



# MicroLogix™ 1500 Processor Unit 1764-LRP

The new 1764-LRP processor for the MicroLogix 1500 controller is a more advanced alternative to the 1764-LSP processor currently available. The 1764-LRP boasts more memory, data logging capabilities, and a second communication port that make it ideal for SCADA applications.

As with all MicroLogix controllers, the 1764-LRP processor is programmed with RSLogix 500 software and has an instruction set which is compatible with the MicroLogix 1000, and 1200 products, as well as all SLC-500 processors. The 1764-LRP provides world class functionality, flexibility, and a competitive price to meet the needs of the global marketplace.



1764-LRP (shown with optional 1764-DAT Data Access Tool)

Feature	Benefit
Program Size: 12K User Words (4K Data words max)	The 1764-LRP has 12K of configurable user memory (8K program 4K data). Along with the 1764-LSP processor's 7K memory size, users can now select a processor to suite the needs of the application. The additional memory in the 1764-LRP allows an even wider range of applications to be served.
Isolated RS-232 Port 9 Pin D-shell with full handshaking (RTS, CTS, DCD)	This port on the 1764-LRP processor unit is additional to the RS-232 port built into the base unit. Full handshaking allows the controller to serve modem-based applications (SCADA). Additionally, 1764-LRP based controllers can simultaneously connect to both an operator interface and a network. The 1764-LRP and base unit ports can be individually configured to support any protocol (DF1 Half and Full Duplex, DH-485, Modbus RTU Slave and ASCII) for greater flexibility than competitive products.  This allows simultaneous communication with modems, operator interface devices, network interfaces or programming devices.



## Features and Benefits (continued)

Feature	Benefit
Data Logging Instruction (DLG) with 50K bytes of data storage (battery backed).	The 1764-LRP has 50K bytes of data logging memory and a new data logging instruction. This feature allows the user to select data (Real Time Clock data, bit and integer values, etc.) that can be saved as records. These records can then be retrieved via communications. Data logging is used extensively in SCADA (supervisory control and data acquisition) applications. The new DLG instruction can be used to select critical data within the controller for later export to spreadsheet applications. In this way, a user can access the controller periodically for analysis or recordkeeping information. This functionality in addition to DF 1 half duplex and Modbus RTU slave protocol support, allows the 1764-LRP to be used as an extremely effective RTU.
Modbus RTU Slave Protocol (embedded)	The 1764-LRP and new 1764-LSP Series B processors include Modbus RTU slave protocol. Having this well known protocol built into the processor provides a very cost effective solution for Modbus based SCADA networks. When either of the communications ports are configured for Modbus RTU operation, the controller will function as a slave device on the network.  Existing users of the 1764-LSP MicroLogix 1500 processor can flash upgrade existing processors to enable this protocol.
ASCII Instruction Set with String Data File Support	The 1764-LRP and new 1764-LSP Series B processors include full read and write ASCII capabilities, virtually identical to SLC 500 processors. This functionality allows ASCII based devices (modems, bar codes, weigh scales, smart sensors) to be connected directly to the processor. String Data File Support has been added to support these new instructions.
Static Data File Protection	MicroLogix 1500 processors have the ability to individually set data files to be protected from inadvertent changes via communications. When set, only the ladder logic can change the data within a statically protected data file. This is extremely useful in safety systems or critical applications where security is paramount. There are no restrictions on how many data files can be statically protected.
RTC (real time clock) data exchange	MicroLogix 1500 processors now allow their Real Time Clock data to be written to other controllers via messaging. This allows users to update multiple controllers on a network to the same time value.
PWM ramping	The PWM instruction on all MicroLogix 1500 processors (1764-LRP and 1764-LSP Series B) have been enhanced to support trapezoid accel / decel (ramping). This functionality allows either the frequency or the pulse width to be modified "on the fly" with the output signal being ramped to the new value.