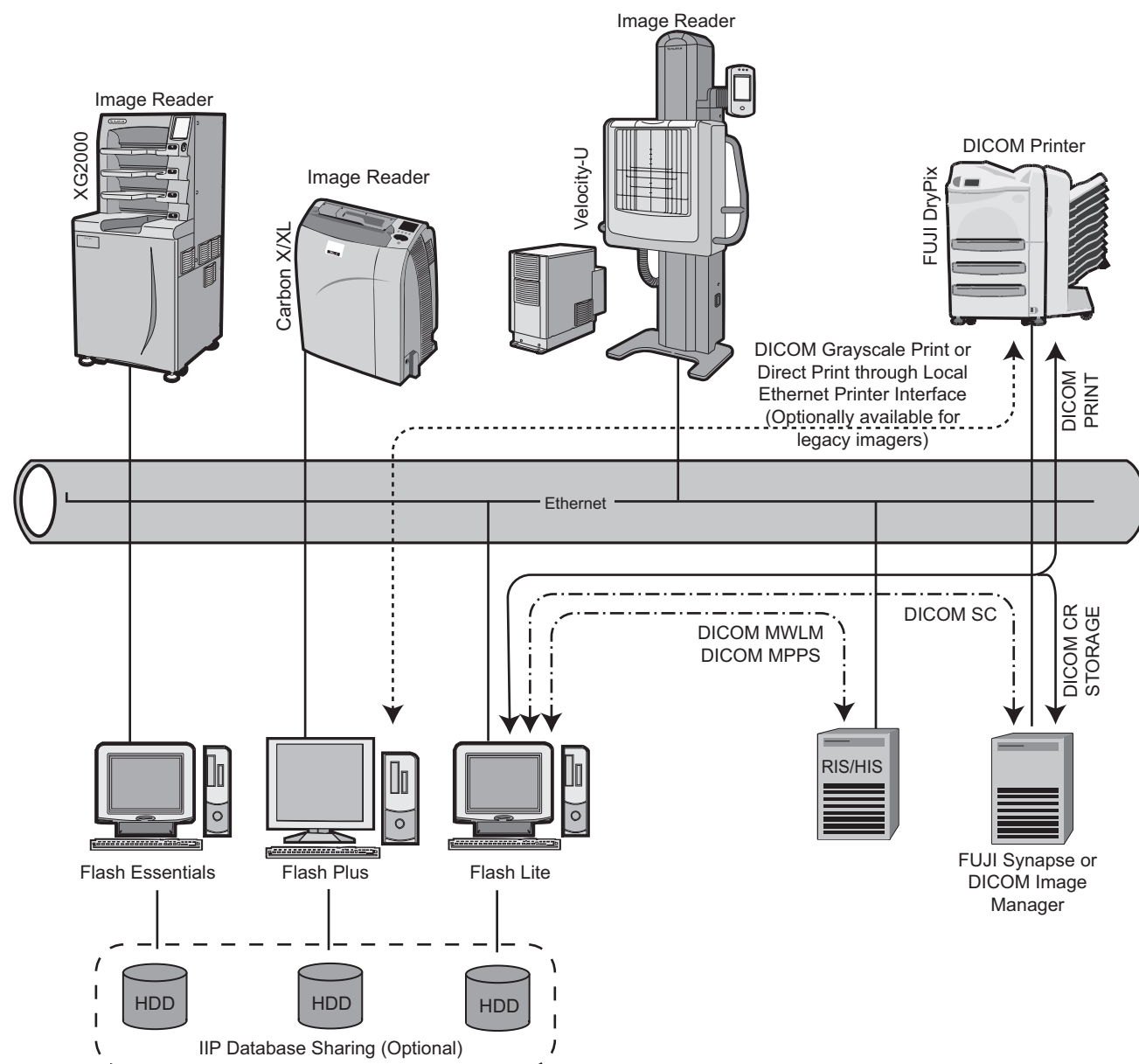


Connectivity Diagram



Notes:

- Network Interface - 100 Base-T, half or full recommended.
- Any FCR Reader can be utilized, after registering the patient at a Flash Essentials connected to the same network.
- Database Sharing allows sharing of exam and image data between Flash Essentials consoles within the Database Sharing cluster.
- Interfacing with Legacy FCR equipment - devices that communicate through DMS protocol can be connected to the network printer by adding an optional Fuji DryPix Station to convert the DMS to DICOM.

Specifications subject to change without notice.

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FUJIFILM

XBUSCR131

FUJIFILM MEDICAL SYSTEMS

FCR

Product Data

FCR XG2000 High Capacity Multi-Cassette Reader



Application

The Fuji Computed Radiography (FCR) XG2000* is a digital radiography system utilizing storage phosphor Imaging Plates (IP) as an x-ray detection device.

The FCR XG2000 reads and processes x-ray image information from an IP that has been exposed using a cassette-type x-ray stand. This system can also output printed hard copies on film via a network connected laser imager and transmit digital images to PACS.

The FCR XG2000 provides chest, abdomen, bone, spine, head and other plain x-ray imaging, as well as spinal canal, bronchial tube and other contrast media x-ray imaging.

A Flash IIP (Image & Information Processor) console workstation is provided with each FCR XG2000. Fuji CR's Flash IIP is designed for patient identification, image viewing, reprocessing and optimization. It integrates patient identification process via manual entry or connection with RIS/HIS using DICOM Worklist Management, with FCR image processing and transmission of images to PACS and/or imagers. The Flash IIP features a simplified user interface, which allow for complete patient processing in as few as 3 easy steps.

Connected to the Flash IIP, the FCR XG2000 system makes available both standard and high resolution scanning, and yields 100% size or reduced image output.

The FCR XG2000 is configured with either a Flash Lite or Flash Plus IIP. The Flash Lite IIP is ideally configured for the radiologic technologist. It includes a barcode scanner, 19" color, touch screen

flat panel monitor, ID entry and basic QA software. The Flash Plus IIP version is configured with advanced features for the QC technologist and can be used as a centralized QA workstation. It adds advanced reprocessing software options and a more robust hardware platform, including a premium 2 mega-pixel resolution 19" flat panel display.

Features

Due to the nature of digital image processing, this system produces radiographs that have high diagnostic value and are very easy to read. The system's wide latitude and automatic sensitivity adjustment function protects radiographs from variations in x-ray exposure conditions. This results in consistent image density for all radiographs.

The FCR XG2000's HQ reading mode provides high resolution (10 pixel/mm) image acquisitions from standard IPs. Additionally, the HQ mode enables 100% size image output for the most demanding diagnostic situations, with no effect on system throughput.

Both fast scan and high resolution (HQ) reading modes are user selectable. Fast scan reading provides maximum throughput for both 14 x 14" and 14 x 17" sizes.

The XG2000, also features an advanced grid pattern removal mode used in conjunction with grid pattern removal processing on the Flash IIP (GR mode & GPR). GPR intelligently suppresses moire patterns associated with the use of grids with a low number of grid lines per inch (80-100) which have wide interspaces between the lead strips. In most cases, moire can and should be prevented with a more optimal grid selection. The GR mode is only available

in the high resolution output mode from the Flash IIP Console and for 14 x 14" or 14 x 17" images. GPR suppresses the grid lines for images prior to output from the IIP to hard copy printers and/or PACS (GPR suppression is not viewable on the IIP screen). Transmission of this processing function to PACS requires that the PACS is capable of accepting high resolution images (10pix/mm). GPR is easily configurable ON or OFF in the configuration of individual exposure menus. This feature provides an on-film identification character: G, which is also sent to PACS in a private tag.

Image processing parameters are identified according to an anatomical region selection menu at the Flash IIP console. With optional Auto Exam Select, exam menus can be mapped to CPT (procedure) codes for automatic transfer via DICOM Worklist Management.

The system has two separate cassette drives to permit insertion of two cassettes at once, making it possible to efficiently process images and optimize user workflow. Each slot has an independent drive that enables continuous operation, in the event of a cassette jam in one drive, the remaining drive(s) will still function normally.

The automatic feed/load mechanism on the FCR XG2000 improves operational efficiency. It also features a convenient easy-release mechanism to release cassettes in the case of a power outage or system failure.

The FCR XG2000 can be network connected to multiple Flash IIP consoles and other FCR reader units for maximum flexibility and redundancy.

System Configuration

FCR XG2000 two slot cassette drive Image Reader is an industry exclusive. The FCR XG2000 is a scalable system that can be upgraded to a four drive reader as a facility's exam volume increases.

Standard Components:

FCR XG2000 Two-driver cassette stacker, Image Reader
Built-in Operation Panel - monitors machine, cassette drives and imaging plate status.

FCR Flash IIP workstation - One FCR Flash Lite or Flash Plus IIP workstation is included with the reader. Desktop configuration with keyboard, mouse, flat panel LCD display and barcode scanner. (See related Flash IIP Product Specifications for additional details.)

Image Processing Software

Standard & High Resolution Processing
Density & Gradation Processing
Spatial Frequency Processing
Enlargement & reduction for one or two image output.
Image Orientation: inversion, left to right, top to bottom
Film copy function (to output multiple number of films)
EDR automatic detection of exposure level

Image Intelligence™

Multi-objective Frequency Processing (MFP)
Dynamic Range Control (DRC)
Tomographic Artifacts Suppression (TAS)
Flexible Noise Control (FNC)
Grid Pattern Removal (GPR)

Other System Options

Additional Flash IIP consoles and related imaging software capabilities, External DVD-RW, Seismic Mounting Brackets

Other System Components

FCR Flash IIP Consoles: Flash Essentials, Flash Lite IIP, Flash Plus IIP, Pocket-id (portable worklist and patient id)
Image Recorders: DryPix 2000, 4000 & 5000

Supplies

Cassettes & Imaging Plates Sizes & Types

Cassettes Types: B, C, CC & LC
IP Type: ST-VN & ST-VI (standard type) sizes
Inch Sizes: 14x17", 14x14", 10x12", 8x10", 14x34", 14x40" & 14x50"
Metric Sizes: 35x43cm, 35x35cm, 24x30cm, 18x24cm, 25.2x58cm, 35.4x83.7cm, 35.4x101.7cm, 35.4 x124.5cm
IP Type: HR-V (high sharpness)
Sizes: 24x30cm & 18x24cm (high resolution)

Processing Capacity

Modes:	(IPs/hr)			IP Cycle Time (sec.)		
	Std	HQ/Fast Scan/GR	GR	Std & HQ	Fast Scan	GR
IP Size						
14 x 17" (35x43cm)	103	120*	75	60	45	68
14 x 14" (35x35cm)	120	140*	85	54	40	60
10 x 12"		128			50	
8 x 10"		165			40	
24 x 30cm (ST)		128			51	
18 x 24cm (ST)		165			42	
24 x 30cm (HR)		90			65	
18 x 24cm (HR)		110			55	

Approximate Rates all at 10 pixels/mm

*5 pixels/mm Fast Scan Mode

GR-Grid Removal Mode

Film Output Time (with DryPix 7000)

Approx. 110 sec. (with high pixel density 14x14" 35x35cm) six two-image output format on 26x36cm film, from cassette insertion to film output)

Image Reading

Reading gray scale 12 bits/pixel
Output gray scale 10 bits/pixel

Sample Rate (pixel/mm)	Number of Pixels (pixels)	
	Standard	HQ
Image size		
14 x 17"	*5 10	*1760 x 2140 3520 x 4280
14 x 14"	*5 10	*1760 x 1760 3520 x 3520
10 x 12"	6.7 10	1670 x 2010 2505 x 3015
8 x 10"	10 10	2000 x 2510 2510 x 2000
24 x 30cm	6.7 10	1576 x 1976 2364 x 2964
18 x 24cm	10 10	1770 x 2370 1770 x 2370

*Fast Scan Mode - 14 x 17" and 14 x 14" sizes only. Fast Scan sampling and pixels same as standard mode.

Image Output

The laser imager (sold separately) can output one or two-image format on a film. Any of the following image reduction ratios and formats can be selected by specifying the pixel density of each menu at the Flash IIP console.

IP Size	- Output Reduction Ratio -			
	Std. Pixel Images		HQ Pixel Images	
	Two-Image	One-Image	Two-Image	One-Image
14 x 17"	50%	67%	50%	100%
14 x 14"	50%	67%	50%	100%
10 x 12"	67%	100%	67%	100%
8 x 10"	86%	100%	86%	100%
24 x 30cm	67%	100%	67%	100%
18 x 24cm	86%	100%	86%	100%

Site Planning Specifications

Dimensions: 58 1/4H x 25 13/16W x 29 1/8D inches
(1480 x 655 x 740mm)

Environmental Conditions

Temperature: 59-86°F (15-30°C)
Humidity: 40-80% RH (No dew condensation)
Heat Output: ~500 Wh (1707 BTU)

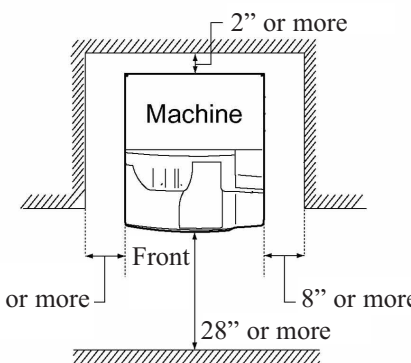
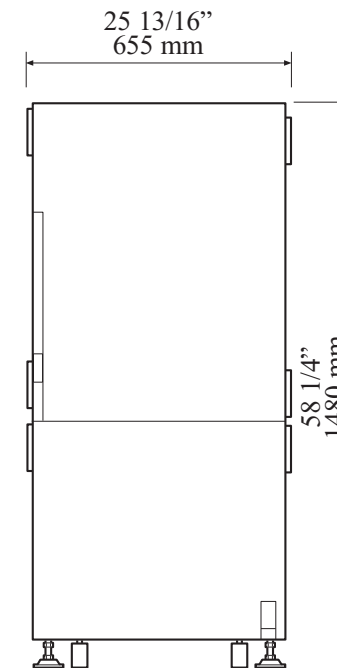
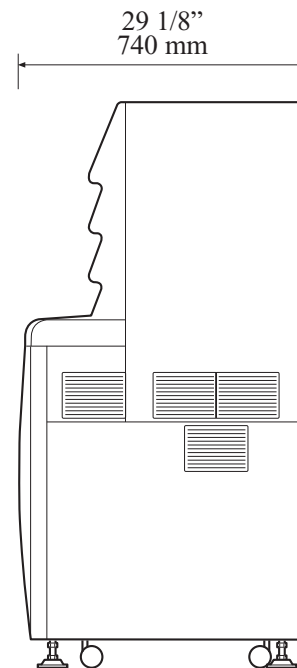
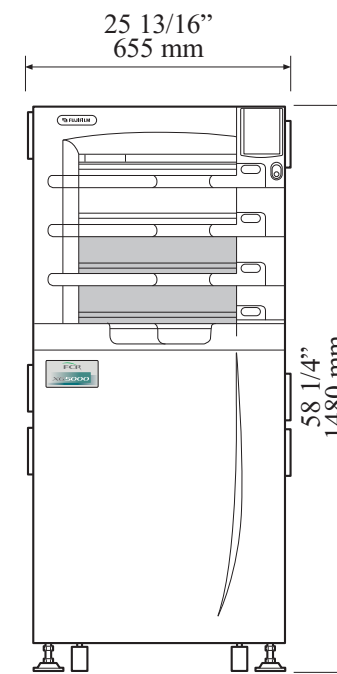
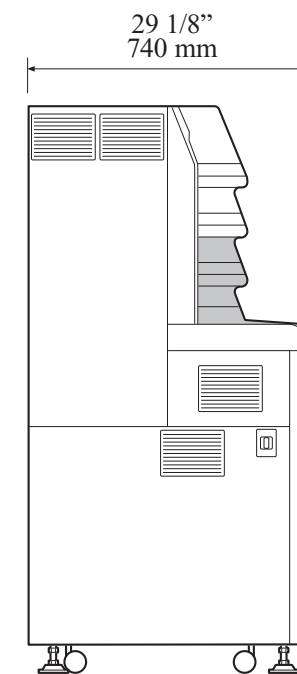
Weight: 627 lbs. (285kg)

Electrical Requirements

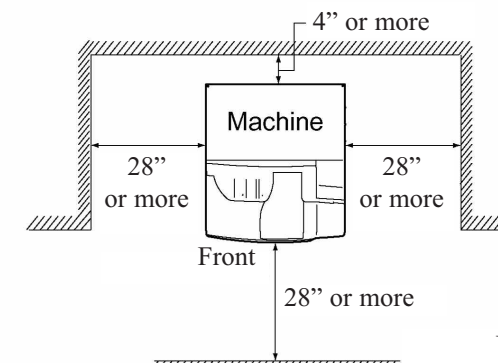
Line Voltage: 100-240 VAC 10%
Phase: Single 50-60 Hz
Rated Amperage: 7A (Max)
Power Consumption: 770 W (Max) ±

Network Connection 10Base-T/100Base-TX
100 Base-T: 1/2 or full, recommended.

FUJI XG2000 Multi-Plate Reader



Space required without fixed floor mounting



Space required with fixed floor mounting

Unit: Inch

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* Not currently available in the U.S.

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