FUJIFILM MEDICAL SYSTEMS

Product Data

FCR Carbon X/XL-2

Exceptional Image Quality in An Efficient, Compact Package

Application

The Fujifilm Computed Radiography Carbon X/XL-2 are digital radiography systems utilizing storage phosphor Imaging Plates (IPs) as an x-ray detection device.

Carbon X/XL-2 models scan and process x-ray image information from an IP that has been exposed using a cassette-type x-ray stand. This system can print out hard copies on film via DICOM Print and also transmit digital images to PACS via DICOM CR store.

The Carbon X/XL-2 models provide chest, abdomen, bone, spine, head and other general x-ray imaging as well as spinal canal, bronchial tube, urinary organ and other contrast medium x-ray imaging. Carbon X/XL-2 units also include the capability to perform Pantomographic exams.

Features

Due to the benefits of digital image processing, the system produces radiographs that have a high diagnostic value and are easy to read. Fast Scan, high resolution (HQ-100µ) and 50µ pixel size using HR IPs is possible with the Carbon XL-2. Reading modes are user selectable. Fast Scan reading provides maximum throughput for the Carbon XL-2 for both 14x14" and 14x17" sizes, while the standard HQ reading mode provides 10 pixel/mm resolution image acquisition and display for all sizes without impacting system speed.

High Resolution (50µ) Scanning-available with the Carbon XL-2 for 18x24cm and 24x30cm sizes, making it ideal for orthopedic and extremity applications, where seeing fine details is critical.

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 types of radiographs. Image processing parameters are selected through anatomical region selection menus.

FCR Carbon X/XL-2 readers can be network connected to multiple Flash IIP (Image & Information Processor) consoles and other FCR readers for maximum scalability and redundancy. A Flash IIP console workstation is provided standard with each reader unit. Fujifilm's Flash IIP is designed for simple and fast patient identification, image viewing, reprocessing and optimization. It integrates patient identification process (via manual entry or automated by connection with RIS/HIS using DICOM Modality Worklist Management) with Fujifilm's intelligent image processing and ability to transmit images to PACS and/or imagers. The Flash IIP features a simplified user interface which allows for complete patient processing in as few as 3 easy steps. See Flash IIP datasheet for more information.

Mobile kit

Hardware brackets to stabilize & support Carbon X/XL-2 for mobile vehicle use. Optional Laptop Flash IIP console also available to reduce space requirements.

Other System Components

FCR Flash IIP consoles:
Flash Lite IIP, Flash
Plus IIP, Flash IIP Suites,
Flash IIP Laptop,
IP cassette type CC, CB, LC, PC, CH*
ST-VI and HR-V IPs
FCR DVD-RW
Custom Workstation Stand
Seismic Bracket
Mobile Mounting kit
Pocket ID PDA
Image Recorder:
DRYPIX 2000, DRYPIX 4000,
DRYPIX 5000
Synapse® PACS

*XL-2 model only

Available Cassette Types

Type CC, CB, LC, PC, CH*
Inch settings
14 x 17", 14 x 14", 10 x 12",
8 x 10" and 15 x 30cm
Metric settings
35 x 43cm, 35 x 35cm, 24 x 30cm,
18 x 24cm, 15 x 30cm
Type LC
14 x 50", 14 x 34", 10 x 24"

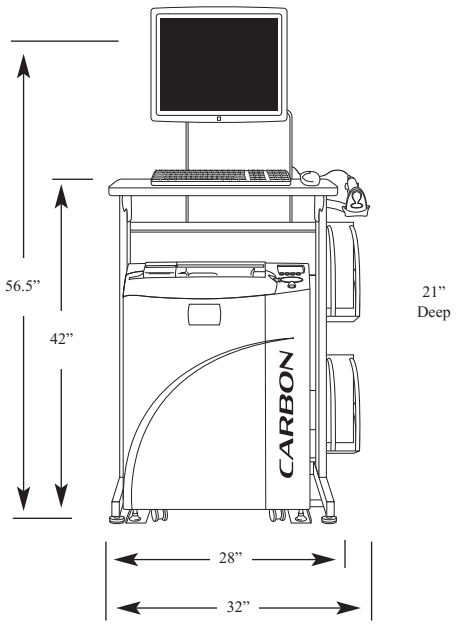
*XL-2 model only

Fujifilm Imaging Plate

Standard type ST-VI
(35 x 35cm), 10 x 12", 8 x 10",
24 x 30cm, 18 x 24cm, 15 x 30cm
HR-V (XL-2 Only)
24 x 30cm, 18 x 24cm

Options

Dedicated Carbon Cart: Heavy – duty engineered technical furniture providing countertop and cassette holder space for the Carbon readers, with support for the CPU and monitor of the Flash IIP console.



Throughput (IP/hour)

	CARBON XL-2			CARBON X
IP/Cassette Size	Fast Scan (5pixels/mm)	Standard HQ (10pixels/mm)	HR-V (20pixels/mm)	Standard HQ (10pixels/mm)
14x17 in.	87	62	-	43
14x14 in.	94	70	-	50
10x12 in.	-	73	-	54
8x10 in.	-	87	-	67
24x30 cm	-	75	61	54
18x24 cm	-	92	70	72
15x30 cm	-	73	-	55

Cycle Time (Sec.)

CARBON XL-2			CARBON X
Standard HQ	Fast Scan	HR-V	Standard HQ
58	41	-	82
52	38	-	72
49	-	-	66
41	-	-	53
48	-	59	66
39	-	51	50
49	-	-	65

Image Reading

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

CARBON XL-2

Reading Size		14x17"	14x14"	10x12"	8x10"	24x30cm	18x24cm	HR-V 24x30cm	HR-V 18x24cm	15x30cm
Fast Scan Pixel density	Pixel Density (pixels / mm)	5	5	-	-	-	-	-	-	-
	Number of Pixels	1760×2140	1760×1760	-	-	-	-	-	-	-
High Pixel density	Pixel Density (pixels / mm)	10	10	10	10	10	10	20	20	10
	Number of Pixels	3520x4280	3520x3520	2505x3015	2000x2510	2364x2964	1770x2370	4728x5928	3540x4740	1464x2964

CARBON X Sampling Rate

Reading Size		14x17"	14x14"	10x12"	8x10"	24x30cm	18x24cm	15x30cm
Pixel density	Pixel Density (pixels / mm)	10	10	10	10	10	10	10
	Number of Pixels	3520x4280	3520x3520	2505x3015	2000x2510	2364x2964	2364x2964	1464x2964

EXTERNAL DIMENSIONS AND WEIGHT*:

Width in. (mm)	Depth in. (mm)	Height in. (mm)	Weight lb. (kg)
23.25 (590)	15 (380)	32 (810)	218 (99)

* Dimensions and weight are approximate and are subject to change without prior notice.

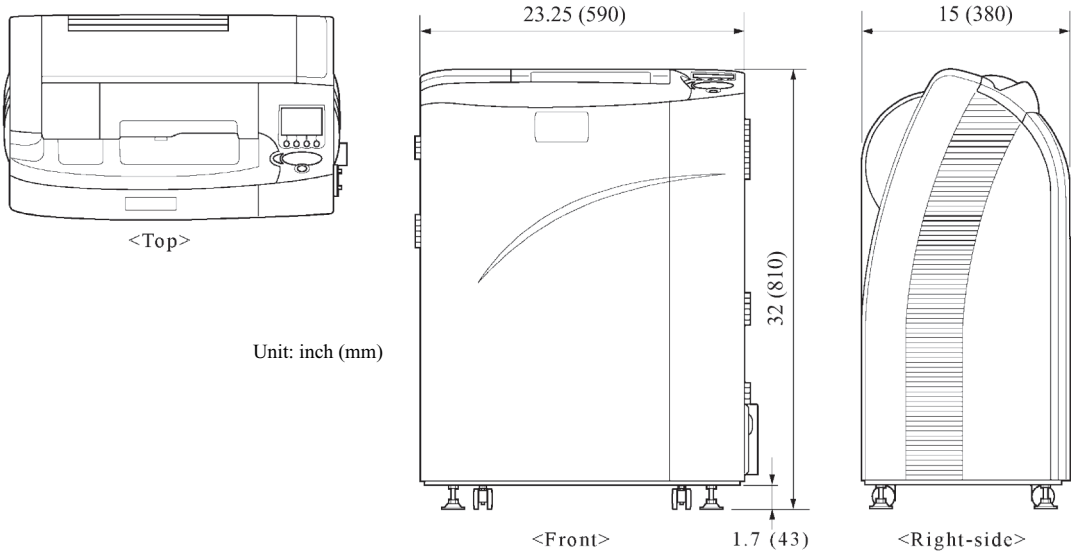
Power Supply Conditions

Single phase 50–60Hz
AC 120–240V ±10%
5A (Max.)

Operating Conditions

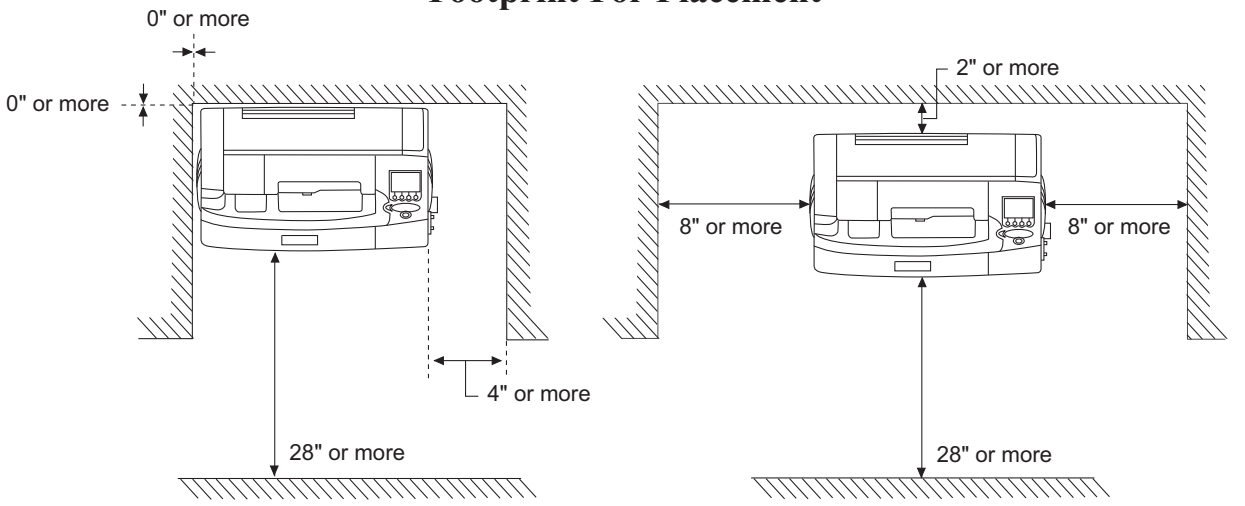
Temperature:	15 - 30°C	
Humidity:	40 - 80%RH	
	(No dew condensation)	
Heat Output:	XL-2	995 BTU/hr
	X	692 BTU/hr
Power consumption:	XL-2	290 VA (W) or less
	X	200 VA (W) or less

Carbon X/XL-2 Image Reader



Unit: inch (mm)

Footprint For Placement



Installations Without Floor Anchoring

Seismic & Vehicle Mounted Installations
Height Clearance 52” Minimum

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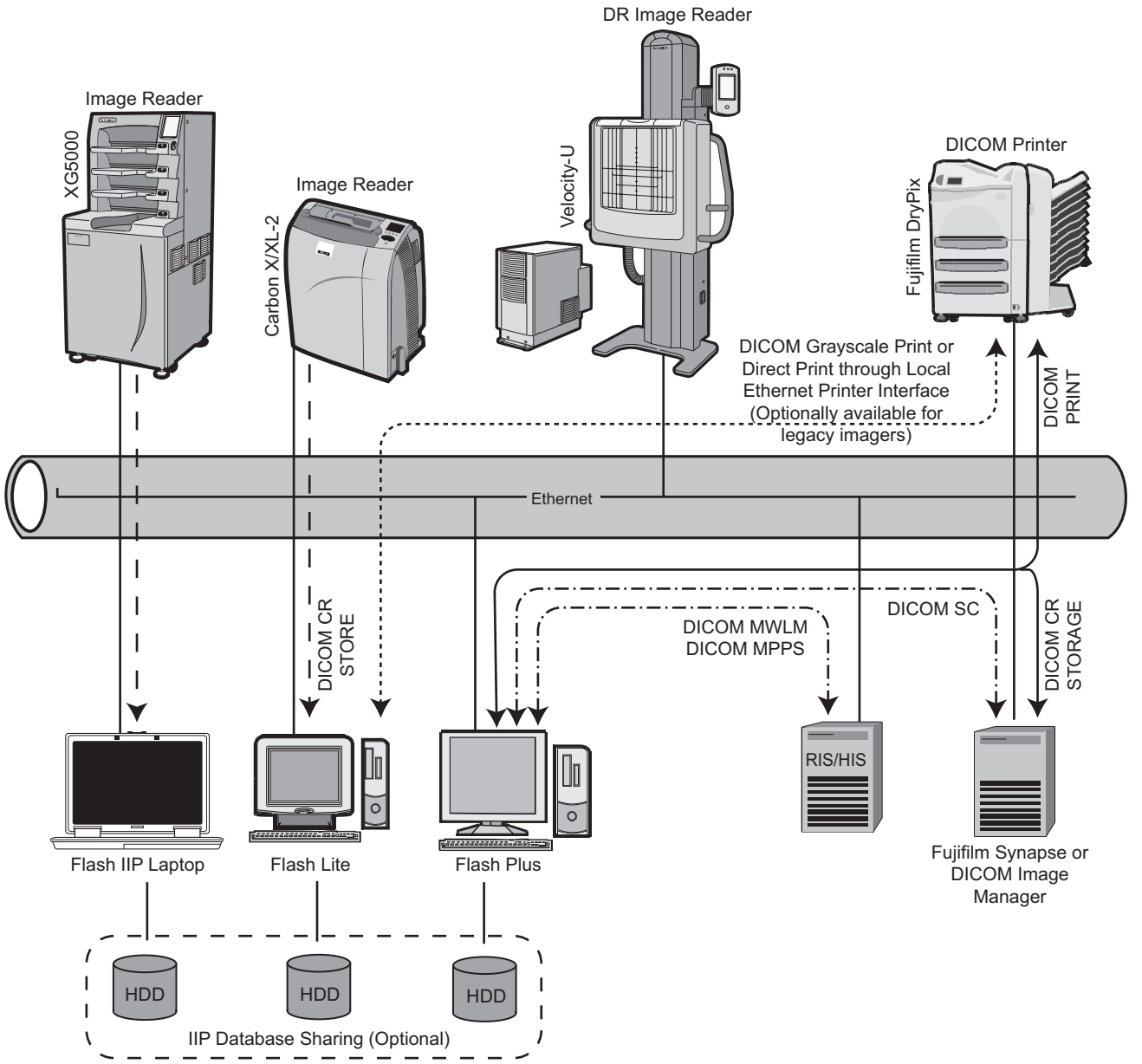
Connectivity Diagram



Notes:

- Network Interface - 100 Base-T, half or full recommended.
- Any FCR Reader can be utilized, after registering the patient at a Flash IIP connected to the same network.
- Database Sharing (option) allows sharing of exam and image data between Flash IIP 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 Fujifilm DryPix Station to convert the DMS to DICOM.

Specifications subject to change without notice.

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