ISys

Embedded Middleware

Version 2.0

Integrated System Infrastructure Software

Features

Event Logging

Interprocessor Messaging

Extensible Command Line Interface

Operating System Abstraction Layer

Hardware Abstraction Layer

Chassis Abstraction Layer

Benefits

Enhance End User Experience and Regard for Your Product

Improve Customer Support and Minimize System Downtime

Reduce Time to Market

Reduce Software Development and Maintenance Expense

Increase End Product Reliability

Fully Featured and Continuously Supported Software Components

Lextel's ISys Embedded Middleware is an integrated set of software components that perform commonly required system infrastructure functions.

ISys enhances the end user experience of your product, ultimately leading to favorable customer opinion and increased sales. At the same time, incorporating Lextel's off the shelf solutions will reduce your engineering and on-going maintenance expenses.

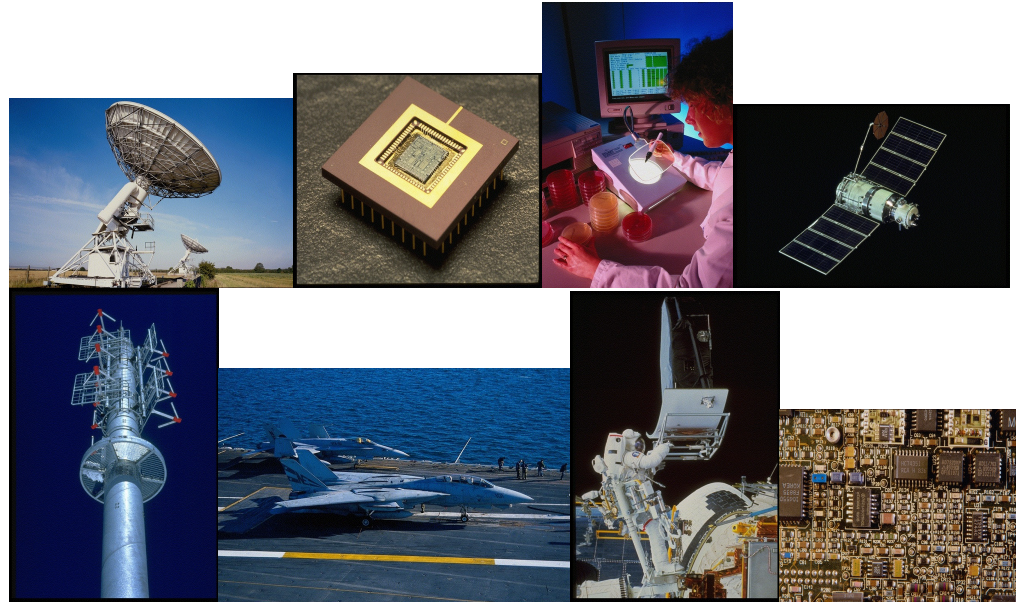Components in Version 2.0 of ISys include Event Logging, Interprocessor Messaging, Extensible Command Line Interface, Operating System Abstraction Layer, Hardware Abstraction Layer, and Chassis Abstraction Layer.

ISys provides compatibility with various embedded real time operating systems, processor cards, and system chassis' through 'Abstraction Layers' that provide standardized interfaces for use by other ISys components and user applications.

ISys has a C/C++ object oriented API for ease of use and reliability.

ISys is provided as a set of object module libraries, header files, and sample source code files. Object modules are included in a user application image on an as needed basis. Example application programs are provided for the user to build upon.

ISys is the result of experience gained during many man-years of software development performed for firms in the telecommunications, networking, military, aerospace, and national laboratory markets. ISys incorporates the features and specific functions found to be useful in a large number of embedded systems projects. Lextel engineers are available for support and custom development.

lextel

Lextel, Inc. 131 Main St, B475, North Andover, MA 01845 (781) 245-5017

ISys Revision 2.0 Components

Command Line Interface

The ISys Command Line Interface is a feature rich, extensible CLI. User Commands are implemented using a simple Object Oriented API. Examples are provided from which the developer can 'cut and paste'.

Features of the ISys CLI include:

- User extensible command specification
- Tab command completion
- Context sensitive help
- Position independent parameter specification
- Username / Password protection
- Command history recall
- Command line editing
- User extensible parameter types
- Parameter type checking
- User specified sub 'modes'
- Verification prompting
- CLI Sessions

Interprocessor Messaging

The ISys Interprocessor Messaging component enables user application tasks to communicate with one another when running on separate processors. An object oriented API provides mechanisms for serializing and deserializing message object data, and provides for encapsulating the actions to be taken on message receipt within the message itself.

Features of the ISys Interprocessor Messaging Component include:

- Object oriented API
- Send messages to named tasks on remote processors
- Uses udp or tcp via socket interface
- Details of underlying communication system hidden from application programmer
- No copying when sending to same processor
- Message object data and actions on receipt encapsulated within the message object
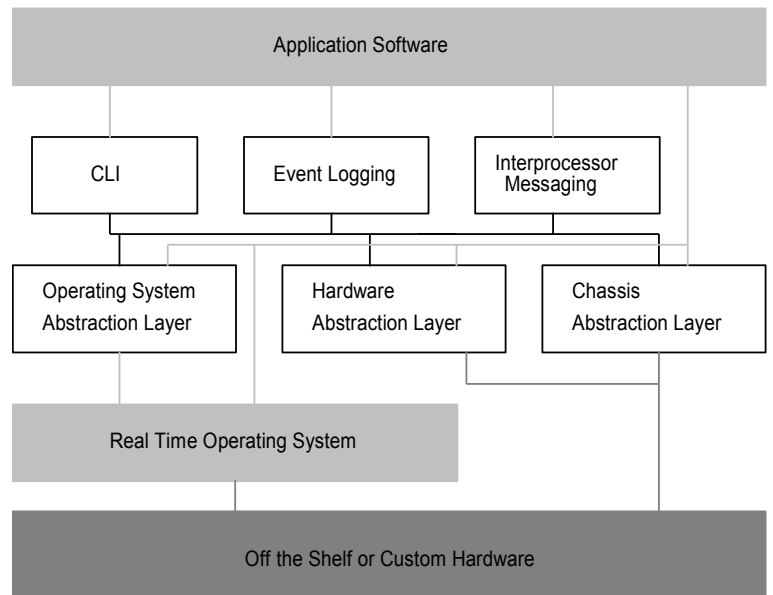
Event Logging

The ISys Event Logging system provides a consistent mechanism for user application programs to generate event log information as a system is running. Log messages consist of text strings and parameter values specified at the time of generation. Log messages incorporate information regarding the severity, source of the message, and time of generation.

Filtering of messages based on various criteria is supported. Event Log messages are automatically distributed from the generating application tasks to Log Server tasks running on one or more processors. Each Log server task performs a specific function such as outputting the event log message on a console, storing it in a disc file, or generating audible or visible alarms.

Features include:

- Object oriented API
- Simple specification of event log messages and their format
- Prioritization and filtering of messages
- User application tasks can generate event log messages to one or more centralized Log Servers
- Log Servers are extensible for customized event log handling
- Log Servers may be running on one or more processors; potentially separated by large distances from the event-generating task.

| Hardware | RTOS | ISys | Application Software |

Ordering Information

Please use the ordering code shown below. Contact a sales rep for additional options not shown below or your specific requirements.

Ordering Code: ISys-*os-trg-hst-ver-fc-hdw-itm*

os	target rtos:	TS	TimeSys Linux
		VX	vxWorks
trg	target processor:	PPC	power pc
		X86	x86
		ARM	arm
hst	host dev. system:	W2K	Windows 2000
		RHL	Red Hat Linux
ver	ISys version:	x.y.z	specific version: major (x) / minor (y) / patch (z)
		L	Latest released version
fc	feature code:	DEM	demonstration distribution
		R0F	Cli, Messaging, Event Logging
		R03	Cli
		R07	Cli, Messaging
		R08	Event Logging
hdw	hardware code:	00	abstraction layers for running on development system, including source code. Suitable for adaptation to custom hardware.
		01	Embedded planet 860hep862. Also includes items in option 00
itm	item code:	DEV	development seat license and software package
		DIS	distribution license
		SUP	annual support via email, web, and voice