SMM 21201 P
High Contrast Gray Scale Monitor

- CRT with anti-reflective and anti-static panel and dispenser cathode for long CRT life
- Automatic calibration of black level without external sensor, 20 minutes after power on and every 12 hours
- Constant Gamma for equal gray scale performance in multi monitor configurations, also over complete lifetime of CRT
- High contrast and brightness/ high resolution CRT, up to 145 fL (500 cd/m²), front-of-screen luminance through 32 % total transmission
- 2048 x 2560 addressability standard
- Scan range of 120 to 200 kHz horizontal and 50 to 120 Hz vertical
- Microprocessor control of all internal monitor functions
- Front panel brightness, contrast and geometry controls are standard and can be disabled for calibrated diagnostic applications
- Front panel control for image rotation
- Ambient light sensor for automatic contrast control

Product Brief · November 2002

display SOLUTIONS

Siemens SMM-Series of gray scale monitors is designed to meet the demanding requirements of Medical Diagnostic Imaging.
The monitor features high resolution at high luminance with low background levels for wide dynamic range.
The internal microprocessor controls all electrical and magnetic monitor functions, and continuously adjusts drive levels to maintain constant luminance during warm up and over long life of the CRT depending on the environmental light conditions. For each format stored, the dynamic focus and dynamic astigmatism ensures optimal sharpness at any point of the screen.
All formats are stored internally, including a full set of screen settings for each. Formats are selected and modified through the RS 232 serial port.

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Technical Data	
Power requirements	
Input voltage	90 to 264 V, Wide range power supply
Power frequency	47 to 63.6 Hz
Power consumption	Approx. 150 W
Power factor control	According to EN 61 000
Power saving	According to VESA DPMS
CRT specifications	
Size	54 cm / 21", flat & square (portrait)
Deflection angle	90°
Light transmission	32 %
Phosphor type	P45, cadmium free
Surface	Multicoated conductive panel (AR/AS)
Gun system	Dispenser cathode (long life)
Focus	Static and dynamic
Typical spot size @	- 200 cd/m², 58 fL: 150 µm - 400 cd/m², 117 fL: 200 µm
General performance	
Horizontal frequency	120 to 200 kHz
Vertical frequency	50 to 120 Hz
Formats	19 max., self recognizing and auto-scaling
Display performance	
Display area (W x H) in mm	300 x 400
Non-linearity	< 2 %
Raster stability	0.05 mm max. swim & jitter
Maximum luminance	P45: ≥ 145 fL @ 0.7 V_{pp} input signal (at 32 % total transmission)
High voltage regulation	0.2 % max. size change
Video amplifier, inputs	
Type	High contrast, high resolution supports 550 MHz pixel-clock
Connectors	BNC type
Impedance	75 Ω or 50 Ω
Video level	0.75 to 1.2 V_{pp}
Sync level	0.1 to 0.6 V_{pp}

Front panel controls	
Controls	Power on/off, contrast, brightness
Geometry	H/V-phase, H/V-amplitude, pin & barrel, image rotation
Ambient light sensor	For automatic contrast control
Operation conditions	
Temperature	
- Operating	10 °C to 35 °C, up to 40 °C with some restrictions
- Storage	-25 °C to +70 °C
Humidity, rel.	
- Operating	20 % to 80 %
- Storage	20 % to 80 %
Mechanical specifications	
Dimensions (W x H x D) in mm	403 x 580 x 520
Weight	Approx. 33 kg
Approvals	
Safety	EN 60 601, UL 2601, CAN/CSA-C22.2 No. 601, DHHS
EMC	
- Emission	FCC Class A, MPR II, EN 60 601-1-2 Class B
Others	CE Mark Medical Device Class I EN ISO 9001, EN ISO 13 485 certified plant
Options	
- OEM versions	
- Other phosphors available	
Miscellaneous	Customer specific labeling available
Ordering data	**Order No.**
SMM 21201 P	6GF6300-2EM01

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Display Technologies
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