

# RomWebClient™ Feature Overview



## *Web Client Toolkit for Embedded Devices*

The RomWebClient toolkit is an embedded HTTP 1.0/1.1 client toolkit that provides devices the ability to send and retrieve objects from any Web server using the HTTP protocol. The toolkit may be used to allow devices to download configuration files, retrieve software updates, retrieve "print-by-reference" documents or send status notifications. RomWebClient also allows devices to initiate XML-based request/response protocols such as the Simple Object Access Protocol (SOAP), a new vendor-independent initiative supported by most computer manufacturers.

The RomWebClient toolkit can send and receive HTTP objects in any format. The format is indicated using a MIME definition such as `text/plain` or `image/gif`. The RomWebClient toolkit includes MIME definitions for all the standard MIME object types, as well as allowing use of non-standard MIME types. The HTTP objects are sent to and from internal memory buffers or an optional file system may be used to store the objects.

The RomWebClient toolkit supports both HTTP 1.0 (RFC 1945) and HTTP 1.1 (RFC 2616) requests. The RomWebClient toolkit supports the following HTTP methods: GET, POST, HEAD, PUT, OPTIONS and TRACE. The HTTP GET method is used to retrieve an object, the POST method sends an object to the Web server and may retrieve an object with the same request. The PUT method stores an object on the Web server and usually does not receive an object response. The HEAD, and OPTIONS methods usually receive only HTTP headers as responses and are used to determine Web server capabilities. The TRACE method returns an object containing the HTTP request headers and is used for examining network request flows.

Both HTTP direct requests and proxy server requests are supported, allowing use in any network environment. HTTP 1.0 and 1.1 persistent connections are supported which allow multiple requests and responses inside a single TCP connection.

RomWebClient also supports HTTP Cookies, a non-standard addition to the protocol that was developed by Netscape to support maintaining state information over multiple transactions.

Authentication is supported using both the HTTP Basic and Digest methods and is compliant with RFC 2617. The RomWebClient Secure version of the product adds SSL/TLS encryption and certificate services for communicating with secure Web servers.

RomWebClient can provide integrated retrieval/transmission of XML objects using the embedded XML parsing and framing support of the RomXML toolkit. XML objects provide machine-independent computer-to-computer data exchange with a syntax that is easily read by humans.

The RomWebClient uses a single task from the host operating system and uses asynchronous calls, so that the device may perform other tasks while the HTTP request is being serviced. RomWebClient uses 10-20Kb of ROM depending on compilation options. The RomWebClient toolkit is delivered as ANSI-C source code and will work with any RTOS or TCP stack. It is delivered with interface files for all the leading OS vendors.