

JMobile V1.90 – Release Information

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EXOR

JMobile has been in the market for almost 4 years and has become the most important competitive point for the HMI Exor offering. Time for a review...

- Version 1.80 Service Pack 2 has been released in March 2013. To improve support of the user base most of development resources have been re-focused on product consolidation with excellent results. Product roadmap has been changed to concentrate on software stability and usability.
- More than 1500 licenses have been activated for JMobile Studio. This is the rough estimation of the user base for JMobile
- More than 20000 JMobile HMI products have already been manufactured and delivered; the vast majority has been already installed. An installed base of this size is producing a strong confidence on reliability of hardware and software

After the successful results of the software roadmap based on V1.80 and its two Service Packs, it is time to make a step in terms of functionality with the introduction of V1.90.

- JMobile V1.90 can be considered a landmark release as, after the product stabilization carried out with V1.80, is offering to the market a number of significant product innovations.
- Innovations driven by technology will make the product even more competitive in a market that is more and more demanding.
- JMobile V1.90 uses the same software license as V1.80. It can be used as a free upgrade. Users will not need to purchase new licenses.
- JMobile V1.90 is fully compatible with all projects created with older versions of the software. Projects created with older versions of JMobile are automatically converted at the time they are opened with V1.90.

The main features introduced with JMobile V1.90 are outlined here:

- Simulator, including online simulation
- Printing reports, alarms and events from the runtime. Printing to PDF files is included
- Data transfer
- Offline node management
- Media Player (only available in products with 1 GHz CPU or Win32)
- IP video with streaming HTTP/MJPEG support
- Widgets for energy metering/consumption metering
- Widget for scatter diagram/XY graph presentation
- Alarm widget with color mapping for alarm status
- Screensaver
- Remote debugger for JavaScript programs
- Macros to simplify access to PDF reader and VNC server
- Widget browser with HTML5 capability
- New event types for touchscreen (OnMouseClicked, OnMouseHold)
- Developer Tools

JM4web is the most exciting feature introduced with JMobile V1.90.

With JM4web you can have immediate and easy Web access to Jmobile applications based on the Web server included in all JMobile runtime systems.

Design is based on HTML5 and JavaScript, making it compatible with all latest generation browsers (Firefox, Chrome, Safari and Internet Explorer).

JM4web is the key technology to offer access to HMI application with the use of mobile devices such as smartphones and tablets.

JMobile Studio generates the web version of the application with one click and you can immediately access the screens using any HTML5-capable browser. No apps are needed when operating from mobile devices!



JMobile V1.90 JM4web - Today



This first version of JM4web includes as subset of the widgets and macros available in the full JMobile V1.90. While this will not allow you to export for web access all JMobile applications, there are features available that will enable you to create great applications for mobile access.

If you need to use all features in JMobile and you do not need to offer simple browser access, we would recommend to use the Windows Client facility available in JMobile.

JMobile Studio V1.90 has a new organization of pages and gallery.

Pages are divided into two folders: normal pages and pages for web access

When you work on pages for web access (JM4web), JMobile Studio shows a view of the gallery that only includes widgets compatible with JM4web.



- Features available in JM4web V1.90 are shown in table:

Widgets		Macros/Actions	
Label	Indicators (Lights)	HomePage	ToggleBit
Multiline Text	Date/Time	LoadPage	ShowDialog
Numeric Fields	Bar Graphs	NextPage	CloseDialog
Buttons	Segmented Bar Graphs	PrevPage	LaunchBrowser
Hotspot Buttons	Message widget	LastVisitedPage	
Horizontal / Vertical Sliders	Knobs	WriteTag	
Gauge / Needle	Shapes	StepTag	
Images		SetBit	
Multistate Images		ResetBit	

JMobile V1.90 – Available Protocols



Number of available protocols for JMobile is constantly increasing.
The list of communication protocols available in V1.90:

A-B DF1	GE Intelligent Platforms SRTP	Modbus TCP Server
A-B DH-485	Hitachi ETH	NMEA 0183
A-B ENET	Hitachi SER	Omron FINS ETH
BACnet	Jetter Ext ETH	Omron FINS SER
Baldor NextMove	Keyence KV	Panasonic FP
Beckhoff ADS	KNX TP	ProConOS ETH
CANopen HMI	Koyo DL	Profibus DP
CODESYS V2 ETH	Lenze CANopen	Profibus DP S7
CODESYS V3 ETH	Mitsubishi FX ETH	SAIA Ethernet
CT Modbus CMP ETH	Mitsubishi FX SER	SAIA S-BUS
Ethernet/IP CIP	Mitsubishi Q/L ETH	Simatic S7 ETH
Fatek FACON ETH	Modbus RTU	Simatic S7 MPI
Fatek FACON SER	Modbus RTU Server	Simatic S7 PPI
GE Intelligent Platforms 90	Modbus TCP	

The BACnet protocol is widely used in building automation and energy efficiency applications. The availability of the BACnet communication protocol in version 1.90 is of particular importance because it will open to the products based on JMobile a new application area.

The BACnet protocol has been included in V1.90 as a «beta test» version. Although it has been already used by several distributors and users, we expect a significant feedback before considering it officially released.

BACnet comes with the following features:

- IP and MS/TP communication
- Imports .EDE files to create Tag Dictionaries
- Access to all BACnet basic objects
- Optimize communication with COV (Change of Value) and RPM (Read Property Multiple)

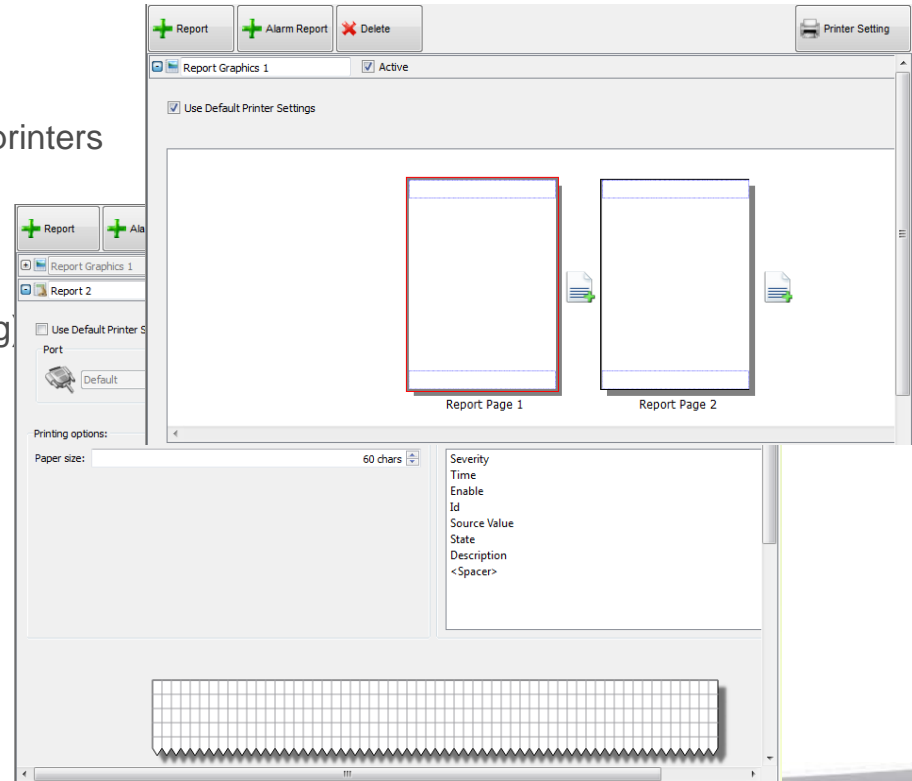
The protocol has already been checked in operation with several devices from: Johnson Controls, Carel, Honeywell, ASI, Wago, Invertek.

Features in JMobile V1.90



Runtime Printing Reports and Alarms

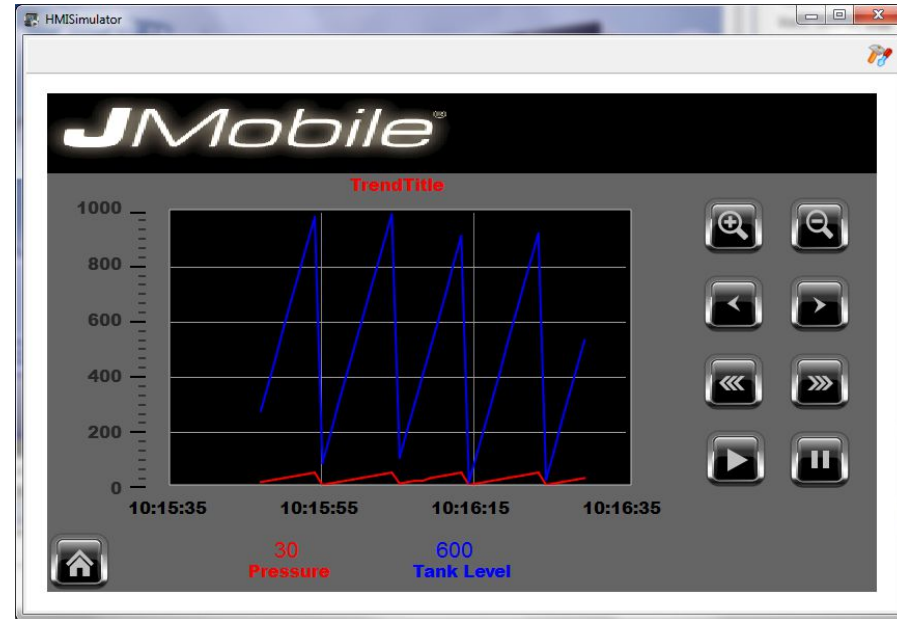
- Supports USB printers. Printer drivers for popular printers are available.
- Supports printing to file. Generates PDF files.
- Report printing with report layout editor
- Printing of Alarms on triggering (continuous printing)
- Print screen image



Features in JMobile V1.90

Simulation

- Offline simulation mode for immediate rendering and verification of the design
- Online simulation mode (with communication to devices) for full verification of the application without the need of the HMI panels
- Online simulation mode supports all communication drivers that are compatible with standard PC hardware and Win32 drivers
- Includes simulation of JM4web



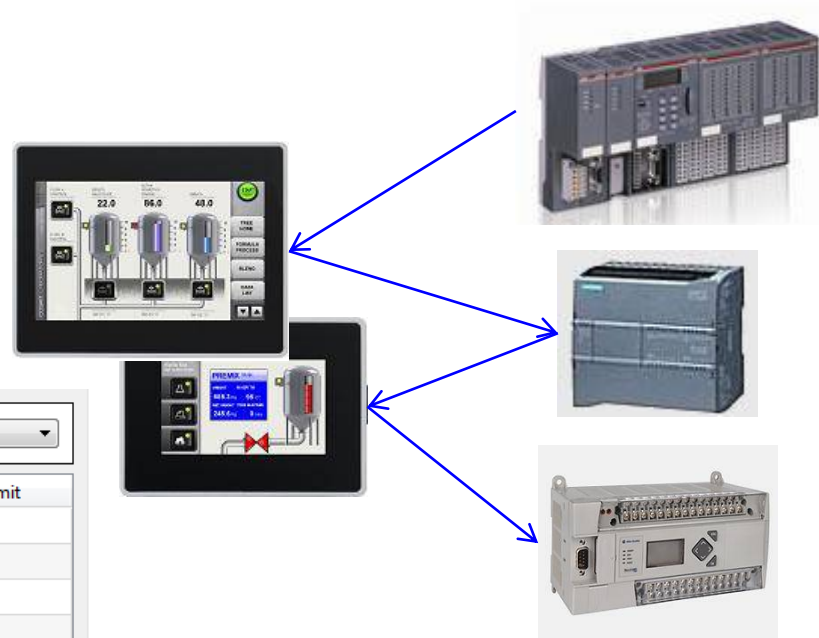
Features in JMobile V1.90



Data Transfer

- The HMI panel becomes a data gateway and an element for a better system integration
- Move data between different controllers in a fully programmable way
- Bi-directional transfers can be programmed
- Data transfers start with flexible trigger conditions

+ - ^ v > < Search <input type="text"/> Filter by: Tag A							
	TAG A	TAG B	Direction	Update method	Trigger	Low limit	High limit
1	Tag1	Tag2	A->B	On update		0	0
2	Tag1	Tag2	A->B	On update		0	0
3	Tag1	Tag2	A->B	On update		0	0
4	Tag1	Tag2	A->B	On update		0	0

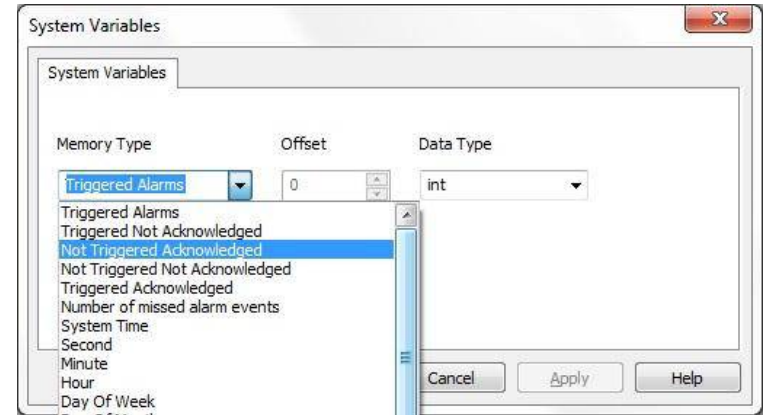


Features in JMobile V1.90



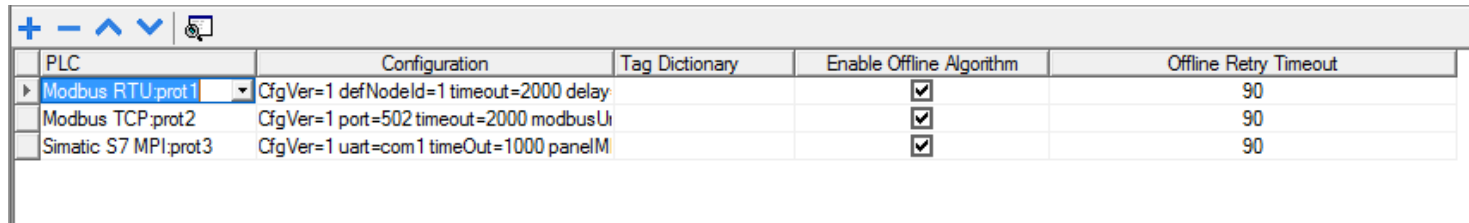
System Variables as a protocol

- System Variables are now accessible also as a communication protocol
- System Variables can have their own Tag Dictionary. Assign user-defined names to System Variables
- The new Data Transfer function can operate also on System Variables when referenced as a protocol
- The Write Tag action can now operate on System Variables also from Alarm and Scheduler
- You can find the protocol «System Variables» in the list of communication protocols



Offline Node Management

- Automatically remove from the communication the devices that are not responding.
- Avoid loss of communication performance due to permanent timeout conditions.
- Automatically restore communication with devices when they come back online
- Manually enable/disable communication with devices
- It is an ideal feature for system configurations where certain devices can be missing or powered-off in certain conditions.



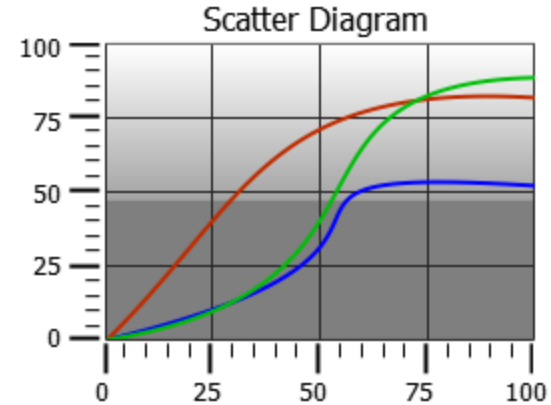
PLC	Configuration	Tag Dictionary	Enable Offline Algorithm	Offline Retry Timeout
Modbus RTU:prot1	CfgVer=1 defNodeId=1 timeout=2000 delay		<input checked="" type="checkbox"/>	90
Modbus TCP:prot2	CfgVer=1 port=502 timeout=2000 modbusUi		<input checked="" type="checkbox"/>	90
Simatic S7 MPI:prot3	CfgVer=1 uart=com1 timeOut=1000 panelM		<input checked="" type="checkbox"/>	90

Features in JMobile V1.90



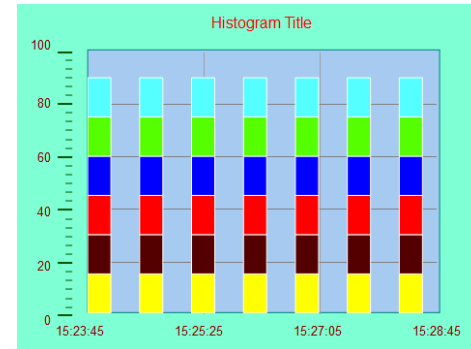
Scatter Diagram/XY Graph

- Display curves on screen based on data in two array of tags
- You can display curves not based on a timeline
- Ideal for data acquisition performed at PLC level



Consumption Meter/Energy Meter

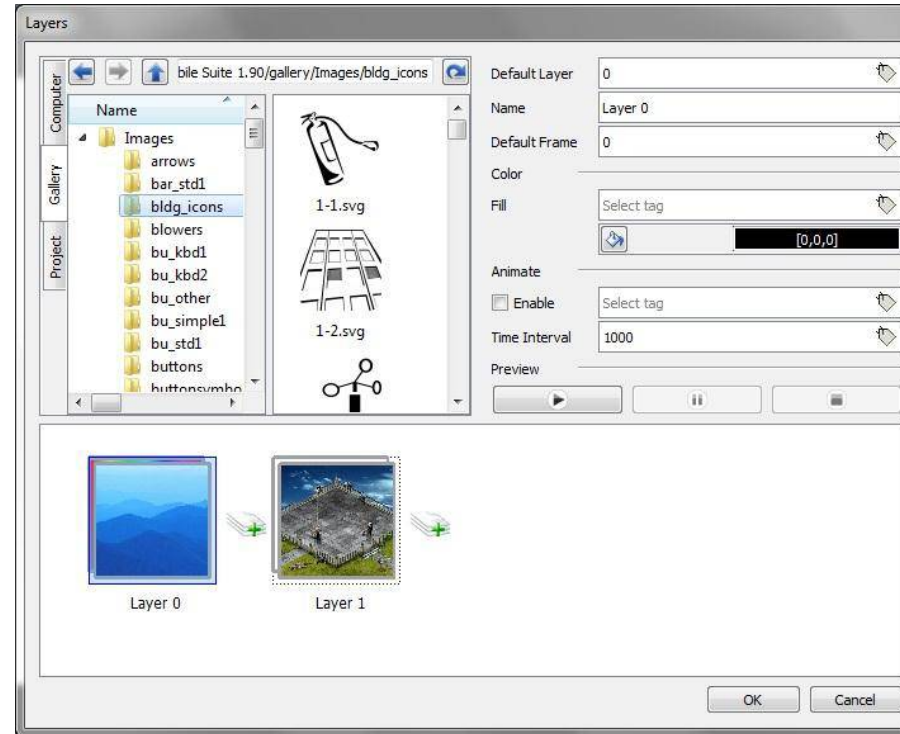
- Histogram-style presentation for display energy consumption based on multiple levels of cost
- Fully programmable daily/weekly ranges



Features in JMobile V1.90

Multistate Image Multilayer

- Extend the concept of the Multistate Image widget
- Adds flexibility and options when creating animations
- You can have multiple sequences of images in the same widgets
- The view can be animated automatically or associated to tags
- Preview mode to check the result of the animation immediately
- Let you browse three locations when searching for images: computer file system, JMobile gallery and the current project. All your image repository available with a few clicks.

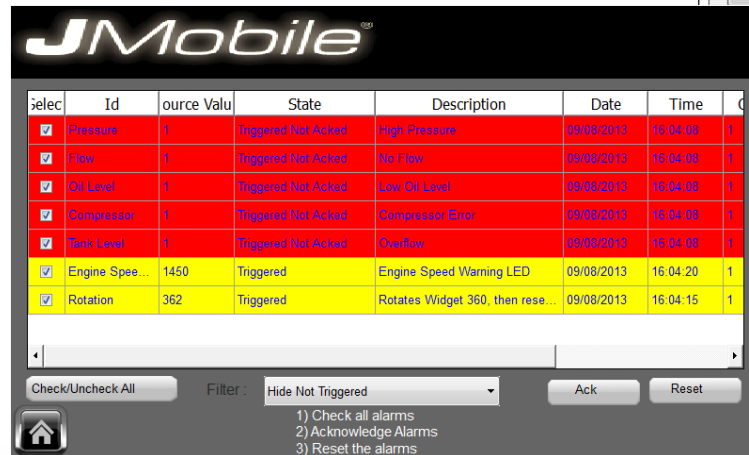
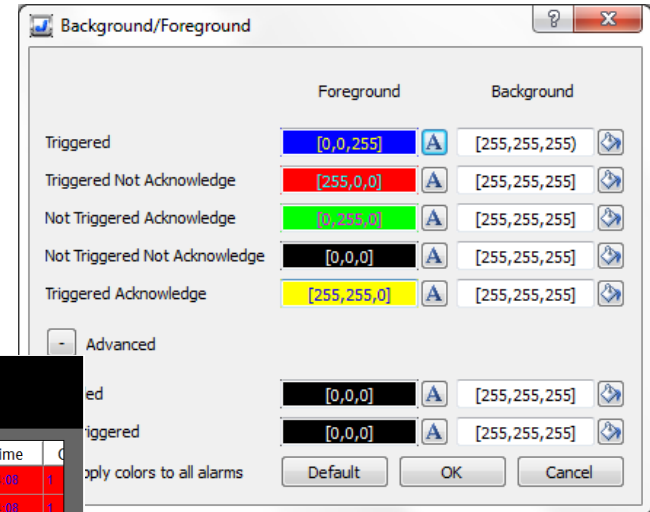


Features in JMobile V1.90



Alarm widget with color mapping for alarm status

- Colors can be assigned to each different status of alarms
- Foreground and background text colors can be selected
- Assignment can be easily extended to all alarms

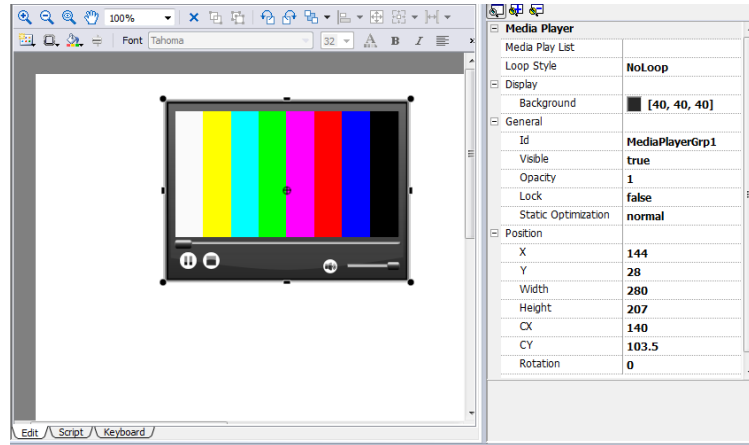


Features in JMobile V1.90



Media Player Widget

- Widget to play videos from a playlist
- Video files can be stored in Flash, USB and SD
- Multiple codecs available
- Resolution up to 720x576
- Only available in products with 1 GHz CPU or Win32



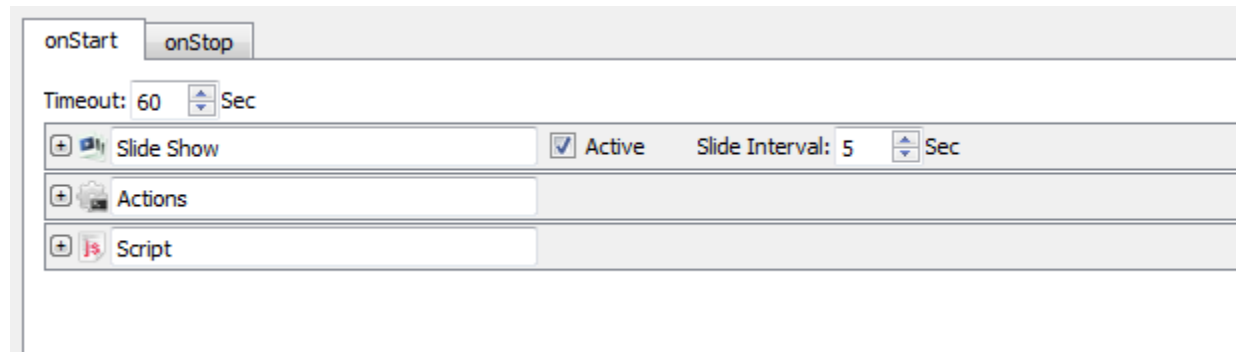
IP Video Widget

- Streaming HTTP/MJPEG support
- Connects to off-the-shelf cameras



Screensaver

- «Screensaver» is not only a black screen. Use the time the screen is not used by the application to show useful information. Ideal for applications in building automation and vending machines
- Create slideshows to be activated as screen savers
- Images for slideshows can be resident on removable memory media
- Easily configure actions or scripts to be executed upon screensaver activation and deactivation

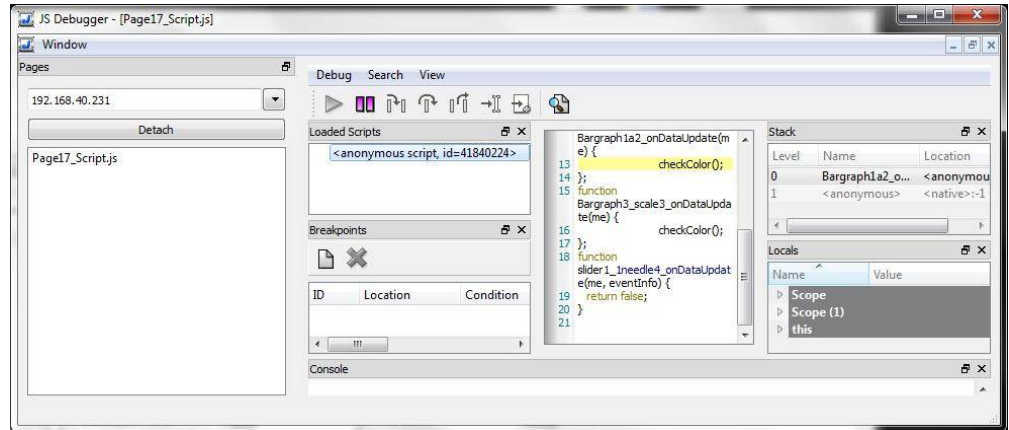


Features in JMobile V1.90



Remote debugger for JavaScript programs

- Debug your JavaScript programs from your computer. You can even debug remotely.
- Full debugging functionality
- Start/stop execution
- Single step programs
- Enter breakpoints
- Step into, step over and step out functions

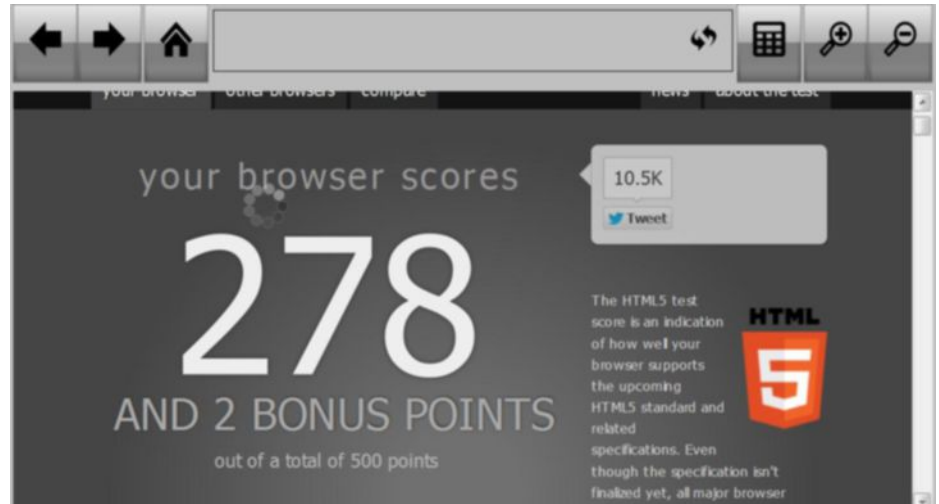


Features in JMobile V1.90



Browser widget with HTML5 capability

- Implementation of the webKit browser
- HTML5 and JavaScript support
- Embed in the HMI screen an object for browsing web sites available in the network and even on the Internet.

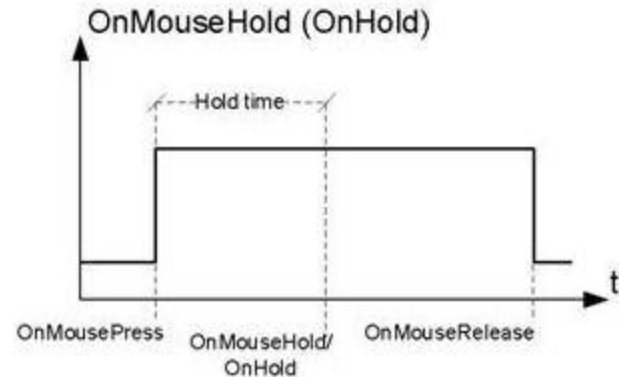


Actions to simplify access to PDF reader and VNC server

- LaunchVNC and LaunchPDFviewer are the one-step method to activate the external applications

New event types for touchscreen (OnMouseClicked, OnMouseHold)

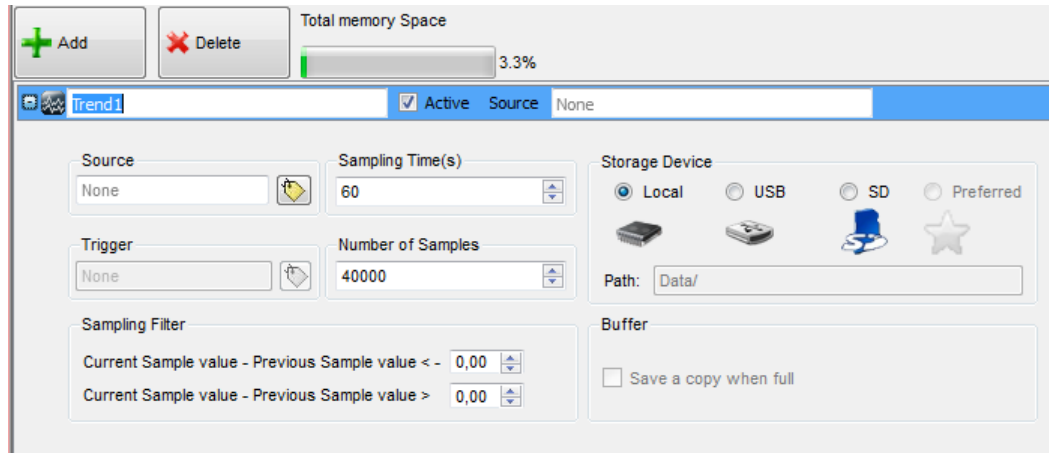
- New events to improve programmability of the user interface
- OnMouseClicked is the event type for operating on the touchscreen how you would use a mouse, that is clicking and releasing on a quick sequence.
- OnMouseHold is the new event for execution actions or scripts following the activation of a touch area for an extended period of time. Hold time is programmable.



Features in JMobile V1.90

Trend Editor redesigned

- The user interface of the Trend Editor has been redesigned
- Simpler and easier to understand
- Sampling Filter has been simplified

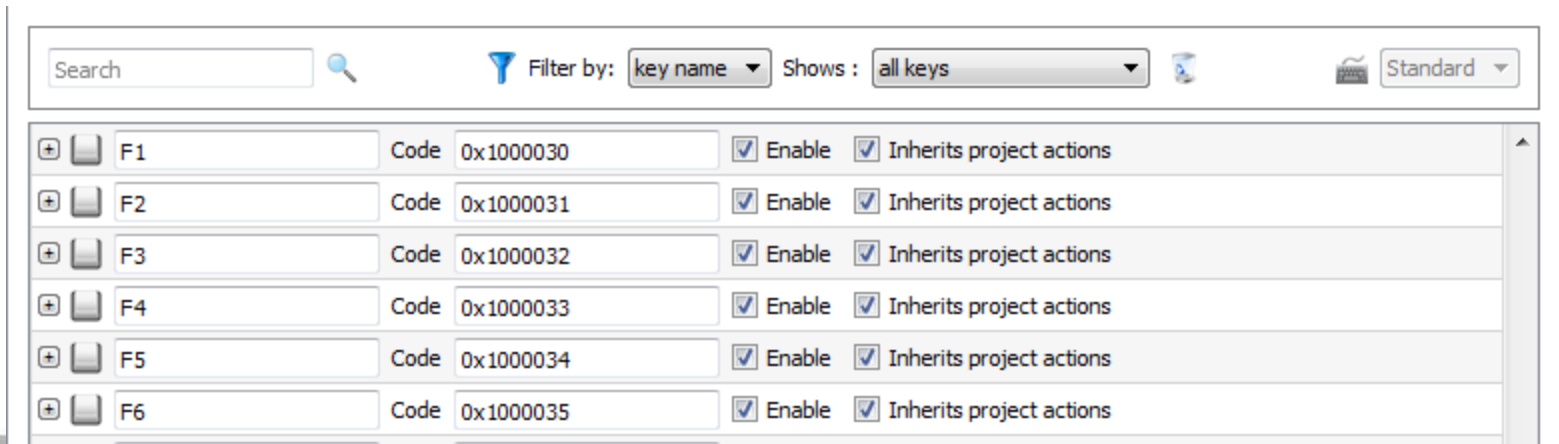


Features in JMobile V1.90



Enhanced use of external keyboards

- Use keyboards connected via USB with more flexibility
- External keyboards and touch keypads can now be used together
- Simple way to connect barcode scanners
- Full programmability of keys in external keyboards using macros



Features in JMobile V1.90

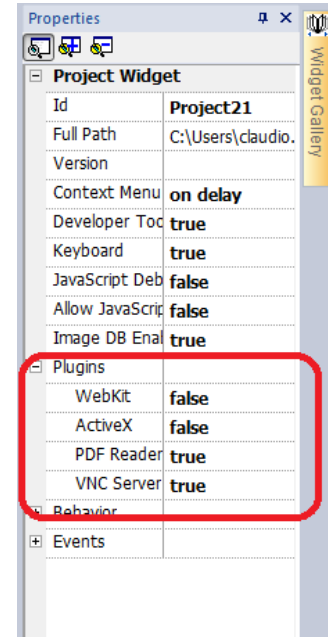


Progress bar on runtime and remote client

- Runtime and remote client show a progress bar while loading a project

Software Plug-in modules

- Reducing the software footprint with the concept of software plug-in
- Use memory for some software modules in the HMI panel only if required by the application

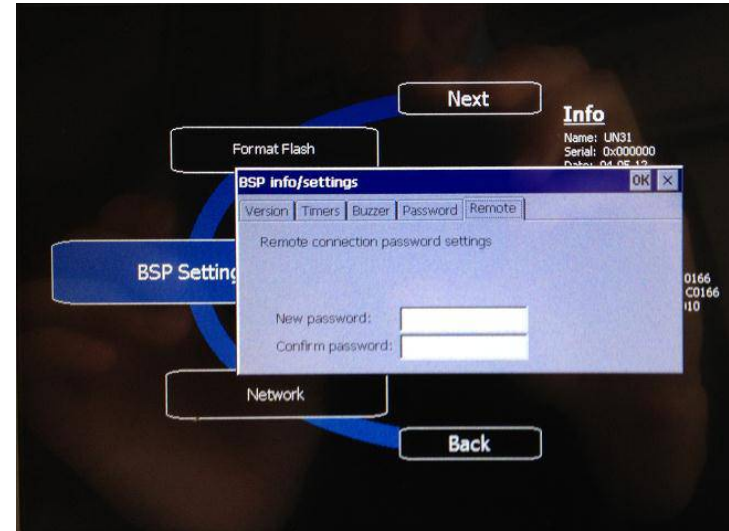


Features in JMobile V1.90



More Protection for Projects at Runtime

- A new upload protection scheme for projects loaded in HMI
- For enhanced security, protection is no longer part of User Management but comes from BSP settings
- Security is no longer depending on project settings
- Password can be easily changed with a new option in the Context Menu of the HMI



Features in JMobile V1.90

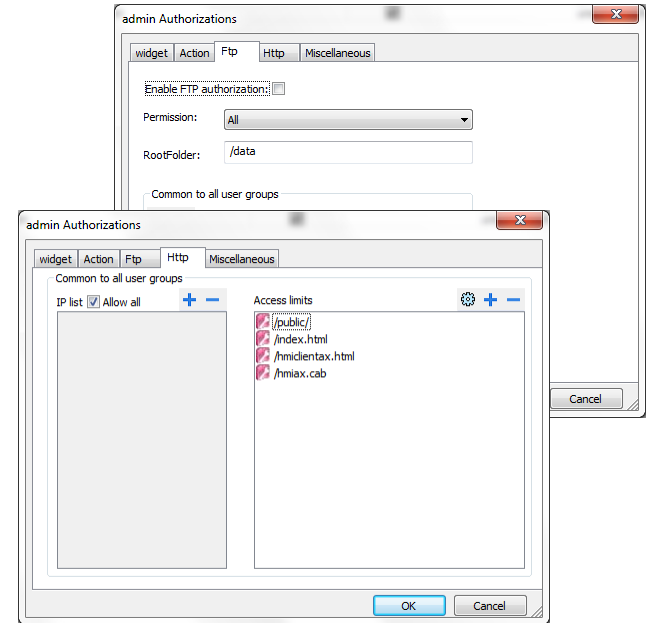


Options for Enhanced Security

- ftp server is disabled by default. If needed must be enabled explicitly
- http access limited to certain folders

Force Remote Login

- New option added to force the login when connecting Windows Clients or Active-X Clients, even if User Management has not been activated.

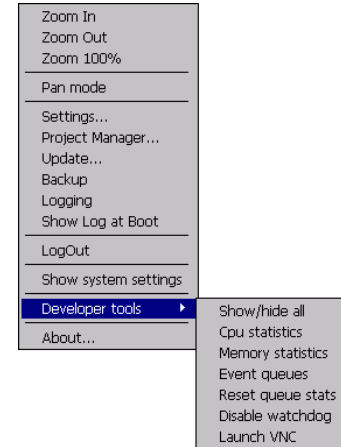


Features in JMobile V1.90



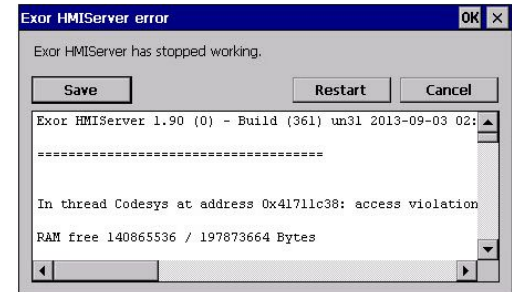
Developer tools

- Developer tools is a new set of tools to help fine-tuning and diagnostic of JMobile applications.
- Developer tools must be activated in the project configuration in JM Studio
- Developer tools are shown as an entry in the context menu
- Disable watchdog in case you need to generate crash reports for technical support reasons



Crash report

- JMobile shows a detailed report in case of system crash
- Use the crash report information to get a better technical support
- Crash report information is saved on a file in Flash memory



FreeType Font Rendering

- JMobile comes with a new mechanism to render fonts on screen. Now JMobile is based on the FreeType Font Rendering engine. FreeType is used both in Studio and in Runtime. Fonts in runtime will look exactly the same as in Studio. Font rendering is now OS-independent
- FreeType offers better rendering of Asian fonts and higher performance
- Anti-aliasing helps produce more readable text. Anti-aliasing is now a property of all text-based widgets
- You can still work with the old font rendering (it is a project property) when 100% visual compatibility is required

Improved UNICODE Support

- UNICODE support has been improved and now results in a better operation of Studio when operating system is using non-Latin fonts (Asian or Ebrew for instance)
- Full details added to the manual/help
-

Features in JMobile V1.90



Windows 8 Support

- JMobile Studio and JMobile Win32 Runtime have been verified for operation in Windows 8 32/64 bit

Documentation and Help

- JMobile V1.90 help has been carefully revised and updated with information on all new features.
- You will find it more and more comfortable as a reference tool with complete user information on JMobile Studio
- Documentation coverage of communication drivers has been enhanced. More protocols are now fully documented for even simpler use

Features in JMobile V1.90

Custom encoding for string tags

- When a tag refers to a string object and must be presented on screen, the proper encoding must be used to make sure the characters will be displayed correctly.
- The Tag Editor offers now the option to define the type of encoding that Jmobile will use to display the string.

The screenshot shows the JMobile Tag Editor interface. At the top, there is a toolbar with icons for adding, deleting, and navigating. Below the toolbar is a dropdown menu set to 'Modbus TCP:prot 1'. The main area contains a table with the following columns: Name, Group, Driver, Address, Encoding, and Comment. The table lists seven tags (Tag1 to Tag7) with their respective addresses and data types. A dropdown menu is open over the 'Encoding' column, showing options: UTF-8 (selected), Latin 1, UTF-8, UCS-2BE, UCS-2LE, UTF-16BE, and UTF-16LE.

Name	Group	Driver	Address	Encoding	Comment
Tag1		Modbus TCP:prot 1	0.0.0.1:1 HREG 400001.0 string [0]	UTF-8	
Tag2		Modbus TCP:prot 1	0.0.0.1:1 HREG 400002 int	Latin 1	
Tag3		Modbus TCP:prot 1	0.0.0.1:1 HREG 400003 int	UTF-8	
Tag4		Modbus TCP:prot 1	0.0.0.1:1 HREG 400004 int	UCS-2BE	
Tag5		Modbus TCP:prot 1	0.0.0.1:1 HREG 400005 int	UCS-2LE	
Tag6		Modbus TCP:prot 1	0.0.0.1:1 HREG 400006 int	UTF-16BE	
Tag7		Modbus TCP:prot 1	0.0.0.1:1 HREG 400007 int	UTF-16LE	

Multiple dialog pages

- Jmobile runtime can now display up to 5 dialogs in the same page.

Backup/Restore

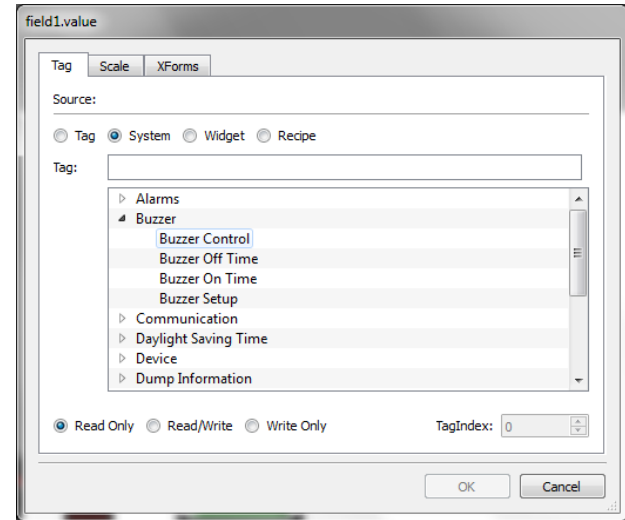
- If need to perform a complete backup of the runtime of your application (including both project file and HMI runtime files), just use the new Backup feature.
- Call Backup from the runtime context menu
- Save Backup files to USB or SD media
- Restore files using Transfer from disk option in the BSP loader menu

Features in JMobile V1.90



Buzzer Control

- Control directly the buzzer from the HMI application, overriding the default system function (touchscreen audible feedback)
- Buzzer control available as a new System Variable
- Note: buzzer control requires a BSP version greater than 1.66. In case of need please enquiry.

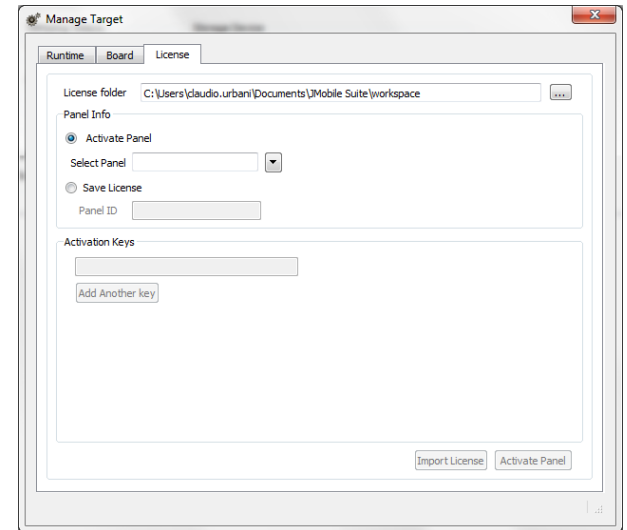


Features in JMobile V1.90



License Management

- New feature created to manage activation licenses for runtime software modules
- It will be used to activate software modules (for instance the PLC) without the need of hardware support such as the –CDS plugin modules.
- Note: License Management for runtime software module will be required for the forthcoming availability of CODESYS V3 as integrated PLC. If interested in beta testing, please enquiry.



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