« *Discover a universal suite of software designed to drive Balteau NDT & other brands hardware but also manage every step of the image processing & defect recognition...* »

OEM FRIENDLY

Automation | Acquisition | IPS012 | X-Ray Remote Control | Axis Remote Control | Diaphragm | Shutter | RIO | ADR

INSPECTION SUITE ■ FROM BALTOSCOPE

MODULAR SOFTWARE SUITE DEDICATED TO X-RAY SOLUTIONS

Balteau is a one century old company specialised in X-ray generator manufacturing proposing X-Ray solutions for various Industries and applications. Having gained a very important experience in the design and manufacture of small to complex solutions for their customers, our systems activities has launched a **series of software** called the «Inspection suite» which are used in Balteau designed systems and can be use with most hardware available on the market.

The inspection suite is made up of **independent software** driving hardware such as X-Ray generators and detectors as well as motion controllers and securities. They can be linked together to form a user friendly intelligent coordinated NDT inspection solution. Acquisition software drives different models of flat panels, detectors or cameras and provides a much more flexible **fully NDT oriented** solution than software provided «in the box». X-Ray Remote Control with

the Shutter module can drive various X-Ray sources and shutters or automatic filter mechanisms for calibration or specific exposures. IPS is a universal Image Processing Software with options for quality assessment according to **EN or ASTM**, filters, recognizing most type of image formats. Axis Remote Control with the appropriate hardware connected is able to drive motors. Automation is the high level module linking all installed applications to provide users with a user friendly manual, semi or fully automated inspection process.

All these software are also now available for **systems integrators** having minimal skills in software configuration and programming but enough capacities in mechanical designs and good contact with field applications. Several versions are available for download in trial or demo versions and much more important Balteau has also started to **publish examples of source code** that are publicly available.
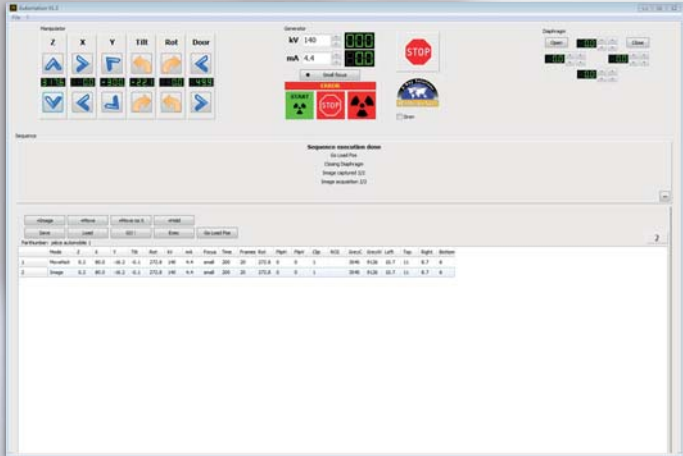
AUTOMATION
Module Integrator

Automation is the top level module that will aggregate all others such as XRRC (X-Ray Remote Control), ARC (Axis Remote Control), DRC (Diaphragm Remote Control), Etc. into one window and offer transparent access to all controllers on only one screen.

Automation also includes a teaching mode which will record sequence of motions, x-ray settings, time of exposure, etc. Later the recorded sequences can be played back providing an automated inspection of components.
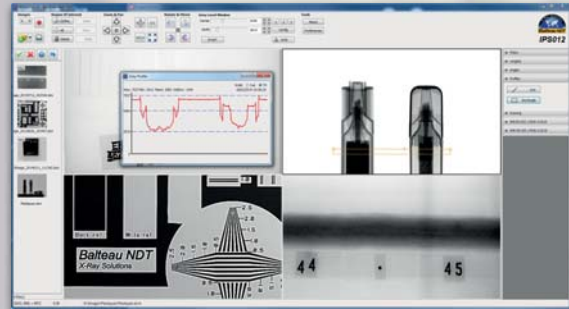
The optional database add-on will use a SQL database to store sequences and index the images metadata (DICONDE only). The same database can then be used from IPS to quickly retrieve images using a search engine.

IPS012
Image Processing System

The Image Processing System (IPS) software enable to process digital radiography to find and display the defects of a component. With the different filters and zoom capabilities, the most difficult and tiniest defect can be quickly located.

Available with:

IPS Report

Compatible with:

DicomDirNav

IPS can be linked with the acquisition module to receive the images acquired. This can be done on the same computer or using a separate reviewing station. Integration is also accomplished with the automation module, showing the images in real time as well as querying the (optional) database. IPS has an extensible architecture, this means you can expand the features using add-on modules. Balteau provides a number of modules and custom ones can be developed on demand.
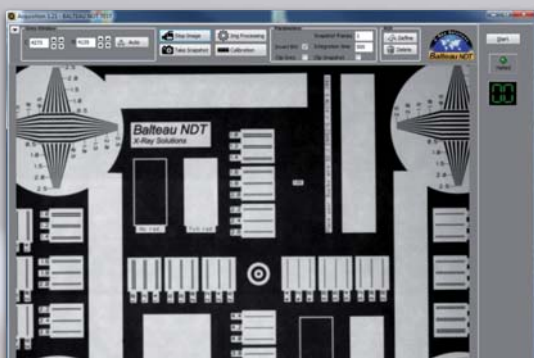
Existing add-on: SRb (Basics Spacial Resolution), SNR (Signal to Noise Ratio), DICONDE (Reader & writer), DB (Database), & more on demand.

ACQUISITION
Detectors module (Image & video acquisition)

Drives detectors such as flat panel, digital camera or image intensifier. Showing images in real time, the user can take snapshot or record videos whenever he's satisfied and it will be automatically stored on the selected disk. This module can support Diconde, Dicom, Tiff, Jpeg, Png, Bmp and raw images.
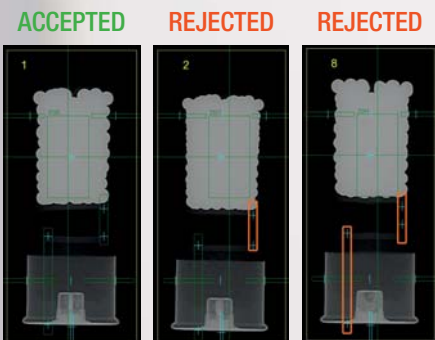

Compatible with:

DicomDirNav

The Acquisition module works as a standalone module or can be integrated with IPS and Automation. It can also be integrated with an external application using a simple communication protocol based on «sockets».

ADR
Assisted Defect Recognition

ADR is a software module that has been created to finalize the Automation process by identifying automatically the parts that have default or not to then inform the end user which one is « accepted », « rejected », « to be verified », etc. This will lead to a much faster flow of inspection as very strict rules will have been defined within the software, reducing mistakes and costs but increase reliability.

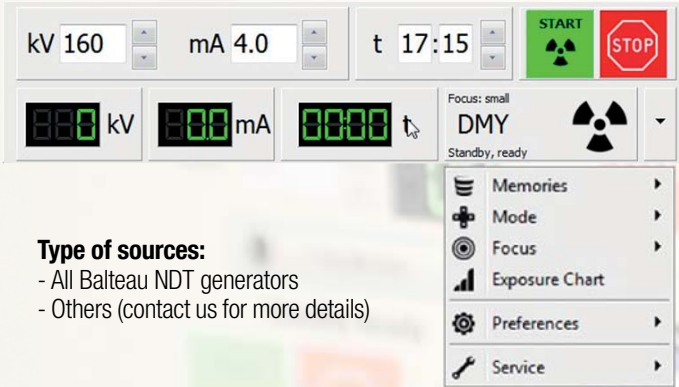
ACCEPTED   REJECTED   REJECTED

Depending on the part that will be inspected, a lot of different criteria can be looked for in terms of default and be recognized by the ADR module such as: Dimensions, foreign substances/objects, position/location, quantity, distance/gap, nature/density, angles, profiles/deviations, and much more.

XRRC
X-Ray Remote Control

Connects to the X-ray source using a serial link and is able to control all operations remotely, directly on the computer screen. Allowing you to interact with the mA, kV, start and stop the X-ray from running, view of the tube characteristics and state, start and stop preheating, choose tube focus, load exposure charts, etc.
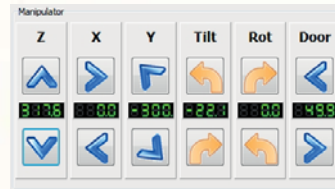
kV 160   mA 4.0   t 17:15   START STOP

kV mA t

Focus: small
DMY
Standby, ready

- Memories
- Mode
- Focus
- Exposure Chart
- Preferences
- Service

Type of sources:
- All Balteau NDT generators
- Others (contact us for more details)

ARC
Axis Remote Control

This module will control the motors of the equipement, such as manipulators, doors, etc. It works with the latest technology and allows up to 9 axes. This module can also be driven by remote control when used for teaching inspection process.
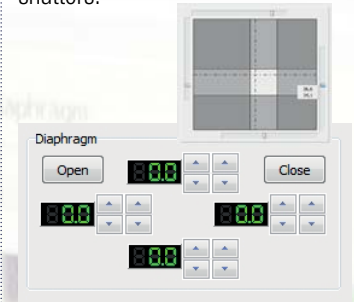
Manipulator
Z X Y Tilt Rot Door

Type of motion objects:
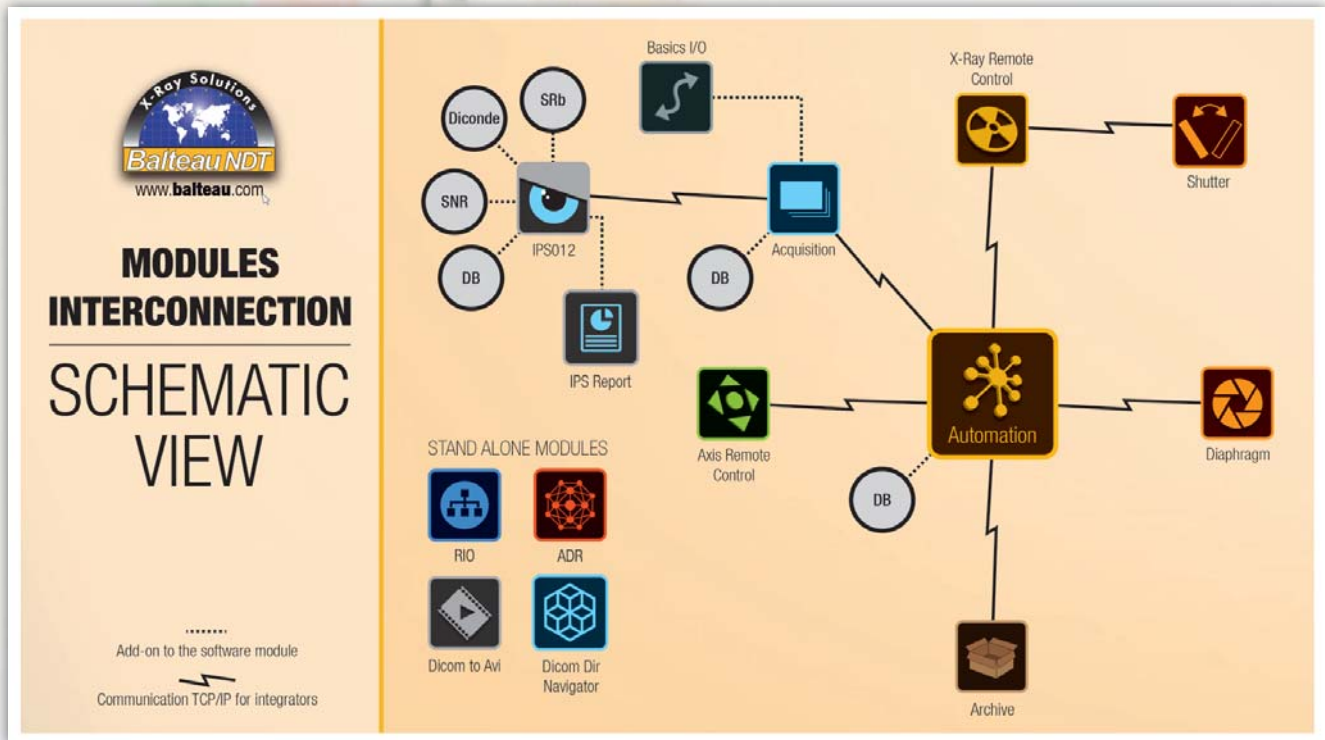- Motor drive
  - Low torque
  - High torque

DRC
Diaphragm Remote Control

Controls the motors of the different shutters of the collimator. It works with the latest technology regarding motors control and allows up to 4 shutters.

Diaphragm
Open   Close

Type of collimators:
- Balteau NDT CLMT
- Others

Balteau NDT
www.balteau.com

MODULES INTERCONNECTION
SCHEMATIC VIEW

Basics I/O

Diconde
SRb
SNR
DB

IPS012

IPS Report

STAND ALONE MODULES

RIO
ADR
Dicom to Avi
Dicom Dir Navigator

········· Add-on to the software module

⚡ Communication TCP/IP for integrators

X-Ray Remote Control

Shutter

Acquisition
DB

Axis Remote Control

Automation

DB

Diaphragm

Archive

IPS REPORT
Automatic image processing report

Reporting module that automates tasks of reporting and allows users to design templates fitting their needs.

DICOM DIR NAV
Customizable image library & viewer

Designed for images transfer between users. Creates your own DCM images libraries with the Dicom Dir Standard and share them with your customers, thanks to the free included viewer.

RIO
Reference Image organiser

RIO is a stand alone module designed to organize, recall and display Reference Images such as ASTM. Radiographers can now load reference images within their Image Processing Software and compare with their own radiographies using all available tools. Balteau NDT has also developed an ASTM extractor that will extract all selected images from the ASTM dvd to store in your database and use with RIO module.

SRC
Shutter Remote control

Linked to XRRC, SRC will control and seal the x-ray beam when required by the user.

DICOM TO AVI
Image converter

It will convert high quality DCM images into a more compact and portable AVI file for sharing with customers or third parties.

BASIC I/O
Peripherals module

It is the link between the system and accessories like radiation alert, contacts & switches. It will send impulsions to allow or not to start an inspection.

ARCHIVE
Storage module

Old images will be stored in archive in case an old design need repairs, maintenance or inspections.

Balteau in words...

Balteau is a company based and established in Belgium since 1906. The activity of the power transformers successfully turned into the X-ray business in 1932. Years after years Balteau has affirmed its leadership leading the technology and setting the foundation of modern X-ray technologies. The first company ever to reach 200, 300 and 400 kV in the past, Balteau has today brought to the industry new standards that are consciously safety oriented to allow users to operate equipment safer and easier. Balteau is also greatly caring about environment and always uses top grade and specification materials to ensure that the efficiency of the equipment will be at the top of what is technologically achievable.

On the service and spares side, Balteau is providing the buyer with an exceptional and unequalled commitment of continuous service all through the life cycle of the product.

Qualified engineers and an extensive worldwide network dedicated to serve our customers is actively participating to the success of our brand and to your possibility of always getting, from the selection of your equipment to its follow up in service, a qualified and professional support.

Balteau in numbers...

Balteau has a very long established network in more than 40 countries, some of our agencies are of second generation proving they rely on the quality of our products and that they are totally committed to their business in NDT.

Balteau has produced more than 15.000 generators spread in more than 60 countries. We have 4 ranges of products and are the only manufacturer in the world to provide from Crawlers to Systems built into the same factory.

Balteau in names...

Patented names and commercial brandings are:

BALTOSPOT (Portable and Crawlers X-ray equipment)
    LLX (Constant potential portable equipment)
    GFC (Panoramic portable equipment)
    CERAM (Pulsed frequency portable equipment)
    HAND X (Radio remote control for portable X-ray)

BALTOGRAPH (Stationary X-ray equipment)
    XSD (HF CP X mobile and stationary X-ray equipment – High power)
    CLD (HF CP X mobile and stationary X-ray equipment – Low power)

BALTOSCOPE (Digital imaging & NDT Software)

AIS & Systems (Standard & custom made)

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