

The first Thai-developed digital embedded network is here

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As the device and gadget markets grows, it's now given a new optional protocol system named DOLLx8 ("DIGITAL ONE LINE LINK") to link intelligent electronic devices together with control systems, switches and sensors using this new embedded network technology and tools. It promises new functions and programs that can bring easy integration together with offering a lively and easy to use user experience.

As far back as 1991, a new easy-to-use embedded network system named DIGITAL ONE LINE LINK or DOLLx8 was introduced by the engineering team of our group of companies to control electronic devices such as relays, sensors and other devices from a PC system. MISOLIMA, a brand name and developments based in Chiang Mai, Thailand, has today announced a new release of its DOLLx8, version 3.18 that already allows for digital text-based embedded network experience offering both security and colourful function integration. The new release is packed with embedded software technologies for full system integration and functions, which is a vastly important topic and potentially represents a revolution in embedded information technology.

The DOLLx8 developments is driven by the increasing capabilities and ever-declining costs of computing, control systems for intelligent home and offices, and communications devices, resulting in networked systems for embedded computing whose functional components are nearly invisible to end users. This new version have the potential to alter radically the way in which people interact with their environment and energy-saving by linking a range of devices and sensors that will allow information to be collected, shared, and processed in unprecedented ways. The following image shows a sample of how the DOLLx8 may be integrated with Internet.

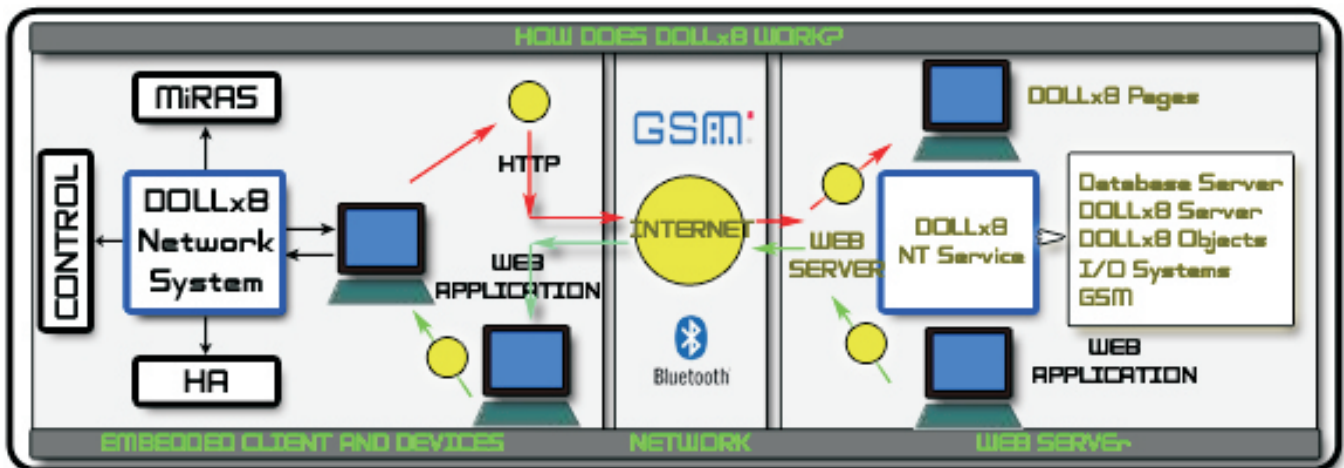


Illustration 1. The DOLLx8 system with PC, Internet, wireless networks and web servers.

DOLLx8 version 3.18 is designed to become the "mother" among connected embedded devices, such as stand-alone embedded systems, embedded PCs and displays, RFID, robotics systems, computer peripherals, wireless systems and a number of universal sensors for a vast number of applications. Combining information from in-place sensors with information from other sensor sources on a DOLLx8 network will also enable new, rich scenarios to be realised in automotive and avionics control systems, local environmental monitoring system, precision agriculture using wireless technologies and GPS, medical systems, personal health-care monitoring systems, and SME manufacturing and process automation in addition to home and office automation, alarm systems and multimedia for entertainment, just to mention few.

World marked for 2012 is 5.6 billion embedded systems

The new version of DOLLx8 network system which is already being integrated into several embedded devices are also being announced available in the form of small compact module named MISOLIMA ePAT MCU. ePAT is aimed for easy embedded technology integration, adaptation and educational purposes for the digital industrial embedded marketplace as well as hobby electronic enthusiasts and of course, the DOLLx8 is now available for all users and available as embedded module for new projects. ePAT exist with or without DC-DC switching power supply, securing seamless integration in a wide range of application using a wide range of power sources. As a consequence, the new DOLLx8 embedded computing and communications technology can quite literally be everywhere and become an integrated part of all aspects of life, that being as an almost invisible component of almost everything in everyone's surroundings.



Illustration 2. ePAT MCU module

Even though, the DOLLx8 digital embedded network is not so much software for end-users, it is still more an integrated "invisible" network and compact control system using powerful ATMEL microcontrollers ready to use as modules using MISOLIMA ePAT MCU as a platform. The module is ready to be booted on power-up and can be controlled by any communication tools like direct or remote links, GSM or Internet connections. The new ePAT MCU that is based on the new version 3.18 of DOLLx8 system is available from MISOLIMA's website <http://www.misolima.com> and is formally equivalent to earlier versions. With a lot of intelligent content loaded, this system may contain some pleasant surprises also for developers that which to use this protocol in existing or new control systems. Since DOLLx8 would be integrated in buildings, vehicles, homes and office, it would be expected to last as long as the objects in which it's embedded into. The expectation of longevity were taken into accounts when the MISOLIMA engineering team designed, deployed, and managed this system.

In the term of market potentials for the embedded sector, the overall world-wide value is estimated to be 1,580 billion Euros per year. Out of this, the three largest markets for embedded systems are telecommunications, automotive and avionics together with aerospace, with combined accounts for a yearly world-wide value of 1,240 billion €. The remaining is split into several sectors where out of this, 180 billion is covered by embedded system integration used in consumer electronics and intelligent homes and these markets are characterised by growth rates in excess of 10 percent year-on-year. The health and medical embedded sector counts for 50 billion Euros while the remaining 110 billion is for instrumentation and other embedded systems.

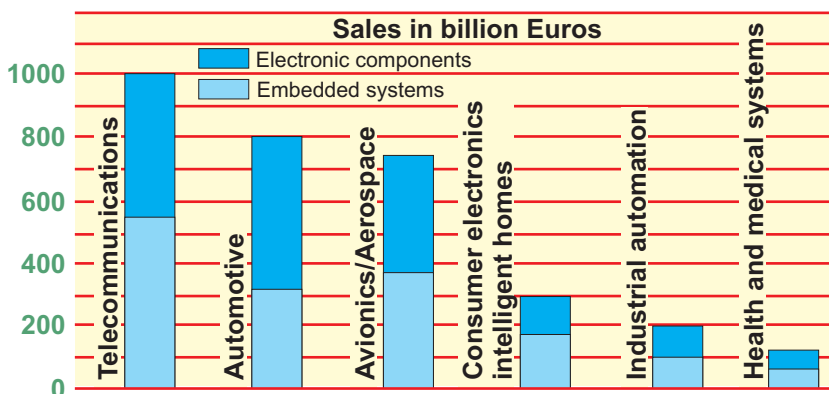


Illustration 3. World-wide markets in embedded technologies

What we can see from this graph is that in electronic systems that uses embedded technologies an overage of 50% is the cost of embedded system in itself.

These figures counts for more than 4 billion embedded systems and devices shipped world-wide in 2006 and for 2011 this would be an estimate of 5.6 billion systems.