

**TOSHIBA**  
Leading Innovation >>>



PRODUCT PORTFOLIO

INTERVENTIONAL IMAGING

# IMPROVING THE QUALITY OF LIFE IS OUR MISSION

## **Innovation is our commitment**

At Toshiba we make every effort to provide you with the best quality products and services to meet the challenging demands of your clinical practice. The development of our Infinix product family for cardiovascular angiography was guided by our commitment to deliver innovative clinical solutions that help you deliver the best patient care.

The clinical and technical challenges are rising continuously – especially in interventional imaging. With procedures becoming ever more complex, systems are needed that are faster, more efficient and more precise. Unobstructed patient access from all sides, excellent image quality and smart functionality are the key aspects of a modern angiography system.

Infinix-i meets the challenges of today's interventional imaging. The variety of configurations fulfills all needs and offer tailored solutions that are suited to your personal requirements and demands.

The logo for Infinix-i, featuring the word "Infinix-i" in a stylized, italicized font with a circular graphic element around the "i".

## Single plane – Ceiling

## Single plane – Floor

## Biplane



**Multi-axis ceiling mounted** C-arm systems with variable configurations



**5-axis floor mounted** C-arm systems with variable configurations



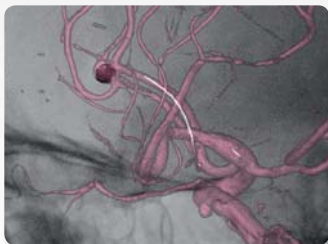
**High-end biplane** C-arm systems with variable configurations

# INFINIX VF-i/BP



Infinix Biplane is the system of choice for dedicated neuro-interventions. The 30x30 cm FPD size with its slim housing design on frontal and lateral plane offers the perfect balance between anatomical coverage and projection flexibility for high-risk procedures.

Alternatively the system is available with 30x40 cm FPD on the frontal and 30x30 cm on the lateral plane which is an excellent combination when the system is supposed to be shared between neuro and general vascular procedures.



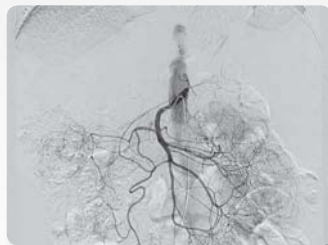


# INFINIX VF-i

*Infinix VF-i*

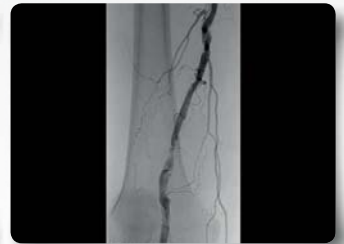
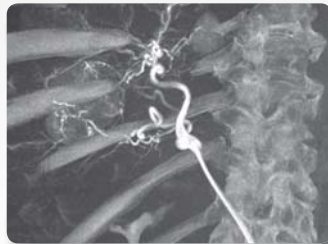


Infinix floor mounted C-arm system with the flexibility of a ceiling mounted system thanks to its innovative 5-axis positioner for maximal projection flexibility and optimal patient access. Performance without compromise and a choice between two different types of detectors 30x40 cm for general vascular or 30x30 cm for mixed cardiovascular applications.



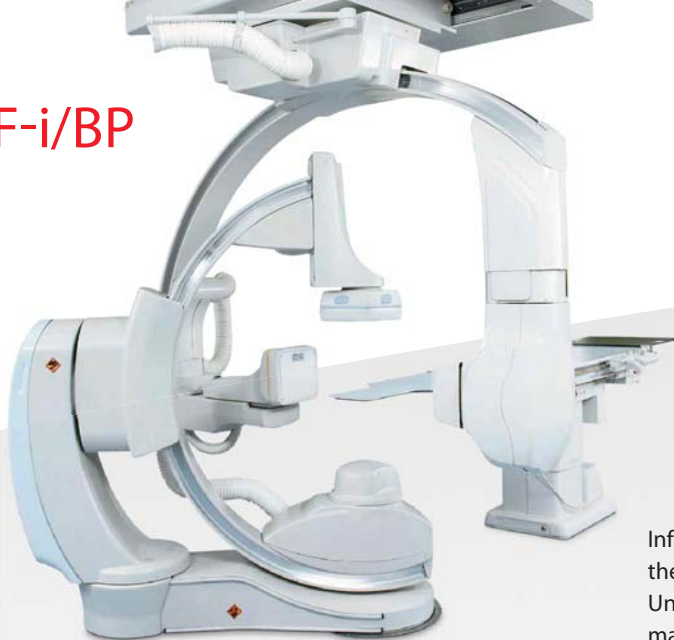
# INFINIX VC-i

This Infinix ceiling mounted C-arm with the large 30x40 cm flat panel detector is our flagship for interventional angiography. It offers patient access from all sides which eliminates the need to move table or patient. The system is available with two flat panel sizes: 30x40 cm or 30x30 cm.



# INFINIX CF-i/BP

*Infinix CF-i/BP*



Infinix Biplane with two smaller detectors is the optimal solution for cardiac interventions. Unmatched patient access combined with maximum projection flexibility make it a phenomenal system.

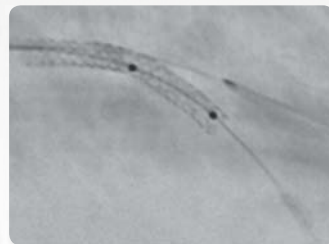
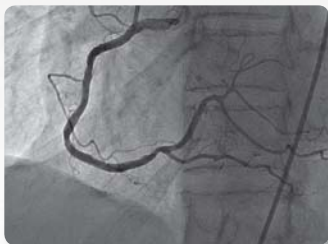




# INFINIX CF-i

*Infinix CF-i*

Infinix floor mounted C-arm with the flexibility of a ceiling mounted system. Performance without compromise with 20x20 cm FPD dedicated to PCI and EPU procedures. The innovative 5-axis principle offers optimal workflow and patient access that even allows easy access to the peripheral vessel system without the need for moving the patient.

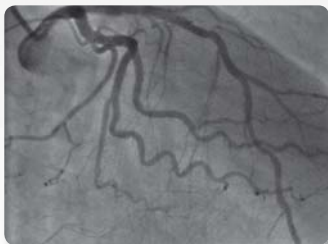


# INFINIX CC-i

*InfinixCC-i*

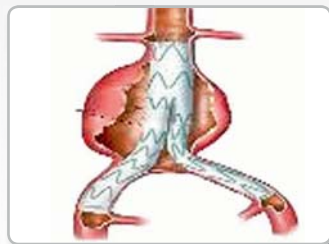
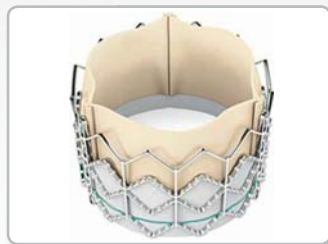
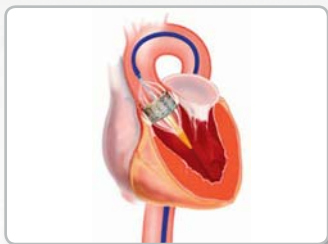


The Infinix ceiling mounted C-arm with smaller detector 20x20 cm for interventional cardiology. A system with outstandingly fast and precise projections and the capability to access peripheral vessel anatomy without having to move patient or table.



# INFINIX VC-i HYBRID

The combination of the Infinix VC-i with the fully integrated dedicated surgical table Maquet Magnus perfectly meets the requirements of the rapidly growing demand for hybrid procedures. The system is available in 3 different detector sizes – 20 x 20 cm, 30 x 30 cm and 30 x 40 cm.



# DESIGN – FREEDOM AT WORK



Clinical Freedom



Patient access has never been more important. As the complexity of procedures increases, so does the risk of emergencies. Difficult interventions now tend to be performed under anesthesia and the emergence of new technologies triggers innovative hybrid procedures. In view of these developments unobstructed patient access from all sides is a key criterion in interventional imaging. The innovative 5-axis C-arm design offers perfect access to the patient whenever needed without compromise in projection flexibility.

## INFINIX – AGILITY WITHOUT COMPROMISE

- Flexible positioning of  $\pm 135^\circ$  for left femoral, radial or brachial catheter techniques without compromise
- Automated synchronization of detector and collimator rotation for correct head display regardless of C-arm position



- Lateral C-arm movement for optimal access during pacemaker/ICD implantation



# EXAMINATIONS WITHOUT THE NEED TO REPOSITION THE PATIENT



Clinical Freedom



- Fast and simple arm angiography without table rotation thanks to the lateral movement capability of the C-arm and the synchronized rotation of detector and collimator.



- Complete peripheral coverage without having to move the patient. Available with ceiling or floor mounted C-arm.

## ALWAYS THE RIGHT DETECTOR FOR YOUR CLINICAL NEED

Toshiba's comprehensive detector portfolio provides the perfect detector size for a wide range of applications. Dedicated cardiac procedures are ideally performed with a 20 x 20 cm detector.

When a larger detector is required for peripheral angiography, 30 x 40 cm is the size of choice.

For mixed applications, such as peripheral/cardiac or neuro interventions, the 30 x 30 cm detector offers the best balance for anatomical coverage and projection flexibility.

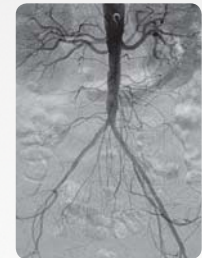
20 x 20



30 x 30



30 x 40



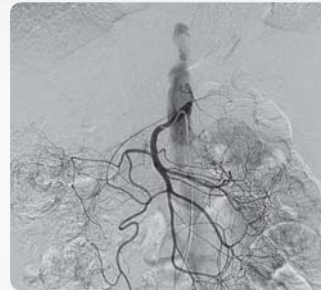
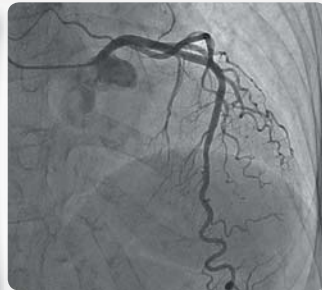
# SEE – DIAGNOSE – TREAT



Image Quality

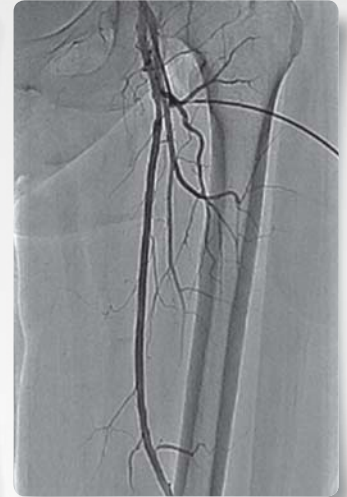
Optimal image quality means diagnostic safety as a basic precondition for a successful treatment. Powerful image processing plays a leading role. All Infinix systems are equipped with innovative algorithms for excellent visualization of smallest vessels and interventional devices. Smart denoising techniques are part of this process as is ultra-high-speed 3D reconstruction.

- Excellent dynamic range in non-subtracted acquisitions
- High-resolution DSA





## INFINIX – AGILITY WITHOUT COMPROMISE



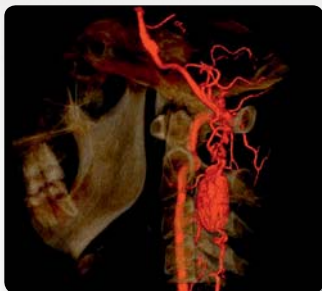
- Stepping DSA and rotational DSA with peripheral overview reconstruction
- Dynamic Trace – interactive bolus tracing – efficient DSA alternative at 60 % less dose

# SEE – DIAGNOSE – TREAT



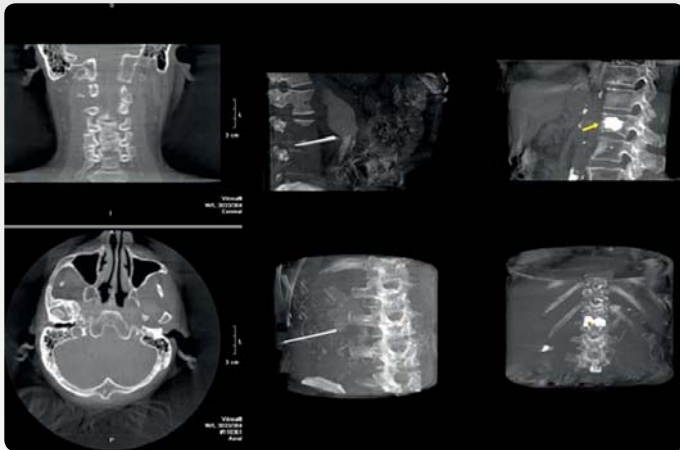
Clinical Applications

Optimal image quality means diagnostic safety as a basic precondition for a successful treatment. Powerful image processing plays a leading role. All Infinix systems are equipped with innovative algorithms for excellent visualization of smallest vessels and interventional devices. Smart denoising techniques are part of this process as is ultra-high-speed 3D reconstruction.



- 3D DA reconstruction of vessels and surrounding anatomy from a single rotational run

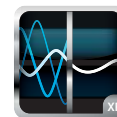
- 3D DSA for high-resolution vessel display combined with device fusion for interventional planning and treatment verification



- 3D volumetric tomography for non-vascular procedures such as tumor ablations, vertebroplasties, needle biopsies etc.

- Volume navigation for optimal guidance during high-risk interventions with complete synchronization of the 3D overlay with every C-arm angulation, vertical table movement, table top panning or FOV change

# DOSE REDUCTION – IT IS A MUST



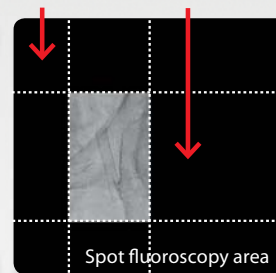
Dose Reduction

All Infinix systems are equipped with a powerful package of dose saving functions and a smart dose management system.

- Variable frame/pulse rate 1–30 F/s in acquisition and 1–30 P/s in fluoro
- Grid pulsed fluoro
- Attenuation-dependant Cu-filtration
- Single shot technique
- Adaptive Live Zoom
- Virtual Collimation
- Retrospective fluoro run storage
- Prospective fluoro run storage
- Spot fluoro function



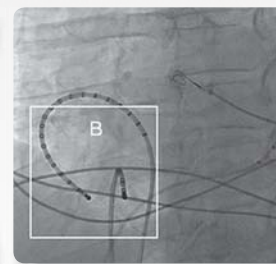
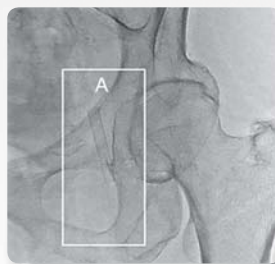
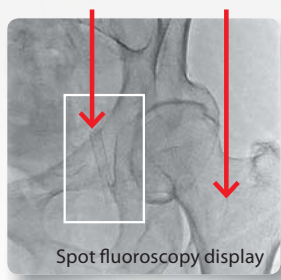
Black area showing collimated area



## Spot fluoro

Spot fluoro is the most recent and unique dose saving technology for interventional procedures. It combines a novel exposure management technique with the ability of asymmetrical collimation during fluoroscopy while displaying the anatomy surrounding the collimated region.

Active targeted fluoro area    Surrounding area used as reference; no radiation



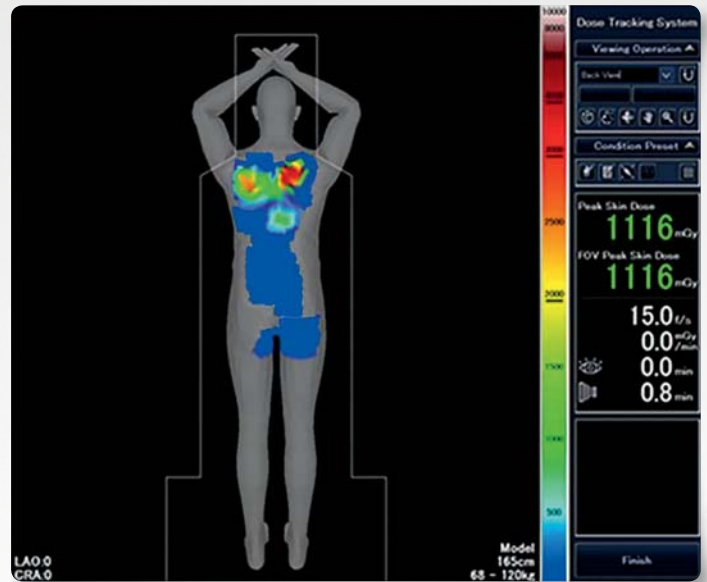
**Both 20 cm<sup>2</sup> FOV**    A – 20% area = 80% reduction in DAP,  
B – 20% area = 80% reduction in DAP

The new collimation adaptive exposure control algorithm keeps the skin dose constant regardless of the size of the collimated area. This enables the DAP (Dose Area Product) reduction to be directly proportional to the reduced size of the exposed area.

## AWARNESS IS KEY FOR DOSE-CONSCIOUS TREATMENT

Gradual, incremental development of skin reaction with underlying tissue involvement is a typical feature of local radiation injury. In general, the higher the dose received, the more rapid the development of pathological symptoms and the more severe the prognosis.

The revolutionary dose tracking system calculates and displays the skin dose applied to the patient in real time. It is an alert tool that helps physicians to avoid the risk of radiation skin injury during a procedure by changing the projection, SID, frame rate or dose rate once predefined dose thresholds have been reached.



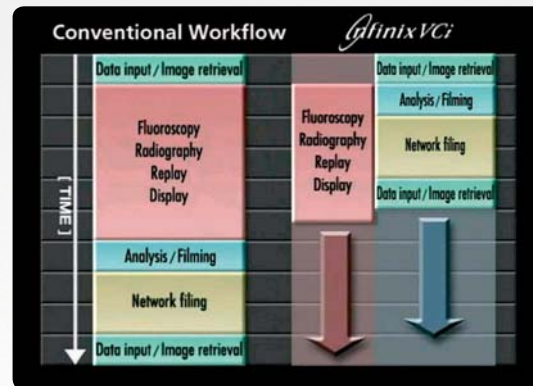
# FAST & EFFICIENT ACQUIRE – ANALYZE – ARCHIVE



Patient safety

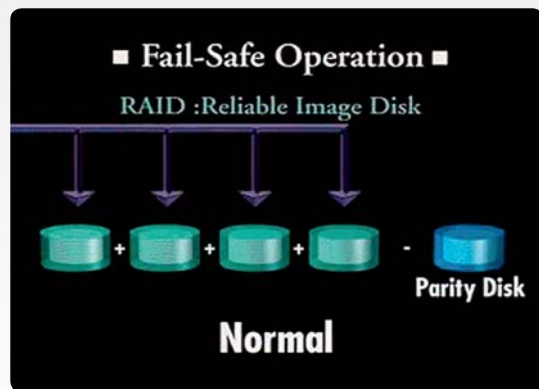
True multi-tasking enables you to do many things in parallel in the control room and independently of the ongoing procedure which significantly reduces your overall procedure time and therefore patient and operator dose.

Post-processing tasks such as image processing, image archiving, vessel analysis, image transfer to or from the network or CD creation can be carried out at any time without disturbing the ongoing examination.



### Double safety

RAID 5 storage technology for maximum data security.  
If one hard disk fails during an examination there is no loss of data.



### Backup focus

Toshiba's unique safety concept for the X-ray tube.

In case of malfunction of a focus during the intervention the system switches automatically to the backup focus to keep the system working without interruption.



# TOSHIBA AND THE ENVIRONMENT



## **Good for our planet, right for our customers**

Caring for the earth and its people is at the heart of everything Toshiba does – and one of the many ways we innovate. Toshiba's passion for safeguarding the earth is enshrined in our Environmental Vision 2050, whereby we seek to improve our eco-efficiency by a factor of ten over the next four decades through strict monitoring of energy usage, continuous improvement of manufacturing processes and eco-conscious product development.

### Factor T

is our way of getting “green” down to a tangible number describing the environmental impact of a product. The Factor T balances the increase in performance and customer value against the actual use of resources to manufacture each specific product.





### **No sustainability without quality**

By manufacturing high quality diagnostic imaging equipment that lasts, we ensure that you can enjoy working with your machine over many years. Our software-driven platforms are easy to upgrade to keep you abreast of new diagnostic tools for a long time. And while we continuously work to improve the performance of our equipment, we drive down consumption of energy and resources at the same time.

### **Energy efficiency is the key**

A major part of the greenhouse gas emissions our medical imaging systems produce accrue while you scan your patients. Therefore we design our products to be outstandingly energy efficient, and even to recycle energy wherever possible. Take for instance our

Aquilion ONE CT scanner. While braking its gantry, 25% of the energy used to set it into rotation can be recovered and stored for the next scan.

### **End of use is not the end of life**

Because outstanding quality lasts, your Toshiba medical imaging equipment remains of high value even after you replace it with new equipment. Our SecondLife refurbishment program helps to maximize the life span of our equipment by enabling you to sell or buy used equipment of the same high quality as our new machines.

# GLOBAL INNOVATION BY DESIGN

For over 130 years Toshiba's research and development has improved the health and welfare of people around the world. Today, Toshiba Medical Systems offers a full range of diagnostic imaging products and is a reliable service partner in more than 110 countries. In accordance with our Made for Life™ commitment, we will continue to develop innovations that improve patient care and provide lasting quality for a lifetime of value.





## WHY TOSHIBA?

### **Innovation**

Toshiba is a world leader and innovator in high technology, spanning information & communications systems, digital consumer products, electronic devices, and medical imaging systems. Year on year we file thousands of patents, leading the way within each industry sector making innovation a key part of the Toshiba fabric.

### **Quality**

At Toshiba quality and reliability is at the heart of everything we do. With technologies and products being developed in more than 30 R&D laboratories and over 300 subsidiary companies across the globe Toshiba engineers are dedicated to develop the best-performing, most reliable and environmentally friendly product solutions for you.

### **Design**

Our product design is driven by customer feedback and the close consultation with industry visionaries and opinion leaders. Our award-winning Corporate Design Center has over 50 years of experience in developing appealing products and industry-leading solutions.

### **Partnership**

Making sure your systems deliver from day one is an important part of our relationship. Whether you need onsite or offsite training, we can provide options that work best for you. Experienced clinical application specialists will help you maximize the potential of your new equipment.

## TOSHIBA – A HISTORY OF LEADERSHIP

- |             |                                       |             |   |
|-------------|---------------------------------------|-------------|---|
| <b>1875</b> | Founding of Toshiba                   | <b>1999</b> | First quiet MRI with Pianissimo™ technology                           |
| <b>1915</b> | Japan's first X-ray tube              | <b>1999</b> | First 0.5 mm multidetector CT   |
| <b>1966</b> | First diagnostic ultrasound system    | <b>2006</b> | First Infinix™ angiography system with floor-mounted multi-access arm |
| <b>1973</b> | First realtime echocardiograph        | <b>2007</b> | Largest open bore MR system Vantage TITAN™                            |
| <b>1978</b> | First CT scanner                      | <b>2007</b> | World's first Dynamic Volume CT scanner Aquilion ONE™                 |
| <b>1989</b> | First helical CT scanner              | <b>2010</b> | First hybrid angiography system with tilting catheterization table    |
| <b>1993</b> | First fully digital ultrasound system | <b>2011</b> | First ultrasound system with Fly Thru technology                      |
| <b>1997</b> | First open, superconducting magnet    | <b>2012</b> | Adaptive Iterative Dose Reduction AIDR 3D for all new CT scanners     |



### TOSHIBA MEDICAL SYSTEMS CORPORATION

[www.toshiba-medical.eu](http://www.toshiba-medical.eu)

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MSSXR0002EUCA 2014-02 TMSE

Printed in Europe