

## FalCon Modules

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### Program modules: Overview

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#### FalCon eXtra

FalCon eXtra contains modules for image acquisition, video processing, visualization of multi-media test data as well as for analysis of image sequences.

FalCon eXtra covers the complete range of tasks in impact testing and supports all available standards.

#### Overview of the camera control and viewing tools:

##### Quick View

- Camera control (*ImagerControl Basic*): different camera types of one producer via Ethernet, FireWire, Fibre-Channel
- Autom. download of raw data
- Picture optimization (white balance, gamma, contrast, sharpening ...)
- AVI creation & compression, autom. multi-AVI-creation
- Insert texts, time values, own logos .....
- AVI and measurements viewer (synchronization)
- Playback AVIs in extensive modes (selectable size and speed .....
- Standard file formats (MME, ISO, DIAdem)
- Image overview by film strip
- PictureView: Viewer of picture series and videos incl. Navigation tree, thumbnail, print templates and file format conversion
- Measuring Data-Viewer with adjustable attributes and curve parameters .....

##### ImagerControl (Add-on to QuickView)

- Camera control: different camera types of different camera producers
- Parallel downloading of raw data
- QuickLook AVIs and ISO-MME support
- AVI Reduction
- Raw data viewer
- Auto download of raw data with AVI creation
- Online Movie steadiness = anti-shake (MovXact is required)
- Support of logical names
- Help for focussing
- Help for camera positioning
- ImagerTemplates
- Free editable user interface

##### ImagerControl Option Client (Add-on to ImagerControl)

- Load-Balancing of multiple processing clients for reducing calculation period

##### ImagerControl Option Remote (Add-on to ImagerControl)

- Remote control via PLC
- Remote control via by Telnet

- FrameMerge**  
(Add-on to QuickView)
- Overlay of AVIs
  - Transparency per channel adjustable (if necessary also temporally)
  - Free positioning of the channels
  - "Distortion" of a channel to balance different camera positions (CamFolder module is required)
  - Automatic positioning
  - "Colour falsifications" with objects of the same colour
  - Emphasis of the differences

- 3AX**  
(Add-on to QuickView)  
(GNS Animator license is necessary)
- Time synchronous overlapping of the image information gained from simulation and test in the vehicle's coordinate system
  - Line of sight automatically adjustable or interactively adaptable
  - Rectification of lens distortion in images
  - Storage of the moving overlapped images as AVI
  - Comparison presentation of several tests or views at the same time

### Overview of the image analysis tools:

- MovXact**
- 2D measurements and tracking
  - Marker types: MXT, DOT, DOT-1, QUAD, COR, PIX, CODE, CODE-I, BAL, BALL-I
  - All markers with defaults of ISO-Basis-Codes
  - Space and time calibration
  - Extraction of additional variable: resultants, angle.....

- Mov3D**  
(Add-on to MovXact)
- 3D analysis
  - Photogrammetric triangulation by multi-camera views
  - Calculation of camera position using know control points
  - Calibration of camera and lens
  - 3D-prediction of marker with selectable coordinate-system of control points
  - 3D-xy-diagrams with choice of the 2D-plane of projection
  - Stabilization for compensation of small jitter of the camera
  - **NEW** CamSplitter

- Mov6D**  
(Add-on to MovXact or Mov3D)
- 6D analysis
  - 6D motion of rigid objects by means of one camera
  - Type of marker CODE
  - Calibration of camera and lens

- MovBag**  
(available as add-on or as stand alone)
- Analysis of airbag sequences
  - Automatic measurement of contour graphs
  - Evaluation of specific measurement values

- CamFolder**
- Calibrate cameras and measure distortions (ISO)
  - Folder file with camera/lens combinations
  - **NEW** Simultaneous calibration of camera pairs with identification of fixed relative camera positions
  - Quality management: Frequency of checks

### Overview of the presentation tools:

- CustomerView**
- Data distribution
  - Free grouping within the data structure
  - Definition of layouts
  - Automatic creation of customer copies
  - Charge free distribution of viewing part to your "customers"
  - ISO-MME Creator
  - Merge several partitions of tests
  - Saving of data according ISO/TS13499
  - Transform of raw data formats
  - Merge several partitions of tests
  - Export/Import layout-files from/to XML-format

### Overview of the archive tools:

- DataBase**  
(FQV Site License is required)
- Archive system for picture and measurement data with connection to a database and client access program, see data sheet.

### Overview of the measurement data analysis tools:

- FcBase**  
(DIAdem license is necessary)
- Analysis of measurement data compliant to international regulations: FMVSS, TRIAS, ECE, ADR, CMVSS ...
  - rating programs: EuroNCAP, USNACP, AustralianNCAP, LINCAP, IIHS ...
  - for Dummies: Hybrid III, Euro-SID, US-SID, Bio-SID, Bio-RID, Q10 ...
  - Comparison of tests
  - Customized evaluation and representation of the result diagrams
  - Automatic norm-specific selection of tests
  - Report generator
  - Result viewer
- FcQuickLook**  
(DIAdem license is necessary)
- View of measurement data
  - Processing of measurement data (Invert and edit channels, interpolation...)
  - Automatic identification of anomalies: polarity, failures of channels...