



Target applications

- X-Ray imaging
- Examination rooms
- Control rooms
- PACS/RIS

Features

- Digital Input
- Analog Input Interface
- Accepts most video formats
- Very High Brightness
- Automatic Backlight Control customisable: on/off
- Backlight Stabilisation
- DICOM greyscale standard display function

MML1801

18" LCD Monochrome Display Analog & Digital input Medical Grade



FIMI, a Company ISO 9001 certified
FIMI, a partner you can count on...

The MML1801 is part of an LCD product line specifically designed for medical applications.

The available features makes this product the ideal solution for X-ray Imaging, both for Control room and Examination, but it can also find application in the PACS systems for general Medical Imaging applications.

Safe

- Medical-grade (UL2601-1, EN60601-1)
- User's control can be disabled by a keyboard lock feature
- Locking video and touchscreen connectors
- Anti-Glare protection window (optional)

Reliable

- A stringent reliability plan has been applied during the design stage to assure many years of trouble-free operation in the field
- Production is continuously monitored by short-term and long-term reliability testing to maintain the product reliability

Compatible

- Digital input and analog-RGB video interface, with optimal panel-matching resolution of 1280x1024 @75Hz and scaling capability from 640x480, 800x600, 1024x768 and other formats.

Product highlights

- Medical-grade (UL2601-1, EN60601-1)
- Supported greyscale 8 bit
- Wide viewing angle (170° H&V)
- High brightness (Max 600 cd/m²)
- High contrast (400:1)
- OSD control
- RS232 Serial Interface control
- Universal mounting (GCX/VESA plate)
- Automatic Backlight Control customisable
- Backlight Stabilization
- DICOM greyscale standard display function
- Optional Touchscreen interface

PHILIPS

MML1801

18" LCD Monochrome Display

Analog & Digital Input

Medical Grade

Display characteristics

Size:	18 inch (460 mm) active display diagonal size
LCD Technology:	Dual ISP (In Plane Switching)
Supported Greyscale:	8-bit per 1(one) sub-pixel
Native resolution:	1280(x3)x1024 pixels resolution (SXGA)
Pixel pitch:	0.2805(per one triad) x 0.2805 mm
Viewing angle:	170° V/H @ contrast ratio > 10
Effective display area:	359.0(H) x 287.2(V) mm
Brightness:	600 cd/m2 Typ.
Contrast:	550 : 1 Typ.
Response time:	35 ms typ. (total: rise time + fall time)
Vertical frequency:	50 ÷ 75 Hz

Video inputs

Digital	DVI standard
Analog	RGB
	Input impedance: 75 ohm ± 1%
	Input level: 0.700 Vpp ± 1%
Horizontal frequency:	81.01 Khz (max)
Vertical frequency:	76 Hz (max)

Resolution

VGA (640 x 480), SVGA (800 x 600), XGA (1024 x 768), SXGA (1280 x 1024) and others.

External connections

Position:	On the recessed lower rear side
DC input connector:	CEE 22-6A IEC320 male pin receptacle
Analog Video Input:	BNC (metal 75-Ohm type)
Digital input:	DVI interface
RS232 serial interface:	RJ11 (4pins) connector

Optical interfaces

ABC input eye:	At the front left bottom side of the monitor Sensitivity range: 1 to 1000 Lux Control selection: Off/On
LED display:	On bezel at the bottom front side Green color Visibility approx. 10 Cd/m ²

Protection window

Non-Touch Acrylic foil:	Hardness 2H Brightness transmittance > 90%.
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Option

Resistive Touch screen:	Type 5-wires resistive Transmittance 80% ± 5% Reliability > 35 million touch Antiglare 15% haze, 90±20 gloss
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Controls

User controls:	- 5 Push buttons for Brightness, On-Screen Display - On/Off switch on rear side. - LED indicating: "Mains on", green color - Brightness B- and B*, up to 256 steps/levels - Reference setting recall - User setting (storage and recall)
Service controls:	- Service OSD menu key control - Service OSD menu functions (Selections of appropriate Reference setting number, ABC customisation Off/On, Key locking Off/On, Mains power On/Off)

Remote control through RS232

Image performances

Picture geometry:	- Useable area: 359 x 287.2 mm - Horizontal opening: 361 ± 1 mm - Vertical opening: 289 ± 1 mm - Control ranges: each format within the applicable specified ranges can be adjusted to nominal spec values.
Picture luminance:	- Brightness reference setting for each applicable video format with ABC set to Off. Reference setting specified for defined working parameters for dark and white level brightness luminance at ABC_Off mode. - ABC illuminance input range: ABC High level: 1000 Lux ± 10% ABC Low level: 10 Lux ± 10%
Greyscale:	- Grey scale standard display function according to DICOM Standard (768 grey levels)

Physical specifications

Dimensions:	410(W) x 362(H) (w/o pedestal) x 105(D) mm; height with pedestal included: 429 mm
Weight:	10 Kg (22 lbs) with pedestal 7.7 Kg (17 lbs) w/o pedestal
Standard mounting:	GXC/VESA compatible (100 mm spacing)
Power supply:	100 to 240 VAC, 50-60 Hz, autoswitch
External AC/DC adapter:	+ 12 V
Power consumption:	70 W max.
Operating temperature:	5° to 35°C
Storage temperature:	-5° to 60°C
Relative humidity:	20% to 90%, non condensing
Reliability:	MTBF: > 50.000 hours excluding backlight

Regulations

- ITE Safety standards:	UL60950 3rd ed., CSA C22.2 No. 60950-00 3rd ed., IEC 60950 / EN60950
- Medical Electrical Safety Standards:	UL2601, CSA C22.2 No. 601.1 - M90 Part 1, IEC601-1 / EN60601-1
- Medical EMC Standards:	IEC601-1-2, EN60601-1-2 EN55011 / CISPR11 FCC / CFR47 P.15
- Approvals/Marking:	CE, C-UL-US



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