

Cyberchron's Portrait series ruggedized flat panel monitors are designed for deployment in the harshest military and industrial environments while providing the latest advances in flat panel technology. Features include high brightness; high contrast; wide horizontal & vertical viewing angles; resolution-independent auto-resize to full screen; 16+ million colors; XGA & SXGA resolution with higher resolution options. The Portrait monitors are drop-in replacements for analog CRT-based monitors but without the weight, size and power consumption. Each monitor includes an internal auto-ranging militarized AC and DC power supply/charger; optional internal rechargeable NiMH or Li-ion batteries

CHASSIS

- Seam Welded Monocoque Aluminum Design
- Sealed convection/conduction cooled
- 19" Rack-mount, Panel-mount or Tilt/Swivel base
- Easy rear Access Cover
- EMI shielded and adaptable rear I/O panel

UPGRADEABILITY

- Upgrade path to the latest Technology Displays
- Daylight & Sunlight readable options
- NVG compatibility options
- Touch screen
- Custom function keys & interfaces
- NTSC, PAL, S-video optional inputs

POWER SUPPLY

- Militarized Design Power Supply
- Auto-ranging AC and DC options
- Wide Voltage & Frequency Compliance
- Power Cord with Rugged Secured Twist-&-Lock Connector
- Custom UPS battery option



FIELD RUGGED - MISSION READY

DISPLAY

- 15" XGA, 18" & 20" SXGA A AMLCD standard
- Wide viewing angle
- Anti-glare and impact resistant layers
- High brightness & Contrast
- Custom size & resolution displays available

INTERFACING

- Touchscreen & Pen input options
- Front Accessible Controls, Indicators and OSD
- Optional custom keys and indicators
- NTSC, PAL, S-video and other options
- Custom feed throughs & repeaters
- Custom Installation/layout options

PERIPHERALS

- 19" rack-mount flanges
- Tilt / Swivel mount base option
- Front Handles (option)
- Built-in Audio with amplifier & speakers, option
- Transit Case; Fold-up Keyboard options



ALTITUDE



TEMPERATURE



SOLAR RADIATION



RAIN



HUMIDITY



FUNGUS



SALT FOG



SAND/DUST



VIBRATION



SHOCK



EMI/EMC

TOTAL ENVIRONMENTAL PROTECTION

Portrait Series

Rugged Color Flat Panel Monitors

UNIT SPECIFICATIONS

Item	Portrait-15	Portrait-18	Portrait-20
Pixel Format	1024 x 768	1280 x 1024	1280 x 1024
Diagonal Screen Size	15.1"	18.1"	20.1"
Response Time	15msec On / 10msec Off	30msec On/Off	50msec
Luminance (Typical)	200cd/m2*	235cd/m2*	150cd/m2*
Contrast (Typical)	170:1	300:1	220:1
Viewing Angle (Horizontal)	± 50°	± 80°	± 80°
(Vertical)	± 20°	± 80°	± 80°
Data Bits per Color	6 (+ 2)	8	8
Shades (with Dithering)	64 (254)	256	256
Colors (Native) With FRM & Dithering	262,144 16M	16.7M	16.7M
Backlight	4 x CCFT	4 x CCFL	10 x CCFL
Backlight Lamp Life (Typical)	25,000	50,000	30,000
Dot Clock (Typical)	55.76MHz	55.7MHz	108MHz Typ. (95 -135 max)
H-sync Scan Rate (Typical)	24-60KHz	15-80 KHz	63.98KHz SXGA
V-sync Frame Rate (Typical)	56-75Hz	50-90 Hz	60.02Hz SXGA
Video Input Formats**	Analog RGB, PAL/NTSC options	Analog RGB. TMDS, PAL/NTSC options	Analog RGB. PAL & NTSC options
Resolution-Independent Auto-Resize to Full Screen	Yes	Yes	Yes
Video Format Auto-Detection	After Auto-Set	Yes, All Formats: VGA, SVGA, XGA, SXGA	Within Module Settings Only
Audio / Speakers	3W/channel amp; 2 speakers; earphone jack	Audio Option	Audio Option
Adjustments:	OSD	OSD	OSD
Contrast	Yes	Yes	Yes
Brightness	Yes	Yes	Yes
RGB Capture Quality	Yes	Yes	Yes
Image position	Yes	Yes	Yes
Color Control (NTSC)	Yes	Yes	Yes
Color Control (RGB)	Yes	Yes	Yes
Reset	Yes	Yes	Yes
Dimensions (Inches)	17.38Wx13.94H x5.00D	17.45Wx14.68Hx3.00D	18.95Wx17.17Hx 4.51D
Weight (Lbs)	≈ 17	≈ 19	≈ 22

* Higher intensity backlights, up to 2,000cd/m², are available on special order.

** Not every combination is available; however, the PORTRAIT series is capable of displaying combinations that correspond to all major graphics standards on the market. Refer to the separate video input data tables for each display.



ENVIRONMENTAL CHARACTERISTICS*

Note: Extended Environmental Characteristics Are Available

Temperature, operating	-25°C to +50°C
non-operating	-40°C to +71°C
Altitude, operating	-1,000 to 15,000'
non-operating	to 60,000' (Method 500.3)
Fungus	Will not support growth per Method 508.4
Humidity	0-95% Non-condensing
Rain	Operating, per Method 506.3 Procedure I
Salt Fog	MIL-STD-810E Method 509.3 Procedure I, exterior
Sand & Dust	Operating per Method 510.3 Procedure I
Solar Radiation	Operation in direct sunlight, minimum 30 minutes
Shock, operating	20g @ 11mS half sine, per Method 516.4 Procedure I
Shock, non-operating	75g @ 11mS half sine, per Method 516.4 Procedure V; 4' drop (in transit case)
Vibration	Per shipboard, common carrier, ground mobile, aircraft, tactical wheeled vehicle (Method 514.4); MIL-STD-167/1 type 1
MTBF	>30,000 hrs ground benign @ 25°C, typical, configuration dependent
MTR	<30 minutes
EMI/EMC Standard	Designed for FCC Class A/B
Optional	MIL-STD-461C, D, E

* Peripheral dependent, based on MIL-STD-810E where noted; preliminary data subject to final test confirmation. Extended environmental performance optional

For Sales or Service Contact:

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