



RapidRIL™

We've redesigned the Radio Interface Layer...

- ▶ Multiple OS support
- ▶ Multiple arbitrated data and control channels
- ▶ Modular and loosely coupled functional code blocks
- ▶ Out-of box-support for a growing list of modems

...so you can get to market faster...

- ▶ With little or no NRE
- ▶ With higher quality final products

...and deliver more innovative handsets.

- ▶ Architecture supports dual-radio phones (GSM, EDGE, CDMA, 4G, etc.)
- ▶ Multi-SIM phones

Overview

A typical sample Radio Interface Layer (RIL) from Microsoft or the Open Handset Alliance (OHA) can contain up to 200,000 lines of code. If your connected device requires feature enhancements to support field testing, diagnostics, or carrier dictated requirements, the RIL may end up with more than half a million lines of code – a significant development effort that may require six to nine months to complete.

The Intrinsic telephony team has successfully custom developed dozens of RIL drivers for baseband processors used in mobile phones and other connected devices. This expertise has been packaged into RapidRIL™, a product that allows developers and manufacturers of Android and Windows Mobile devices to:

Accelerate RIL development with out-of-the-box modem support

Today, RapidRIL has out-of-the-box support for Infineon XMM™ Dual-Core and X-Gold and Sierra Wireless MC87xx modems, resulting in a development cycle measured in just days. Developers can re-use one code base for multiple phones, modems, and operating systems for even faster development.

Reduce development costs and speed time to market with any modem

Because RapidRIL is flexible and extensible, Intrinsic can support virtually any AT-command or binary-interface wireless radio modem out-of-the-box without any non-recurring engineering charges (NRE).

Improve quality and reliability

RapidRIL is a product with a common code base and specific modem extensions. Regression testing and improvements for a specific modem are reflected in common code, which improves the overall quality and reliability for all RapidRIL supported modems and across both Windows Mobile and Android.

Our telephony experts also divided the RIL into eight loosely coupled silos of code, each of which can be added or removed from the build without affecting the rest.

Support multiple operating systems

The core engine of RapidRIL is OS-agnostic, which means as a device maker you can select RapidRIL for both your Android and Microsoft Windows Mobile phone development projects. The benefits of the common code base are; faster time to market, more reuse, less testing, and higher quality.

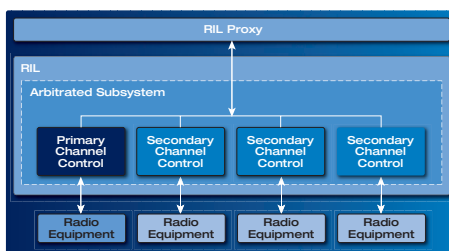
Build innovative connected wireless devices

RapidRIL makes it easy for developers to extend RIL commands to enable innovative features such as location-based services, advanced power management, or advanced telephony features such as push-to-talk.

Design advanced mobile devices with the RapidRIL multi-channel architecture

RapidRIL is architected with the concept of multiple channels. This encourages re-use of code to handle such regular tasks as multiple data channels – a common requirement for EDGE and UMTS technologies. As a result of this innovative design, RapidRIL is optimized for 2.5G and 3G handsets.

This same architecture that supports multiple data channels also supports multiple radio devices or multiple SIMs. RapidRIL was designed with the assumption that some devices will need multiple modems. This means RapidRIL is ideal for any device maker pursuing a dual-radio or dual-SIM solution.



The RapidRIL multi-channel RIL architecture

Who can benefit from RapidRIL?

- ▶ Device makers
- ▶ Modem vendors
- ▶ Carriers and Operators

Benefits for Device Makers

- ▶ Reduces time to market
- ▶ Reduces development cost
- ▶ Reduces project risk

Come to Intrinsic for all your wireless telephony needs

RapidRIL is just one example of the innovation resulting from our deep knowledge of telephony technology. Intrinsic has expertise in developing RILs for various operating systems and industry-leading modems/radio stacks. Call our experts or visit our website at www.intrinsic.com to learn more about how Intrinsic products and services can help with your smartphone or mobile device projects.

Companion product to RapidRIL: The Intrinsic Telephony Test Suite

The Intrinsic Telephony Test Suite was originally created as an internal tool for the testing of RIL implementations on target devices. Now everyone can leverage this automated, configurable, and extensible tool for testing mobile phones and other connected devices. The test suite provides:

- Fast, efficient, repeatable, and documented testing
- An end-to-end solution for live or simulated network testing
- Boundary, stress, and special network case tests
- An extensible framework for adding new tests

Intrinsic Differentiators

- Proven Experience with 300+ Customer Projects Completed
- Worldwide Resources Located in North America, Asia, and Europe
- Flexible Contracts: Fixed Firm Price, Time and Materials, Royalty/NRE Mixes
- Strong Partnerships: OS, Silicon, and Radio Stack/Modem Vendors

To learn more about **RapidRIL** and check for the latest list of supported modems, please visit our website at www.intrinsic.com.

About Intrinsic

Intrinsic empowers device makers, mobile operators, and silicon vendors to deliver compelling, next generation mobile devices with faster time-to-market, higher quality, and differentiating innovation. Our customers and partners rely on our award-winning device development products and services and our industry-leading navigation software and location-based services solutions. Intrinsic globally supports customers with solutions that span all major mobile operating systems and platforms, including Windows Embedded CE and Windows Mobile, Linux/Android, and Nokia/Symbian. Intrinsic is publicly traded (TSX: ICS) and headquartered in Vancouver, Canada, with offices in China, Israel, Taiwan, U.K. and the United States.

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