



# SOLUTIONS

CONTINUITY PLANNING -  
HOW TO ENSURE ACCESS TO YOUR PACS  
DURING AND AFTER A DISASTER

## *MY PACS, MY PEACE*





# ***PACS CONTINUITY PLANNING BEYOND BACK-UP COPIES***

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The data archived in any PACS is very sensitive. It has to be available at all locations within a medical facility around the clock, 365 days a year, even if something unpredictable has happened.

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There are many unpredictable events that may risk the integrity of a PACS server: A failure in the air conditioning of the server's room, flooding, fire, short circuits, vandalism and the like may cause a permanent breakdown of the system.

After such failure occurs, it might take a long time until the system is available again with the same data consistency that it used to have. Even if a back-up copy is available,

it doesn't mean that data can be accessed immediately, since the recovery process or the installation of a new server might take several weeks. Many PACS planners tend to think: "It won't ever happen to us!". And they might be right, since the possibility that anything of this order occurs is relatively low. However, we have experienced enough examples of these situations happening. The impact on the affected institutions, their workflow, patient histories,

daily work and even on their reputation has always been extremely high. In order to prevent these situations from happening, iQ-SYSTEM PACS offers a series of reliable options for easy and safe business continuity planning. This innovative product line protects every organization's data and ensures immediate access to the stored records in case of a breakdown.

# *PACS CONTINUITY PLANNING*

It is crucial to rely on a continuity system. Stored imaging data and reports may be accessed using alternative channels (either temporarily or permanently). This way, the whole system can keep on working normally with a minimum of inconveniences even in case of an IT disaster.

Using iQ-SYSTEM PACS, we offer the following 4 solutions for the planning of a convenient PACS continuity system:

- A. Full back-up PACS (iQ-WEB)
- B. Virtual PACS Server (iQ-ROUTER PRO)
- C. Thick client access to multiple sources (iQ-VIEW)
- D. Thin web-based image distribution architecture (iQ-WEBX)



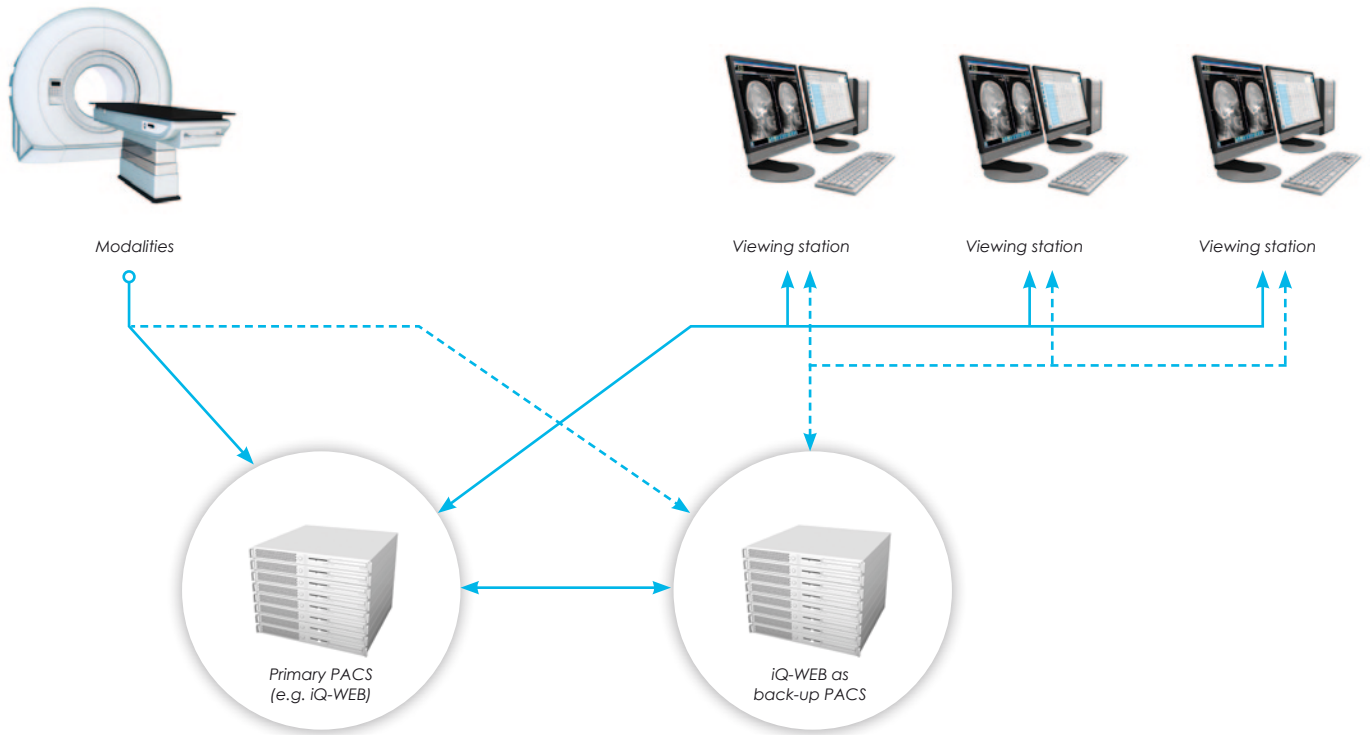
# A. FULL BACK-UP PACS (iQ-WEB)

iQ-WEB can be the back-up PACS of any existing PACS available on the market. Data will be sent from the modalities to both, primary and back-up PACS. Both PACS may synchronize automatically.

Scenario: Primary PACS has been impacted by a disaster

Solution: Existing PACS viewing stations can easily be adjusted to load studies from iQ-WEB (Back-up PACS)

Post disaster data recovery: Automatic resynchronization from iQ-WEB to the primary PACS



———— Regular operation mode      - - - - - Disaster mode

## B. VIRTUAL PACS SERVER (iQ-ROUTER PRO)

Thanks to the functionalities of iQ-ROUTER PRO, it is possible to use it as a Gateway that serves as a proxy between the modalities and various PACS. This virtual PACS acts as a DICOM store SCP / SCU to the local modalities. This way, the modalities and viewing stations only interact with the proxy. The proxy communicates with the PACS servers .

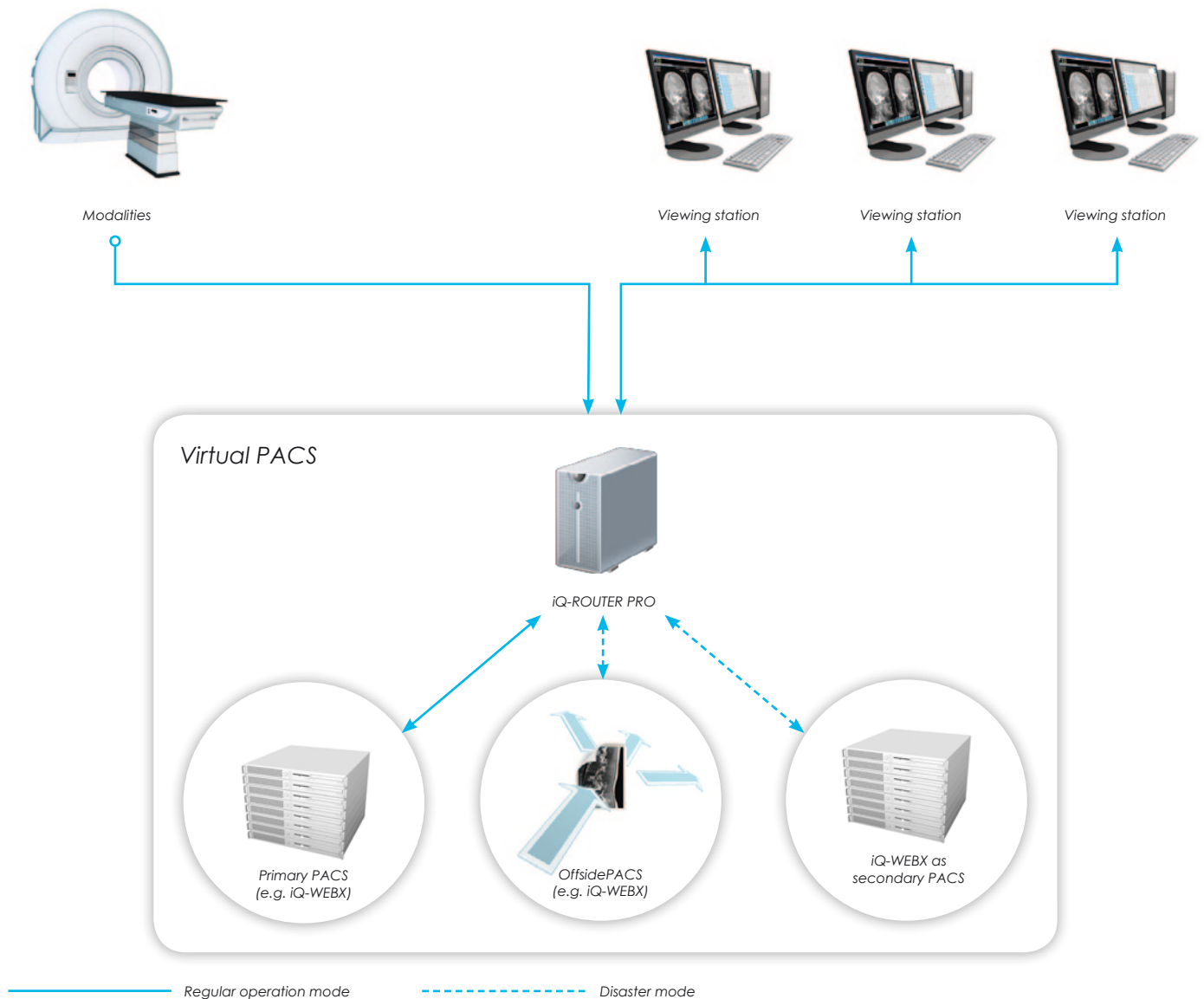
**Scenario:** One of the PACS servers has been impacted by a disaster

**Solution:** Data is automatically obtained from the other PACS servers without the users even noticing; modalities and viewing stations do not have to be reconfigured in order to access the secondary PACS or the offside PACS (if applicable)

**Scenario:** Viewing stations have also been impacted by the disaster

**Solution:** Thin web based image distribution architecture; for details see page 7 (solution D, first scenario)

This solution has been implemented, for example, at IMSI, Philadelphia, PA = storage provider for 15 hospitals.



## C. THICK CLIENT ACCESS TO MULTIPLE SOURCES (iQ-VIEW)

iQ-VIEW is one of the few PACS viewing stations on the market that can query, retrieve and read seamlessly from multiple sources at a time. Thus, it provides simultaneous access to an unlimited number of sources without reconfiguration.

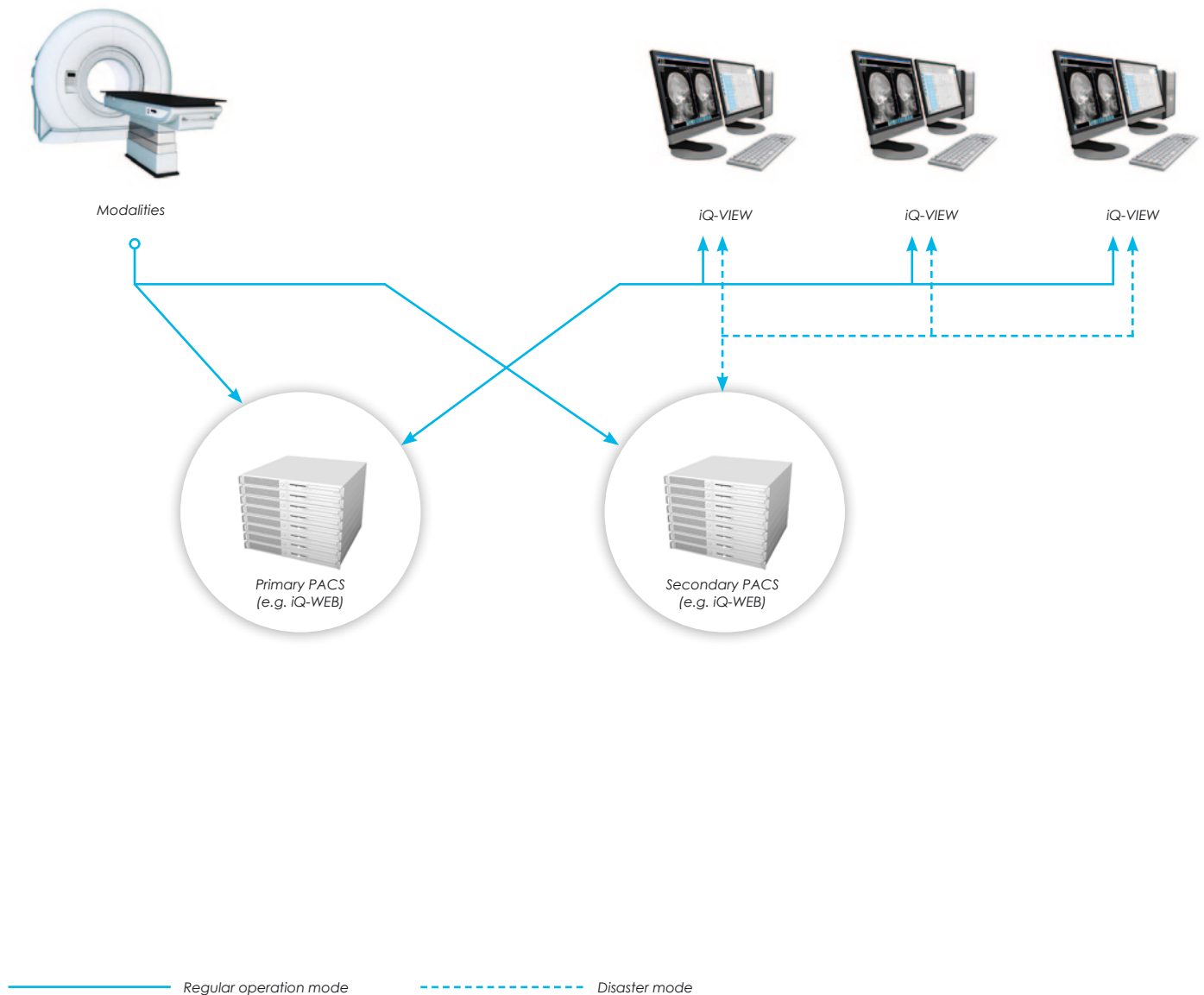
**Scenario:** Primary PACS server has been impacted by a disaster  
Low risk for the viewing stations to be impacted

**Solution:** iQ-VIEW can smoothly access any secondary PACS (e.g. iQ-WEB)

**Scenario:** Viewing stations have also been impacted by the disaster

**Solution:** Thin web based image distribution architecture; for details see page 7 (solution D, first scenario)

This solution has been implemented at Michigan Health (USA), Canterbury Christ Church University (UK), Idime (Colombia) and many other sites.



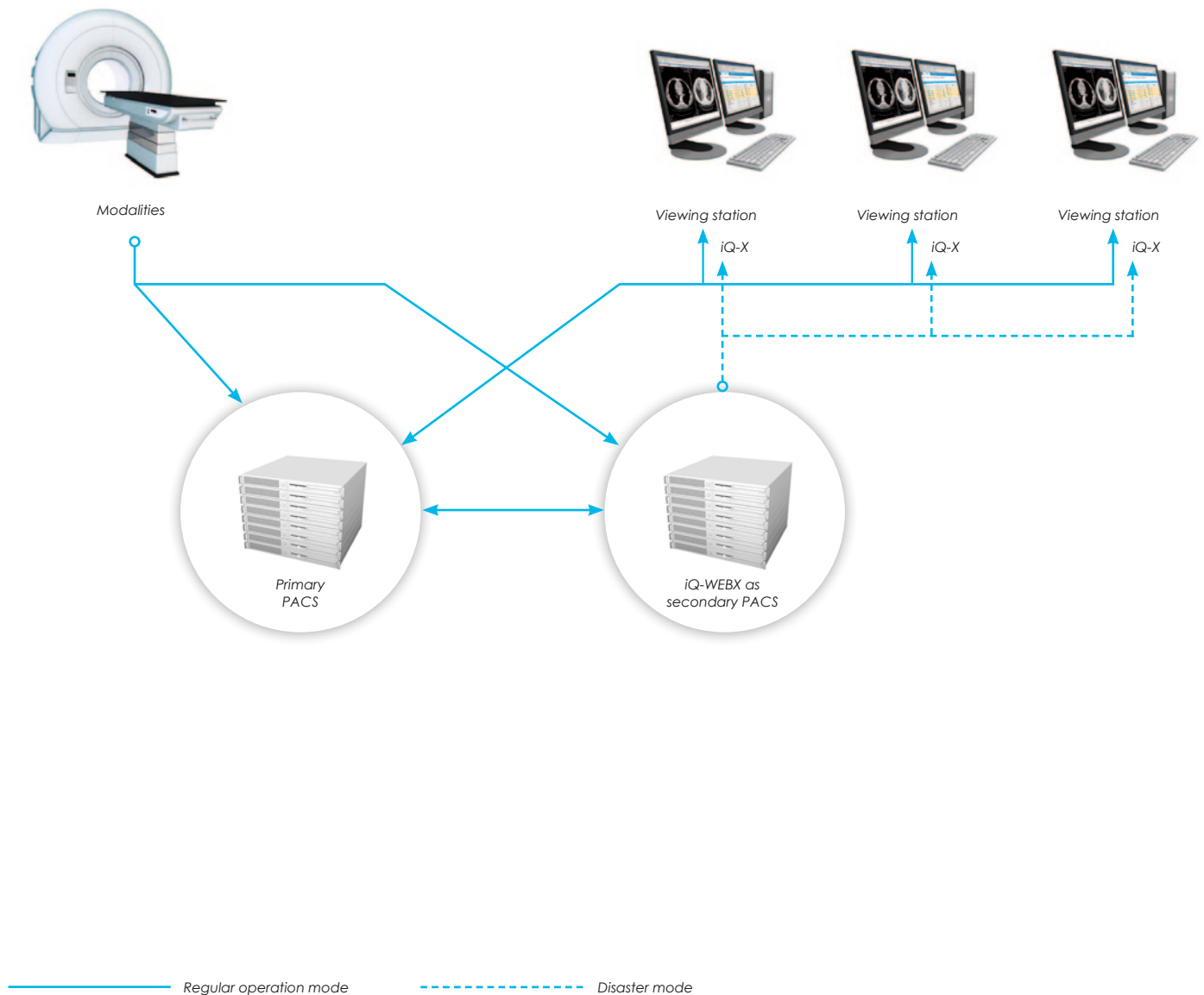
## D. THIN WEB-BASED IMAGE DISTRIBUTION ARCHITECTURE (iQ-WEBX)

iQ-WEBX can act as a secondary thin client reading software to query, retrieve and read from an unlimited number of sources simultaneously. As a secondary PACS, iQ-WEBX can receive directly images from the modalities and/or retrieve the primary PACS server to look for further, updated information at any time.

**Scenario:** Viewing stations have been impacted by a disaster; primary PACS is still working and accessible  
**Solution:** Secondary PACS can be accessed via iQ-X, the web-based DICOM Viewer included in iQ-WEBX  
Modalities send images to primary and secondary PACS

**Scenario:** Primary PACS has also been impacted by the disaster  
**Solution:** Secondary PACS can be accessed via iQ-X, the web-based DICOM Viewer included in iQ-WEBX  
Modalities send images to secondary PACS only

Post disaster data recovery: Automatic resynchronization from iQ-WEBX to the primary PACS



# OUR COMPANY AT A GLANCE

IMAGE Information Systems is a British-German company group, which offers complete, easy-to-use and affordable solutions for the most demanding customers in the field of medical imaging.

Thousands of satisfied clients all over the world are benefiting from our state-of-the-art products for PACS, RIS, nuclear medicine, medical displays, X-ray solutions, 3D processing and teleradiology.

We have pioneered several innovations to the market: We are the first worldwide PACS vendor to introduce true 12 bit grayscale display technology for a visibly better quality of CR, DR and CT studies. We are the world's first provider of a fully automatic nuclear heart reconstruction. Our DICOMReader has the highest available read-in rate of patient CD-ROMs ensuring virtually full compatibility with almost all available imaging modalities and vendors.

IMAGE Information Systems provides the 2nd largest digital imaging user forum on earth with more than 20,000 registered users.

To learn more about us and our products, please visit our web site.



[www.image-systems.biz](http://www.image-systems.biz)

## OUR SOLUTIONS FOR YOUR IMAGING NEEDS

|                       |   |
|-----------------------|---|
| <b>iQ-VIEW</b>        | The radiology reading station   |
| <b>iQ-VIEW 3D</b>     | 3D post-processing workstation  |
| <b>iQ-STITCH</b>      | Tool for the creation of full spine and full leg images               |
| <b>iQ-CAPTURE</b>     | Add-on hardware module for capturing images from analog video sources |
| <b>OrthoView™</b>     | Add-on module for orthopedic templating and trauma planning           |
| <b>DICOMReader</b>    | Reading portable DICOM media into any PACS                            |
| <b>iQ-WEBX</b>        | PACS server for storage, teleradiology and image distribution         |
| <b>iQ-WEBX WADO</b>   | Simplifying the workflow  |
| <b>iQ-PRINT</b>       | DICOM paper print server  |
| <b>iQ-ROBOT</b>       | Automatic burning and labeling of patient CDs and DVDs                |
| <b>iQ-ROUTER</b>      | Image compression for teleradiology and workflow management           |
| <b>iQ-WORKLIST</b>    | DICOM worklist server optimizing your workflow                        |
| <b>iQ-MAIL</b>        | Simple teleradiology using DICOM email                                |
| <b>iQ-NUC</b>         | Complete package for nuclear image processing                         |
| <b>iQ-RIS</b>         | The smooth radiology information system                               |
| <b>IMAGE DISPLAYS</b> | Medical diagnostic displays   |
| <b>iQ-CR ACE</b>      | Efficiency in CR  |

