

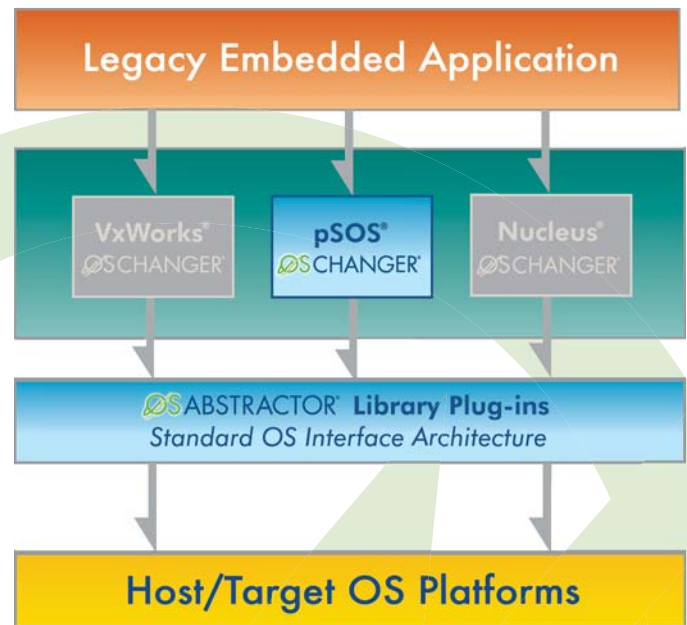
Change Your OS - Keep Your Code

The OS Changer family of products gives developers the freedom to switch operating systems while leveraging on their existing code and knowledge base to protect their software investment. pSOS OS Changer enables the reuse of pSOS applications on different operating systems.



pSOS OS Changer Highlights

- Protect your software investment by re-using your pSOS code
- Reduce time to market by migrating pSOS code to a standard OS interface architecture
- Protect your knowledge-base by using familiar APIs and eliminate the learning curve on the new OS platform
- Eliminate dependency on a single OS vendor and switch to
 - An OS that meets your performance and memory footprint needs
 - An OS that offers better tools, middleware/drivers and support
 - An OS that supports your next generation silicon
- Reduce ongoing development and maintenance cost
 - Develop target specific code on a host platform
 - Re-use one set of code across multiple host & target OS platforms
 - Break down pSOS applications into manageable pieces to reduce complexity and add module protection
 - Use same APIs for inter-task and inter-process communications
- OS Changer is highly optimized for each specific OS platform
- Eclipse-based host environment is available to port pSOS applications using OS Changer in OS PAL (refer to the OS PAL datasheet)
- OS Changer includes access to the BASE OS Abtractor API features to allow development of highly portable applications (refer to the OS Abtractor datasheet)
- Additionally, POSIX or open source Linux code can be reused on a new OS platform with POSIX OS Abtractor (refer to the POSIX OS Abtractor datasheet)
- pSOS OS Changer is offered royalty-free with source code



Using pSOS OS Changer

OS Changer is designed for use as a C library. Services used inside your application software are extracted from the OS Abtractor libraries and are combined with the other application objects to produce the complete image. The following are the porting steps:

- Indicate the target OS and other configurations in the usr.h file provided by OS Changer
- Include the OS Changer header files instead of the pSOS header files in your source code
- Configure the BSP code provided by the target OS vendor to make sure the OS will run properly on your target platform
- Compile and link your application with the OS Changer libraries and header files. Refer to the standard demo application for additional information about the project settings.
- Resolve all compiler and linker errors if any
- Port low-level drivers to target OS (or use a native one if available)
- Download the application image to the target system and let it run
- Please refer to the programming manual to fix any run time errors

pSOS OS Changer API Support

The table below lists MapuSoft's pSOS API support. MapuSoft also offers compliance for pSOS 4.1 rev. 3/10/1986. pSOS OS Changer is currently supported across the following target operating systems: VxWorks® 5x/6x, Windows® CE/Mobile/XP/Vista, Linux®/RT Linux®, LynxOS®/LynxOS-SE®, MQX®, Solaris®, Unix®, Nucleus®, µTRON®, ThreadX®, T-Kernel®, QNX® and eCOS®. Please note that MapuSoft may provide further support to include additional APIs or operating systems not listed. For a current listing visit <http://mapusoft.com/products/offerings> or email: info@mapusoft.com

pSOS® APIs			
<i>Task Functions</i>	<i>Timer Functions</i>	<i>Regions</i>	<i>Queues Fixed</i>
t_create	tm_cancel	m_create	q_broadcast
t_delete	tm_evafter	m_delete	q_create
t_getreg	tm_evevery	m_getseg	q_delete
t_ident	tm_evwhen	m_ident	q_ident
t_mode	tm_get	m_retseg	q_receive
t_start	tm_set		q_send
t_restart	tm_tick	Partitions	q_urgent
t_setreg	tm_wkafter	pt_create	
t_setpri	tm_wkwhen	pt_delete	Queues Variable
t_suspend		pt_getbuf	q_vbroadcast
t_resume	Semaphores	pt_ident	q_vcreate
	sm_create	pt_retbuf	q_vdelete
Device I/O	sm_delete	pt_sgetbuf	q_vident
de_close	sm_ident		q_vreceive
de_open	sm_p	Async Signals	q_vsend
de_cntrl	sm_v	as_catch	q_vurgent
de_read		as_send	
de_write	Semaphores	as_return	Events
de_init	k_fatal	ev_asend	ev_receive
			ev_send

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Porting embedded applications from one OS to another OS is often an underestimated, tedious and time-consuming task. It also requires expensive and skillful resources that take away the focus on building your product. Embedded applications demand more and more performance, scalability and development flexibility from the underlying OS. Developers are forced to change their OS or extend support for more than one OS quickly as the market demands. Developers find that they need to leverage the existing software and knowledge base when migrating to next generation platforms. This has brought a need for the development of highly re-usable software that can run across proprietary and multiple commercial operating systems as well as utilizes open source components or other low cost alternatives.

It's not easy for developers to adapt existing software to a new OS or enable it to support multiple operating systems without incurring high costs and increasing time to market entry. MapuSoft offers OS PAL, OS Abstractor and OS Changer products to help developers streamline development processes and re-use their embedded software on one or more operating systems. MT offers porting, integration, support and training services to help developers easily migrate from legacy platforms to the next generation.

MapuSoft Custom Services

- Provide full porting, integration and validation services
- Extend OS Changer APIs
- Migrate in-house abstraction to OS Abstractor framework
- Add OS Abstractor support to your proprietary operating system
- Offer on-site and off-site training on operating systems and advanced porting techniques

FREE OS Changer Trial Software

Go to: www.mapusoft.com/downloads

- Receive 30 days of FREE technical support!

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