz)</li> <li>• Display resolution up to 1024 x 768</li> <li>• 4 layers of overlay display</li> <li>• Supply voltage 2.5V (internal), 3.3V (external)</li> </ul>
			SCARLET MB86291A	<ul style="list-style-type: none"> <li>• Embedded 16Bit SDRAM</li> <li>• Include geometry processor (@100MHz)</li> <li>• Digital video input function</li> <li>• Include various kinds of 2D/3D graphics acceleration functions (@100MHz)</li> <li>• 4 layers of overlay display</li> <li>• Supply voltage 2.5V (internal), 3.3V (external)</li> </ul>
			ORCHID MB86292	<ul style="list-style-type: none"> <li>• External memory version of MB86291A</li> <li>• Include geometry processor (@100MHz)</li> <li>• Include digital video input function</li> <li>• Include various kinds of 2D/3D graphics acceleration functions (@100MHz)</li> <li>• 4 layers of overlay display</li> <li>• Supply voltage 2.5V (internal), 3.3V (external)</li> </ul>
			CORAL-Q MB86293	<ul style="list-style-type: none"> <li>• Include geometry processor (@166MHz)</li> <li>• Include various kinds of 2D/3D graphics acceleration functions (@133MHz)</li> <li>• 4 layers of overlay display</li> <li>• Supply voltage 1.8V (internal), 3.3V (external)</li> </ul>
			CORAL-B MB86294	<ul style="list-style-type: none"> <li>• Include geometry processor (@166MHz)</li> <li>• Include various kinds of 2D/3D graphics acceleration functions (@133MHz)</li> <li>• 6 layers of overlay display</li> <li>• Supply voltage 1.8V (internal), 3.3V (external)</li> </ul>
			CORAL-P MB86295	<ul style="list-style-type: none"> <li>• Include geometry processor (@166MHz)</li> <li>• Include various kinds of 2D/3D graphics acceleration functions (@133MHz)</li> <li>• 6 layers of overlay display</li> <li>• Include digital video input function</li> <li>• PCI bus interface</li> <li>• Supply voltage 1.8V (internal), 3.3V (external)</li> </ul>
			CORAL-PA MB86296	<ul style="list-style-type: none"> <li>• Include geometry processor (@166MHz)</li> <li>• Include various kinds of 2D/3D graphics acceleration functions (@133MHz)</li> <li>• 6 layers of overlay display</li> <li>• Include digital video input function</li> <li>• PCI bus interface</li> <li>• Supply voltage 1.8V (internal), 3.3V (external)</li> <li>• Dual display support</li> <li>• Double buffer PCI interface (almost 2x performance increase)</li> <li>• Flexible video upscale and downscale</li> <li>• Native RGB mode</li> <li>• Allows PCI bus clock to be used as input clock</li> <li>• Programmable pixel clock</li> </ul>
			LIME MB86276	<ul style="list-style-type: none"> <li>• Include various kinds of 2D graphics acceleration functions (@133MHz)</li> <li>• 6 layers of overlay display</li> <li>• Include digital video input function</li> <li>• SRAM type host interface</li> <li>• Supply voltage 1.8V (internal), 3.3V (external)</li> <li>• Dual display support</li> <li>• Flexible video upscale and downscale</li> <li>• Native RGB mode</li> <li>• Programmable pixel clock</li> </ul>



# Graphics Display Controller

Part Number	Geometry Processor	Rendering Engine	Overlay	Digital Video input	Digital RGB output	Analog RGB output	Power Supply Voltage (V)	Package	
								QFP	BGA
MB86290A	Unavailable	100 MHz (Max.)	4 layers	Unavailable	Yes	Yes	2.5 V (Internal) 3.3 V (External)	240P	-
MB86291A	100 MHz (Max.)			ITU-RBT656				208P	-
MB86292				ITU-RBT656				256P	-
MB86293	166 MHz (Max.)	133 MHz (Max.)	6 layers	No	Yes	Yes	1.8 V (Internal) 3.3 V (External)	256P	-
MB86294				ITU-RBT656				256P	256P
MB86295				ITU-RBT656				-	256P
MB86296				Digital RGB				-	256P
MB86276				133 MHz (Max.)				No	-

## Comparison Table - Tools

Evaluation Board	Description	Device
MB8629XEB01+MB86293EB01* MB8629XEB01+MB86294EB01* MB86295EB01 MB86296EB01	PCI board combination for PCs (WinNT/2000)* PCI board combination for PCs (WinNT/2000)* PCI board for PCs (WinNT/2000) PCI board for PCs (WinNT/2000)	MB86293 Coral Q MB86293 Coral B MB86295 Coral P MB86296 Coral PA
CREMSON-STARTERKIT-CPU CREMSON-STARTERKITCPU369	CPU module for the "Cremson Modular Starterkit" CPU module for the "Cremson Modular Starterkit"	MB91F362 as host CPU MB91F369 as host CPU + Debug RAM
CREMSON-STARTERKIT-CRM CREMSON-STARTERKIT-ROSE	Subboard for Modular Starterkit Subboard for Modular Starterkit	MB86290A Cremson MB86291 Scarlet
CREMSON-STARTERKIT-LIME	Subboard for Modular Starterkit	MB86276 Lime

## Software for Graphics Product

Product Name	Product Model #	Supported GDC	Overview
MB86290 Series Graphics Driver V02	SP360043818QAJ	MB86290A MB86291A MB86292 MB86293 MB86294 MB86295 MB86296	This product is the software which provides fundamental API for using GDC. This product is provided with source code. [API Classification] (1) Display control (2) Video capturing (3) 2D primitive drawing (points, lines, triangles, polygons, rectangles, bitmaps, etc.) (4) 3D primitive drawing (points, lines, triangles, polygons, etc.)

\* Available on other CPUs, since this software is not dependent of specific CPU.

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