

Information Sheet

X-FRAME DR EZ ceiling solution

Product Data



REV. 15 (March 2026)

Informative Sheet X-FRAME DR EZ@ solution

ITALRAY DR EZ@ solution is a high productivity solution for General and Chest examinations, with minimal space requirements, and it is composed by the following items:

- ITALRAY **X-FRAME DR EZ@** Digital Workstation with flat panel detector
- ITALRAY **BT** radiographic 4-way table (optional **BTE** radiographic 4-way elevating table)
- ITALRAY **BS45** Vertical Stand
- ITALRAY **TELESCOP** ceiling tube stand (optional **TELESCOP SYNCHRO**)
- X-ray Generator
- X-ray tube
- Collimator

With this configuration, flexibility and performances are granted in any application: projections with patient in horizontal/vertical position, chest exams with minimum patient-detector distance, and examinations in free exposure technique.

X-FRAME DR EZsolution acquisition is based on the interface with solid-state detectors, featuring amorphous Silicon (a-Si) technology and Cesium Iodide (CsI) scintillator: a combination that guarantees high quality X-ray images for immediate diagnosis, in real time and with low exposure. X-FRAME DR EZversatility is greatly increased thanks to the potential of wireless cassette-size detector that can be positioned either in vertical/horizontal bucky and out of them, in contact to the patient. This detector is battery powered and employs wireless image data transmission, thus freeing the room from cumbersome and risky cables for an unlimited operation autonomy.

The everest-X algorithm automatically optimizes image-processing based on exam type and anatomical region. everest-X enhances image content details in both high attenuation image areas (shoulders, abdomen) and, at the same time, low attenuation image areas (lungs, cavities).

Additional post-processing tools are also available such as Edge Enhancement, Unlimited Zoom and Real Size, Window/Level (auto and manual), linear and angular measurements, Electronic Collimators, Image Stitching (auto and manual), Deviation Index (DI), Exposure Index (EI), text and annotations.

The X-FRAME DR software is Full DICOM and it's compatible with any RIS and PACS system or DICOM Printer.

X-FRAME DR EZ solution, once connected with the radiological accessories (vertical bucky stand, table, tube stand, ...) offers operator an easy management of digital radiographic room in terms of:

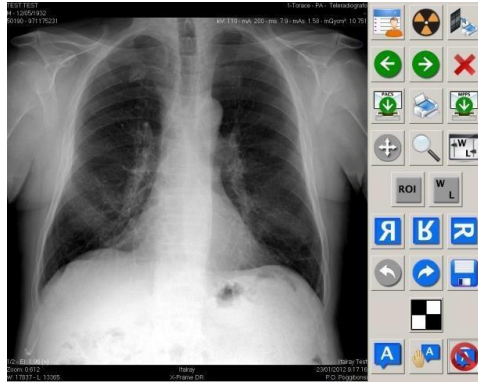
- Integration of the generator with the digital system via a microprocessor-controlled high-frequency inverter enabling real-time control and monitoring.
- Dose Area meter
- Automatic positioning,
- X-ray tube-detector centering with maintenance of alignment,
- Automatic collimation according to the anatomic region to be examined,
- Power supply of the potters for the management of the fixed detectors
- Acquisition / processing of images acquired by up to 2 detectors (fixed and / or wireless)
- Automatic Stitching
- Integrated CD/DVD writer
- Image processing and enhancement with everest-X algorithm
- Full DICOM integration.

MAIN FEATURES

X-FRAME DR INTUITIVE USER INTERFACE AND COMPACT PC FOR EASY INSTALLATION ON CONTROL ROOM DESK

The small-sized fanless computer can be easily installed on the desk. In this way all its ports (USB, LAN) are accessible, and this translates into a digital workstation with minimal dimensions.

X-FRAME DR GUI provides an easy and intuitive access to any available feature through its large icons, on the lateral toolbar.



FULL DICOM COMPATIBILITY

X-FRAME DR EZSoftware is fully compliant with DICOM standards.



In this way user can easily connect to RIS/PACS for downloading patient worklist and uploading acquired exams.

IMPROVE PATIENT CARE

- Dose monitoring
- Exposure Index
- Image optimization without retakes



Thanks to the dose meter and DICOM functionalities, a report of the individual exposures (or of the entire examination) is generated, thus allowing a possible export of the data in DICOM format to a network node. Detected dose values are displayed on the X-FRAME DR EZ monitor and automatically stored in the DICOM file.

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TECHNICAL SPECIFICATIONS

DIGITAL IMAGING SYSTEM

FLAT PANEL DETECTOR	Mars 1717V3	Mars 1717X
Detector type	Portable wireless, available for bucky stand and bucky table	
Technology	Amorphous silicon	
Scintillator	Cesium Iodide (CsI)	
Format (ISO 4090)	43x43 cm (17"x17")	43x43 cm (17"x17")
Active detector matrix (Effective Pixel matrix)	3072 x 3072 pixels	4267 x 4267 pixels
AD conversion	16 bit	16 bit
Pixel pitch	139 µm	100 µm
Detector Battery Indicator and Charger	Yes and battery charger	
Battery charge duration	Max. 2,5 hours	
Battery autonomy	> 8,0 hours	
Max.load capacity	150 kg	300 Kg
Typical DQE (@ 0lp and RQA5, per IEC 62220-1)	@ 0 lp/mm: 66% @2 lp/mm: 38%	@ 0 lp/mm: 67% @2 lp/mm: 38%
Image time	5 s (preview in 3 s)	3 s (preview in 1 s)
Spatial resolution	3,6 lp/mm	5 lp/mm
Weight	4,6 kg (including battery)	3,4 kg (including battery)
Communication interface	Wireless	
Battery Charger	Equipped with nr. 2 batteries and nr. 1 battery charger	
Ingress Protection	IP67	

(*) Optional

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ACQUISITION WORKSTATION AND SOFTWARE HARDWARE	
HDD	System Hard Disk: 64 GB Local archive for images: 2 TB Included with mouse and keyboard
CPU	Intel i5 (6 cores)
RAM	16 GB
Operating system	Microsoft® Windows 10 IoT
Image storage capacity	More than 62.000 images (full resolution).
SOFTWARE	
Software control	Software is capable of controlling and monitoring the generator, the detector and tube
Security	Password-protected access to prevent unauthorized parameter modifications.
Image size	15 MB (12,5 MB typ.)
Image enhancement	everest-X
Automatic LUT	Linear and logarithmic
Stitching ^(*)	Manual
Generator integration	Generator control is directly embedded into the software. This permits the operator to easily choose a predefined APR program in dependence of the body part, projection and patient dimension and to easily adjust this last with one single click. APR programs are available also for pediatric patients where low dose is mandatory.
X-ray Button	Manual control switch, with separate illuminated color-coded functions for preparation and exposure stages.
Control panel and acquisition interface	Automatic step function advancing to the next step in the anatomical program after completion of the previous exposure; Exposure status control panel, parameter setting, APR (Anatomical Programmed Radiography) workflow, and error display; one-touch adjustment for examination protocols: patient body size selection (pediatric / normal / large), focal spot selection, detector/screen sensitivity control; color-coded system status display; acoustic feedback for exposure status and system warnings.
Post processing functions	Wireless image transfer, Exposure Index, Deviation Index, Graphic collimators, R.O.I., Pan / Zoom, Window / Level, Automatic Window / Level, Edge enhancement, Annotations, (Angular - Linear) Distances, Gray scale inversion, Image rotation, Image Flip / Mirror, Spatial Filters, Multi-image viewer, Image export (DICOM, JPEG).
APR	YES, preconfigured and editable anatomical programs
Multi-language	English, Italian.
STITCHING PROCEDURE^(*)	
Image Paste	Manual
Max. n° of images	3
Max. length	120 cm

^(*) Optional

TECHNICAL SPECIFICATIONS

ACQUISITION WORKSTATION X-Frame DR EZ@

MONITOR

Type	Colour LCD medical display, 2 MPixel, back-lighted
Size	23,8"
Resolution	1920x1080 pixel
Aspect ratio	16:9
Brightness	250 cd/m2
Contrast	1000:1

NETWORKING

DICOM functions

DICOM Storage (SCU)	Yes. Send Image to PACS
DICOM Modality worklist (SCU)	Yes. Interface with HIS / RIS with auto refresh option
DICOM Print management Class	Yes. Covers the general cases of printing medical images in standardized layouts
DICOM Media exchange (DICOM DIR)	Yes. Patient images export to DVD/CD
DICOM MPPS (SCU)	Yes. Send the status of exams to HIS / RIS
DICOM Storage commitment (SCU)	Yes. Send commitment status
DICOM Verification (SCU) (*)	Yes
DICOM Query / Retrieve (SCU)	Yes Query and retrieve images from PACS
DICOM Grayscale print (SCU)	Yes Support DICOM printers
DICOM Structured Dose Report	To exchange structured data produced in the course of image acquisition or post-processing
IHE Integration Profile	
Scheduled Workflow	Acquisition Modality: Patient Based Worklist Query / Assisted Acquisition protocol Setting / PPS Exception Management
Patient Information Reconciliation	Acquisition Modality
Consistent Presentation of Image	Acquisition Modality
Radiation Exp. Monitoring	Acquisition Modality

(*) Optional

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TECHNICAL SPECIFICATIONS

PATIENT TABLE	BTE	BT
Elevating table	Yes	No
Height	[55; 88,5] cm – Motorized	75 cm
Elevating speed	2,4 cm/sec	-
Max load	Dynamic max load: 250 kg	
Controls and brakes	Foot pedals: Elevating Up/ Down, Floating Table Top, Parking position	Touch-less IR pedals: Floating Table Top
Braking system	Electromagnetic brakes	
TABLE TOP		
Material	Composite	
Size	220 cm x 80 cm	
Tabletop - detector distance	6,8 cm	
Absorption	< 0,5 mm Al @ 70kVp	
Movement	6-way movement (floating + elevating)	4-way floating movement
Long. travel	± 50 cm/Optional: ± 55 cm ^(*)	
Tranvers. travel	± 13 cm	
Detector travel	40 cm (Motorized ^(*))	
Detector speed	7,5 cm/s	
Patient coverage	183 cm	
Automatic and synchro movement	Auto-centring / Auto-tracking ^(*) (also in oblique projections)	
Detector tray	Size 43x43 cm. Predisposed for both fixed and wireless ISO 4090 detector	

^(*) Optional

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TECHNICAL SPECIFICATIONS

VERTICAL BUCKY (BS45)

Min Detector Centre Height (Vert. Pos.)	40 cm
Max Detector Centre Height (Vert. Pos.)	202 cm
Vertical travel	162 cm Manual Counterbalanced (Motorized ^(*))
Vertical travel speed	6,6 cm/s
Max patient coverage	201 cm
Automatic and synchro movement	Auto-centring / Auto-tracking ^(*) (also in oblique projections)
Collision Detection	Proximity sensor
Handles	Both top and lateral
Surface – detector distance	6 cm
Radiation absorption	< 0.5 mm Al eq @ 70 kVp
Detector tray	Size 43x43 cm. Predisposed for both fixed and wireless ISO 4090 detector
Detector insertion	Configurable for either left or right side insertion

GRID

Grid Control	Yes. Automatic.
Grid type	Stationary or oscillating.
Grid for vertical stand (BS45)	Oscillating and removable grid 10:1 103 L/inch FFD 150cm
Grid for bucky table (BT/BTE)	Oscillating and removable grid R12:1 103 L/inch FFD 120cm

^(*) Optional

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TECHNICAL SPECIFICATIONS

CEILING TUBE STAND (TELESCOP) SYNCHRO

Longitudinal travel	≥ 400 cm (longer/shorter length optional. Maximum length could). Automatic and motorized movement ^(*)
Transversal travel	≥250 cm (longer/shorter length optional). Automatic and motorized movement ^(*)
Vertical Travel	1500 mm (1000, 1200, and 1800 mm optional). Automatic and motorized movement (*)
Minimum focus-ceiling distance	35 cm
Maximum focus-ceiling distance (vertical position)	250 cm (for vertical travel 150 cm)
Rotation of column with respect to its vertical axis	+200°/-180° mechanical stops every 90° (Automatic and motorized movement ^(*)). Cables may limit rotation.
Rotation of Tube-Collimator Assembly with respect to its transverse axis	+120°/-200° (mechanical stops every 90° (Automatic and motorized movement ^(*)). Cables may limit rotation
Tube Movements	Motorized tube movements with automatic retraction function and vertical auto-tracking for table bucky and vertical bucky stand synchronization.
Controls	Tube is provided also with dedicated color coded „Deadman“ pressure controls to unrelease electromagnetic breaks for each single movement.
Console	Ergonomic handgrip with integrated LCD display showing SID, X-ray tube rotation angle, and error messages; One single-button control for release of all movements; centering device for longitudinal and transverse positioning.
Brakes for movements and rotation	Electromagnetic brakes

X-RAY TUBE IAE RTM 101 HS

Rotating - Anode speed	3.000 rpm and 10.000 rpm with HSS
Tube construction	RTM
Nominal X-ray tube voltage	Up to 150 kV
Anode Heat Capacity	400 kHU
Continuous Heat Dissipation Rate	80.000 HU/min
Housing capacity	1700 kHU
Maximum Heat dissipation rate	120.000 HU/min
Target angle	12,5°
Focal number and spot size	2 focus: 0,6mm x 0,6 mm (small focus) - 1,2mm x 1,2 mm (large focus)
Focal nominal spot power	P _{max} =40 kW (small focus) - P _{max} =100 kW (large focus)
Inherent filtration	0,7 mm Al @ 75 kV

^(*) Optional

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TECHNICAL SPECIFICATIONS			
HIGH VOLTAGE GENERATOR	Endeavour 50kW	Endeavour 65kW	Endeavour 80kW
Output frequency	Up to 150 kHz		
Output power	50 kW	65 kW	80 kW
Low ripple	< 1%		
kV range	40 - 150 kV. 1 KV step adjustment; Precision $\pm 1\%$.		
mA range	10 to 630 mA; > 100 selectable adjustment steps in free selection mode	10 to 800 mA; > 100 selectable adjustment steps in free selection mode	10 to 1000 mA; > 100 selectable adjustment steps in free selection mode
Range mAs	0,1 - 630 mAs; > 100 selectable adjustment steps in free selection mode	0,1 - 800 mAs; > 100 selectable adjustment steps in free selection mode	0,1 - 1000 mAs; > 100 selectable adjustment steps in free selection mode.
Time range	0,001 - 10 s		
HSS	Available ^(*)		
APR	More than 1024 anatomic programs. 3 points technique, 2 points technique, 1 point technique		
Independent Operation	Yes. X-ray Generator can also work independently with other imaging supports i.e. film and/or CR		
Generator Console	Integrated in the Acquisition Workstation.		
Automatic Exposure Control (AEC)	3-field sensors/ 4-field sensor ^(*)		
Dose Area Product (DAP)	Yes, with dose information stored in image DICOM header		
Protection	Line, Anode Load and Rotation, Tube thermal Load, Filament status: Overheating, not active, Max KV,..etc		

COLLIMATOR RALCO R Series

Type	Full size multi-leaf manual and automatic collimator unit with integrated LED light, centring lamp, and "Light ON" indicator , plus retractable measuring tape for SID measurement, 5" display with collimator aperture, SID measurement, and tube inclination.
Blade control	Manual multilayer square field
Collimator rotation	$\pm 45^\circ$ (optional rotating flange)
Light source	White LED > 160 LUX
Light time on	Default: 20 s (Adjustable electronic timer)
Collimation	Square field multilayer (0x0 cm – 48x48 cm @ SID=1 m) 6 pairs of shutters (ACS) / multilayer
Al eq contribution to total filtering	Minimum 2 mm Al equivalent
Additional filtration	<ul style="list-style-type: none"> • 1 mm Al + 0,1 mm Cu • 1 mm Al + 0,2 mm Cu • 2 mm Al + 0,3 mm Cu Manual selection / Remote control (motorized) ^(*)
Integrated distance measuring device	Integrated tape meter for SID measurement

^(*) Optional

^(**) These data are only indicative and referred to standard configurations. Different solutions can be supplied according to customer needs.

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TECHNICAL SPECIFICATIONS

INSTALLATION DATA

Power supply	400 Vac +/- 10%, 50/60 Hz
Wall stand (BS45)	DIMENSIONS: : 81 x 56 x 229 cm WEIGHT: 200 kg
Patient table	DIMENSIONS: 220 x 77 x 55 cm (BTE) - 220 x 77 x 75 cm (BT) WEIGHT: 250 kg (BTE) - 140 kg (BT)
Generator cabinet	DIMENSIONS: 55,9 x 40,6 x 123,7 cm WEIGHT: 107 kg

ENVIRONMENTAL CONDITIONS

OPERATING	
Temperature	+15°C ÷ +35°C
Humidity	20% ÷ 75%
Atmospheric Pressure	700 mbar ÷ 1060 mbar
TRANSPORT AND STORAGE	
Temperature	0°C ÷ +50°C
Humidity	20% ÷ 80%
Atmospheric Pressure	500 mbar ÷ 1060 mbar

^(*) Optional

ACCESSORIES

ACCESSORIES FOR BT/BTE HORIZONTAL BUCKY (*)

Compression band
Handles (couple)
Leg support (couple)



Lateral wireless detector holder for lateral projection on lying patient.



ACCESSORIES FOR VERTICAL BUCKY(*)

Accessory for stitching exams: it supports the patient during several expositions. With double footrest and optional compression band.



(*) Optional

CERTIFICATION, INSTALLATION AND WARRANTY

INSTALLATION

Only authorized technical personnel that has been appropriately trained by ITALRAY can install ITALRAY DR Solutions. Upon request, ITALRAY Installation Office can prepare system installation layouts (including eventual construction/electrical).

WARRANTY

ITALRAY guarantees its products for one year from the delivery date. ITALRAY can offer to its customers a wide range of service plans that will perfectly fit all needs and preferences.

REMOTE ASSISTANCE

ITALRAY DR Solutions are equipped with a remote service system that allows ITALRAY service engineers to have access the system via remote network for servicing and upgrading purposes. The remote servicing system availability is subordinate upon the technical/policy characteristics of the local Hospital network.