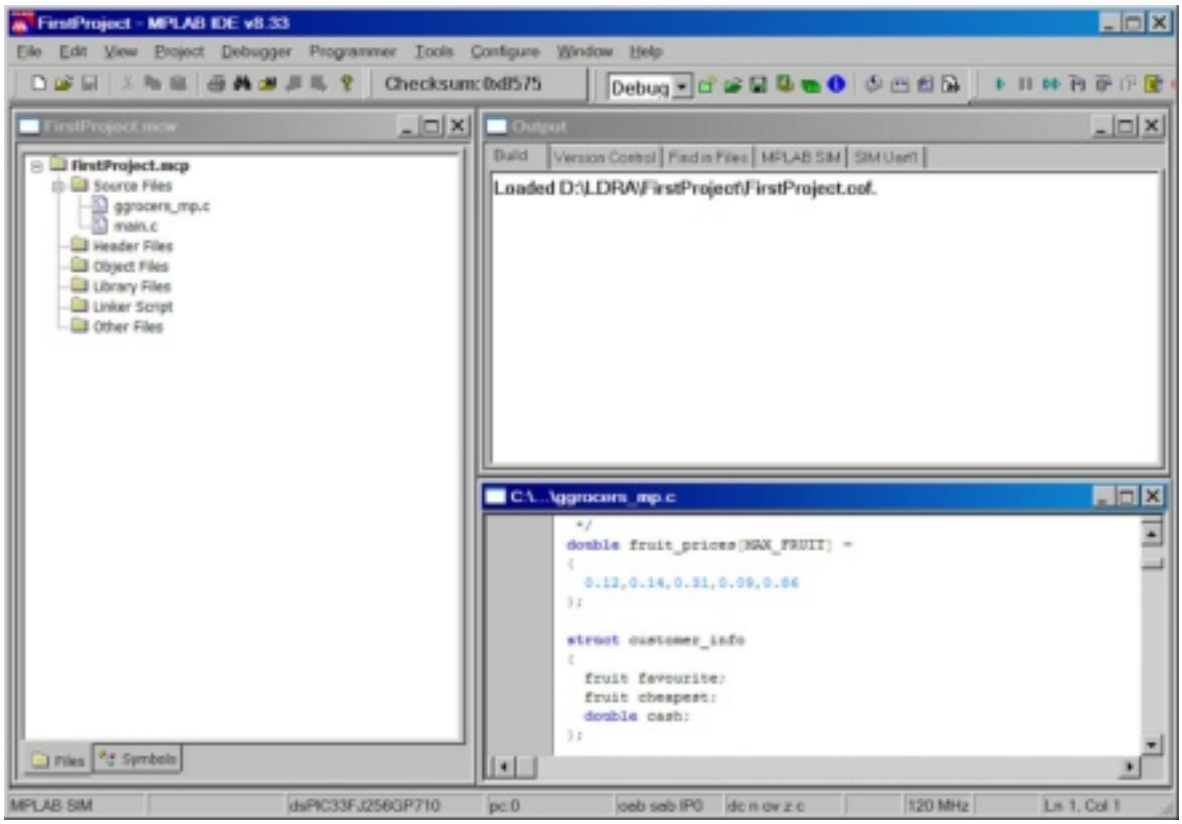
LDRA Tool Suite Integrated into Microchip Technologys PIC Family

LDRA, the leading provider of automated software verification, source code analysis, and test tools, has integrated the LDRA tool suite and Microchip Technology's MPLAB PIC18, PIC24 and dsPIC32/33 tool chains. Leveraging the scalability of its components, LDRA can scale the LDRA tool suite down to run application code on small processor footprints. Thanks to this integration, very low-cost and low-power PIC processors can be used in DO-178B qualified environments.



Microchip's PIC18, PIC24 and dsPIC32/33 families are 8- and 16-bit microcontrollers, specifically designed to provide optimal functionality in a low-overhead design. The scalability of LDRA's components enables LDRA to offer full tool suite functionality with kilobytes of RAM and tens of kilobytes of ROM. By hooking into the PIC serial I/O ports, developers gain identical output across each of these PIC families.

Similarly, the LDRA tool suite fully integrates with the PIC tool chains, allowing for compilation, linking, and programming in the PIC tool chain environment. Despite Microchip Technology's wide range of compilers and processors, LDRA is able to abstract the tool suite uniformly to the user. Flexible licensing enables this breadth of integration to be fully covered with LDRA's Target License Package. End users gain full use of graphical test planning and automatic test vector generation tools in the target environment, reducing the need for programmers and testers to have an

in-depth knowledge of the extensive differences represented by each PIC platform.

“Microchip Technology represents a broad range of smaller footprint market,” noted Ian Hennell, LDRA’s Operations Director. “Our tool suite’s level of in-depth knowledge of the PIC’s tools and processor technology is impressive. It paves the way for successful implementations of our mutual technologies even in rigorous environments requiring DO-178B certification or similar medical or industrial standards.”

The LDRA tool suite integration enables developers to use very low-cost, low-power PIC processors in DO-178B qualified environments. Even though Microchip Technology follows a non-ANSI standard C implementation, LDRA is able to analyze and run code on the target and extract the results to create reports identical to those from a more fully featured development environment. With access to this level of investigation, developers can design in Microchip Technology’s low impact PIC processors for qualification environments such as DO-178B level A or analogous medical and industrial qualification environments.

David Clark, software manager with Kidde Aerospace and Defense, a Hamilton Sundstrand Company, applauds LDRA for its integration with Microchip’s tools and processors. “LDRA’s customer support is superior to many customer support experiences I have had in my career. The FAEs’ in-depth knowledge of the LDRA tool and its integration into our test effort and the PIC microprocessor is very impressive. I would recommend LDRA as an integrated test tool just for the level of customer service they give.”

For more information about the integration, visit www.ldra.com/integrations.asp [1] or e-mail info@ldra.com [2] for more details.

About the LDRA tool suite
The LDRA tool suite has been derived from many ground-breaking testing techniques developed by LDRA. The LDRA tool suite assists with the eight primary tasks: traceability verification, design, code and quality review, unit testing, target testing, test verification and test management. Focus on these key areas is required to achieve a company’s software development and maintenance goals. The LDRA tool suite can be used by an entire project team—developers, QA managers, test engineers, project managers and maintenance/support engineers—to automate the software development lifecycle. Through the deployment of the LDRA tool suite, companies are able to deliver well-constructed, documented and tested software, and benefit from significant time, cost and operational savings. For more information on the LDRA tool suite, please visit: www.ldra.com [3].

About LDRA
For more than thirty years, LDRA has developed and driven the market for software that automates code analysis and software testing of safety-critical, mission-critical and business-critical applications. The LDRA tool suite is widely used in the aerospace, space and defence technology, nuclear energy and automotive industries. Through the use of the LDRA tool suite, companies ensure that their systems are built in accordance to prescribed industry standards and are durable

and reliable in use. The LDRA tool suite is available for a number of programming languages over a wide range of host and target platforms. Boasting a worldwide presence, LDRA is headquartered in the UK with subsidiaries in the United States and an extensive distributor network. For more information on the LDRA tool suite, please visit: www.ldra.com [4].

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