

DIGITAL RADIOGRAPHY DATASHEET

Software

- Single console workflow with generator integration (supported generators only)
- EasyConnect Automatic Exposure Detection (AED) technology
- Multiple imaging stitching application option (manual or automated)
- Pre-exposure display of patient and procedure information
- DICOM Modality Worklist (MWL) or manual patient / exam data entry and patient edit
- Emergency patient exam creation
- Study list with status of exams
- Ability to add views to a study
- Positioning guide
- Display and control of x-ray generator exposure factors (kv, mA, time, mAs, density, AEC (if enabled) (with integrated generators)
- Image rotation in 90 degree steps and free rotate
- Pan
- Zoom
- Horizontal mirroring
- Flip
- Invert
- Automatic and manual image shutter cropping to collimated area
- Verification and correction of image laterality and patient orientation
- Orientation marker that can be added (standard and custom annotations)
- Text comments that can be added (free text or pre-determined custom annotations)
- Measuring tools for distance and angle
- PICC tool for optimized display of lines, tubes, and leads
- Detailed histograms of pixel density and curve shape adjustment
- User selection of modified Look-Up Tables (LUT) based on exam type
- Mask
- Manual adjustment of the LUT and Window / Level, Contrast and Brightness
- Image panel layout selection
- Send destination selection
- Print window with orientation and size
- EasyShare allows a detector to be shared easily between multiple workstations

Indicators

- Network status
- Disk space free
- Detector battery status
- Generator controls with ready, prep, exposing

Dose Reduction Features

- Display of Deviation Index (DI), Target Exposure Index (TargetEXI) and Current Exposure Index (CurrentEXI)
- Grid suppression, including for standard or high-line grids
- Anatomical Programming (APR) for standardized exams with specific default values that may be customized
- Exam specific image processing algorithms based on selected patient anatomy specific image processing algorithms
- Reject analysis with exportable data and reject / accept image management

DICOM Connectivity

- Image Storage Class User (SCU) and Storage Class Provider (SCP) for Computed Radiography, Digital X-ray for presentation and for processing, secondary capture
- Grayscale soft copy presentation state storage SCU
- X-ray radiation dose Structured Report (SR) SCU
- Query / retrieve study root information model, FIND and MOVE, SCU and SCP $\,$
- Modality worklist information model FIND SCU
- Storage commitment push model SCU
- Modality Performed Procedure Step (MPPS) SCU
- Print: basic grayscale print management, basic film session, basic film box, basic grayscale image box, printer SCU
- Media storage write files (FSC or FSU) and read files (FSR): general purpose CD-R, DVD-ROM, USB media interchange with JPEG

CyberSecurity

Advanced CyberSecurity to help achieve HIPAA compliance including Anti-virus, Encryption, Security Updates, and Role based logins. For specifics, see DEL MEDICAL publication #9000-CyberSecurity and/or MDS-2 for DELWORKS at www.delmedical.com/support

DESKTOP WORKSTATION





Processor:	3.2 GHz Intel® Core™ i5-6500
Memory:	16 GB RAM
Hard Disk Drive:	1 TB 7200 RPM
Operating System:	Windows 10 Pro (64-bit) English
Dimensions:	3.7" x 11.4" x 11.5" (9.3 cm x 29 cm x 29.2 cm)
Weight:	11.57 lbs. (5.26 kg)
Power Adapter:	65 W / 130 W

Monitor (Dell P2418HT)

Display Type:	LED-backlit LCD monitor / TFT active matrix touchscreen
Diagonal Size:	24" (61 cm)
Viewable Size:	23.8" (60.5 cm)
Panel Type:	IPS
Aspect Ratio:	16:9
Native Resolution:	Full HD (1080p) 1920 x 1080 at 60 Hz
Pixel Pitch:	0.275 mm
Brightness:	250 cd/m ²
Contrast Ratio:	1000:1 / 8000000:1 (dynamic)
Color Support:	16.7 million colors
Response Time:	6 ms (gray-to-gray)
Horizontal Viewing Angle:	178°
Vertical Viewing Angle:	178°
Screen Coating:	Anti-glare, 3H Hard Coating
Backlight Technology:	LED backlight
Features:	72% (CIE 1931) color gamut, 84% (CIE 1976) color gamut, Dell ComfortView
Color:	Black
Weight:	6.88 lbs. (3.12 kg)
Dimensions (WxDxH):	With stand: 21.2" x 9.3" x 12.7" (53.8 cm x 23.6 cm x 32.3 cm)
	Without stand: 21.2" x 2.1" x 12.6" (53.8 cm x 5.3 cm x 32 cm)
Display Position Adjustments:	Height, swivel, tilt

Swivel Angle:60°Height Adjustment:3.5" (8.9 cm)Built-in Devices:USB HubInterfaces:VGA HDMI DisplayPort USB 3.0 upstream 2 x USB 3.0 downstream 3 x USB 2.0 downstream 3 x USB 2.0 downstreamSecurity Lock Slot:VESA 100 x 100 mm, anti-theft stand lock slotCompliant Standards:RoHS, TCO Displays, Energy Star CertifiedVoltage Required:AC 100 / 240 V (50 / 60 Hz)Power Consumption Operational:18 WattEnergy Class:Class A+Warranty Information - Computer Hardware: Display Hardware:Three (3) year, next business day, on-site hardware support warranty Three (3) year standard warranty	Tilt Angle:	-5°/+60°
Built-in Devices: USB Hub Interfaces: VGA HDMI DisplayPort USB 3.0 upstream 2 x USB 3.0 downstream 3 x USB 2.0 downstream 3 x USB 2.0 downstream Security Lock Slot: VESA 100 x 100 mm, anti-theft stand lock slot Compliant Standards: RoHS, TCO Displays, Energy Star Certified Voltage Required: AC 100 / 240 V (50 / 60 Hz) Power Consumption Operational: Energy Class: Class A+ Warranty Information - Computer Hardware: Three (3) year, next business day, on-site hardware support warranty	Swivel Angle:	60°
Interfaces: VGA HDMI DisplayPort USB 3.0 upstream 2 x USB 3.0 downstream 3 x USB 2.0 downstream 3 x USB 2.0 downstream Security Lock Slot: VESA 100 x 100 mm, anti-theft stand lock slot Compliant Standards: RoHS, TCO Displays, Energy Star Certified Voltage Required: AC 100 / 240 V (50 / 60 Hz) Power Consumption Operational: Energy Class: Class A+ Warranty Information - Computer Hardware: Three (3) year, next business day, on-site hardware support warranty	Height Adjustment:	3.5" (8.9 cm)
HDMI DisplayPort USB 3.0 upstream 2 x USB 3.0 downstream 3 x USB 2.0 downstream Security Lock Slot: VESA 100 x 100 mm, anti-theft stand lock slot Compliant Standards: RoHS, TCO Displays, Energy Star Certified Voltage Required: AC 100 / 240 V (50 / 60 Hz) Power Consumption Operational: Energy Class: Class A+ Warranty Information - Computer Hardware: Three (3) year, next business day, on-site hardware support warranty	Built-in Devices:	USB Hub
Compliant Standards: RoHS, TCO Displays, Energy Star Certified Voltage Required: AC 100 / 240 V (50 / 60 Hz) Power Consumption Operational: Energy Class: Class A+ Warranty Information - Computer Hardware: Three (3) year, next business day, on-site hardware support warranty	Interfaces:	HDMI DisplayPort USB 3.0 upstream 2 x USB 3.0 downstream
Voltage Required: AC 100 / 240 V (50 / 60 Hz) Power Consumption Operational: Energy Class: Class A+ Warranty Information - Computer Hardware: Three (3) year, next business day, on-site hardware support warranty	Security Lock Slot:	VESA 100 x 100 mm, anti-theft stand lock slot
Power Consumption Operational: 18 Watt Energy Class: Class A+ Warranty Information - Computer Hardware: Three (3) year, next business day, on-site hardware support warranty	Compliant Standards:	RoHS, TCO Displays, Energy Star Certified
Energy Class: Class A+ Warranty Information - Computer Hardware: Three (3) year, next business day, on-site hardware support warranty	Voltage Required:	AC 100 / 240 V (50 / 60 Hz)
Warranty Information - Computer Hardware: Three (3) year, next business day, on-site hardware support warranty	Power Consumption Operational:	18 Watt
	Energy Class:	Class A+

LAPTOP WORKSTATION



Workstation (Dell Latitude 5500 Laptop)

Processor:	3.0 GHz Intel® Core™ i5
Memory:	8 GB RAM
Hard Disk Drive:	512 GB SSD
Operating System:	Windows 10 Pro (64-bit) English
Display Type:	Anti-glare non-touch display
Diagonal Size:	15.6" (39.6 cm)
Aspect Ratio:	16:9
Native Resolution:	Full HD (1080p) 1920 x 1080 at 60 Hz
Wireless:	802.11ac Dual Band Wireless Adapter (WLAN)
Battery:	3 Cell 51 Whr capable battery
Power Adapter:	65W AC adapter with E5 US power cord
Height:	0.79" (2 cm)
Width:	14.1" (35.8 cm)
Depth:	9.3" (23.6 cm)
Weight:	4.03 lbs (1.82 kg)
Ports:	1x USB Type C 3.1 Gen 2 with power delivery & 3 USB 3.1 Gen 1, one with PowerShare $1x$ HDMI 1.4 $1x$ RJ-45
Warranty Information - Computer Hardware:	Three (3) year, next business day, on-site hardware support warranty



PORTABLE WORKSTATION

Warranty Information - Computer Hardware:





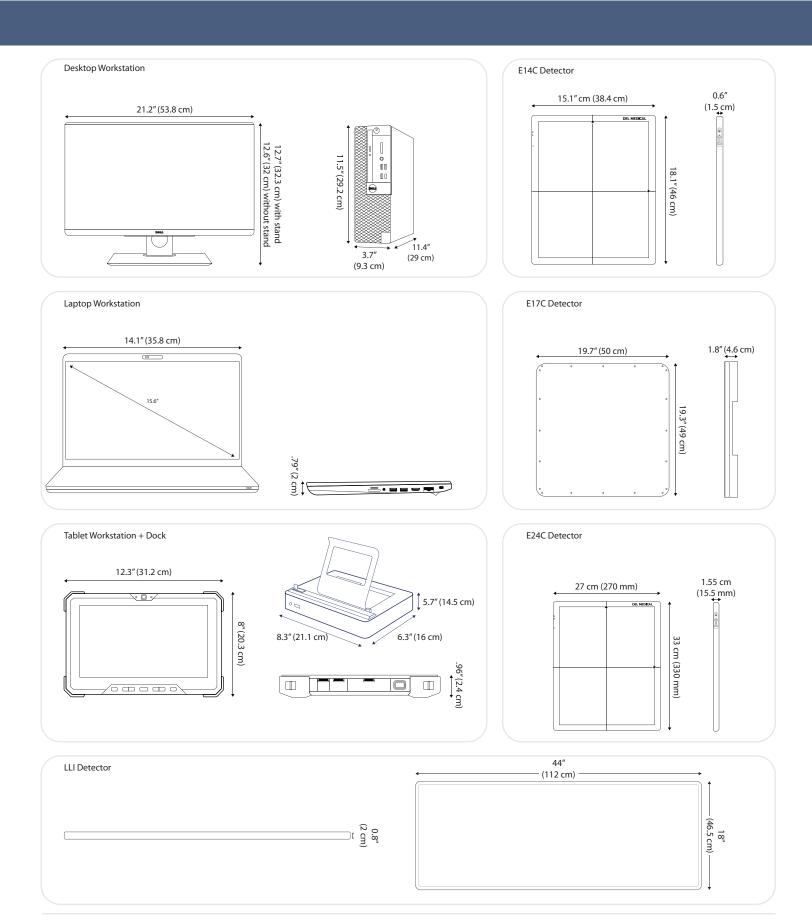
Three (3) year, next business day, on-site hardware support warranty

Processor: Memory: Hard disk drive: Operating system: Display: Keyboard / Input: Battery:	1.7 GHz Intel® Core™ i5 8 GB RAM 256 GB Solid State Drive (SSD) Windows 10 Pro (64-bit) English 11.6" Full HD Touchscreen w/ Gorilla Glass (1920 x 1080, Outdoor-Readable / Glove Capable) Touchscreen 2-cell (34 Wh) Lithium-Ion battery
Hard disk drive: Operating system: Display: Keyboard / Input:	256 GB Solid State Drive (SSD) Windows 10 Pro (64-bit) English 11.6" Full HD Touchscreen w/ Gorilla Glass (1920 x 1080, Outdoor-Readable / Glove Capable) Touchscreen
Operating system: Display: Keyboard / Input:	Windows 10 Pro (64-bit) English 11.6" Full HD Touchscreen w/ Gorilla Glass (1920 x 1080, Outdoor-Readable / Glove Capable) Touchscreen
Display: Keyboard / Input:	11.6" Full HD Touchscreen w/ Gorilla Glass (1920 x 1080, Outdoor-Readable / Glove Capable) Touchscreen
Keyboard / Input:	Capable) Touchscreen
Battery:	2-cell (34 Wh) Lithium-lon battery
Weight:	2.82 lbs. (1.3 kg) with single 2-cell battery
Dimensions:	12.3" x 8" x 0.96" (31.2 cm x 20.3 cm x 2.4 cm)
Certifications:	MIL-STD-810G Transit drop (48" / 1.22 m; single unit; 26 drops) Operating drop (36' / 0.91 m) Blowing rain, blowing dust, blowing sand, vibration, functional shock, humidity, salt fog, altitude, explosive atmosphere, thermal extremes, thermal shock, freeze / thaw, tactical standby to operational
Ingress protection:	IP-65 (dust-tight, protected against pressurized water)
Hazardous locations:	ANSI / ISA.12.12.01 certification capable (Class 1, Division 2, Groups A, B, C, D), CAN / CSA C22.2
Electromagnetic interference:	MIL-STD-461F certified resistant
Wi-Fi:	Dual RF-passthrough (Wi-Fi and mobile broadband)
Software compatibility:	Runs all features of DELWORKS 3.0 Software except optional stitching
Dockable:	Rugged Docking Station enables charging, transferring, and screen mirroring - Dimensions: 8.3" x 6.3" x 5.7" (21.1 cm x 16 cm x 14.5 cm) - Weight: 3.53 lbs. (1.6 kg) - Power: 90 Watt AC 120 /130 V (50-60 Hz) - 1 x headphone / microphone combo jack (3.5 mm) - 2 x USB 3.0 Type A, 1 x USB 2.0 Type A, 1 x Network RJ-45, 1 x VGA, 1 x DisplayPort, 2 x Serial

DETECTORS

	E14Cw	E24Cw	E17C	LLI
Detector Size	14" x 17" (35 cm x 43 cm)	24 cm x 30 cm	17" x 17" (43 cm x 43 cm)	17" x 42" (43 cm x 107 cm)
cintillator	Cesium Iodide (CsI)	Cesium Iodide (CsI)	Cesium Iodide (CsI)	Gadolinium Oxisulfide (Gadox)
Semiconductor Material	Amorphous Silicon (aSi)	Amorphous Silicon (aSi)	Amorphous Silicon (aSi)	Amorphous Silicon (aSi)
Pixel Size	148 µm	148 µm	148 μm	140 µm
Resolution	3.5 lp/mm	3.5 lp/mm	3.5 lp/mm	3.6 lp/mm
Pixels	2400 x 2880	1646 x 2057	2860 x 2874	3072 x 7680
Active Area	14" x 17" (35 cm x 43 cm)	9.5" x 11.8" (24 cm x 30 cm)	17" x 17" (43 cm x 43 cm)	17" x 42" (43 cm x 107 cm)
mage Depth	16 bit A/D	16 bit A/D	16 bit A/D	16 bit A/D
Image Preview	3 seconds	1 seconds	4 seconds	9 seconds
Cycle Time	9 seconds	6 seconds	6 seconds	12 seconds
Dimensions	15.1" x 18.1" 0.6" (38.4 cm x 46 cm x 1.5 cm) ISO 4090 cassette size	10.6" x 13.0" x 0.6" (27 cm x 33 cm x 1.6 cm) ISO 4090 cassette size	19.7" x 19.3" x 1.8" (50 cm x 49 cm x 4.6 cm)	18" x 44" x 0.8" (46.5 cm x 112 cm x 2 cm)
Weight	6.2 lbs. (2.8 kg)	3.5 lbs. (1.6 kg)	25.8 lbs (11.7 kg)	24 lbs. (11 kg)
Wi-Fi	802.11/a/b/g/n 2.4 / 5 GHz or ethernet cable	802.11/a/b/g/n 2.4 / 5 GHz or ethernet cable	Ethernet cable	Gig E, Wi-Fi
Exposure Window	Up to 3.2 seconds	Up to 3.2 seconds	Up to 3.2 seconds	
Auto Exposure Detection (AED)	Yes	Yes	No	Yes
Distributed Weight Bearing	298 lbs. (135 kg)	298 lbs. (135 kg)	N/A	
Power Weight Bearing (4 cm)	176 lbs. (80 kg)	176 lbs. (80 kg)	N/A	
Detective Quantum Efficiency (DQE)	70% @ 0.0 lp/mm 66% @ 0.5 lp/mm 51% @ 1.0 lp/mm 39% @ 2.0 lp/mm 23% @ 3.0 lp/mm	66% @ 0.0 lp/mm 66% @ 0.5 lp/mm 51% @ 1.0 lp/mm 39% @ 2.0 lp/mm 23% @ 3.0 lp/mm	65% @ 0.5 lp/mm 52% @ 1.0 lp/mm 42% @ 2.0 lp/mm 25% @ 3.0 lp/mm	60% @ 0.0 lp/mm 45% @ 1.0 lp/mm 32% @ 2.0 lp/mm 15% @ 3.0 lp/mm
Modulation Transfer Function (MTF)	61% @ 1.0 lp/mm 31% @ 2.0 lp/mm 15% @ 3.0 lp/mm	61% @ 1.0 lp/mm 31% @ 2.0 lp/mm 15% @ 3.0 lp/mm	64% @ 1.0 lp/mm 32% @ 2.0 lp/mm 17% @ 3.0 lp/mm	65% @ 1.0 lp/mm 33% @ 2.0 lp/mm 18% @ 3.0 lp/mm
Charging Time	2 hours	2 hours	N/A	N/A
Battery Operation Time	Up to 8 hours	Up to 8 hours	N/A	~3 hours
Number of Batteries with Each Detector	2 removeable	2 removeable	Wired; no batteries	1 internal
Battery Charging	Trickle charge via cable or 3 slot external charger	Trickle charge via cable or 3 slot external charger	None	Charging cable
IPX Rating (Dust and Water Sensitivity)	IP43	IP43	N/A	IPX3
Shock Sensor	Yes, software recorded	Yes, software recorded	N/A fixed mounted	
Weight Bearing Cover	Up to 750 lbs.	Up to 750 lbs.	N/A	Up to 500 lbs.
Protective Cover with Handle	Yes (optional)	Yes (optional)	N/A	No
Weight Bearing Cover	Yes (optional)	Yes (optional)	N/A	Yes (optional)
Warranty	Three (3) year global warranty on detector, including drop coverage with deductible ¹	Three (3) year global warranty on detector, including drop coverage with deductible ¹	Three (3) year standard warranty	Five (5) year standard warranty

¹Global Warranty can be purchased for a maximum of five (5) years - Replacement detectors are offered at \$7,500 per occurrence - Includes damages to the detector due to drops - Excludes cosmetic repairs, theft, and intended misuse - Excludes battery, charger, and configuration cable



DEL MEDICAL



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