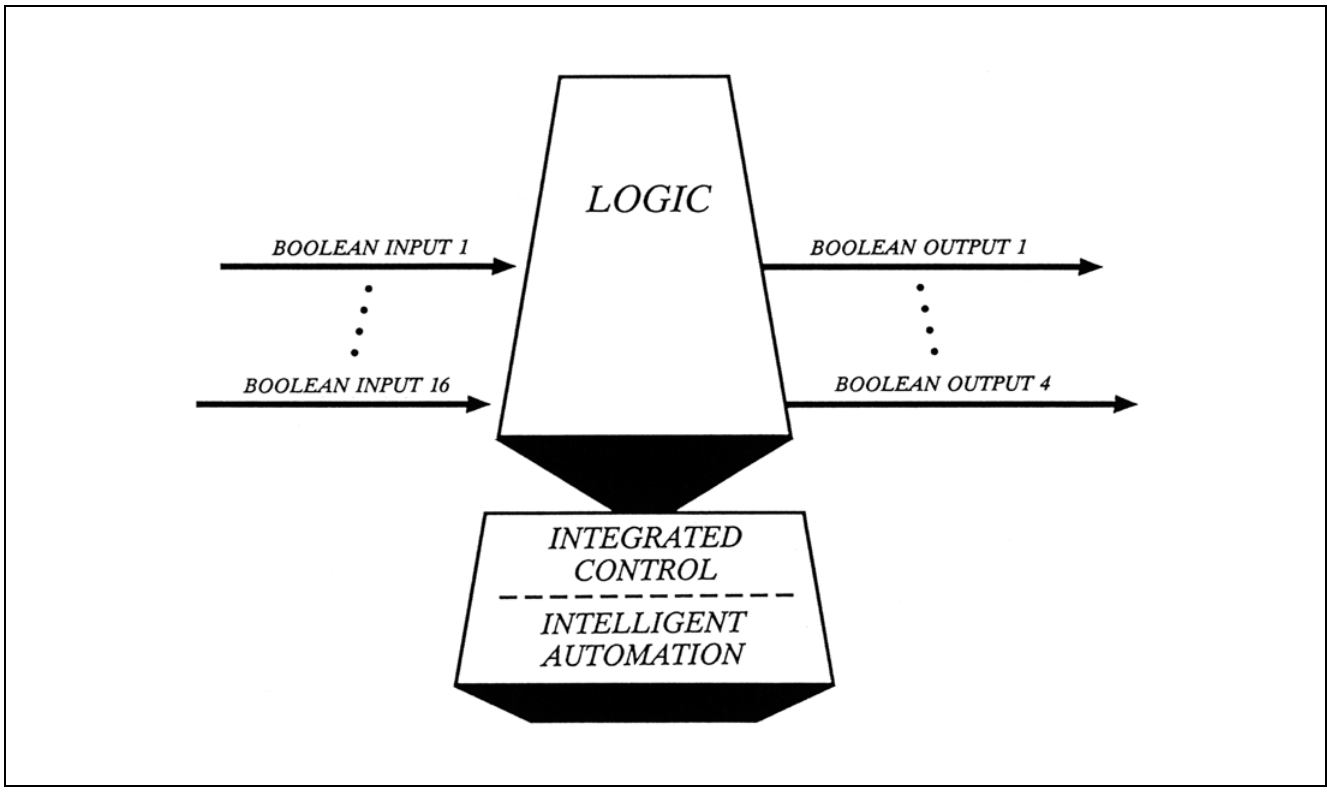
# I/A Series® Software
# Logic (LOGIC) Block




*The Logic (LOGIC) block is a multiple input, 15-step, programmable block that provides logic, latching, and timer functions to augment the operation of standard blocks.*

**OVERVIEW**

The LOGIC block provides functions that can be combined in logic networks: boolean logic, flip-flop, latching, logic delay and timing. These logic networks can range from simple networks with a few gates to complex networks containing multiple gates, latches, and timing elements. The LOGIC block provides optimization of memory resources as well as high speed execution of logic functions.

For increased performance and ease of use, the block supports dual boolean operands in a single programming step. For example, to perform a logical AND of the contents of specified operands, the syntax would be: AND BI01, BI02. All input connections, constant data values, and programming steps are entered via the block configuration process.

## GENERAL FEATURES

- Up to 15 programming steps
- 43 programming instructions
- Up to 2 operands per single instruction
- Integer stack to perform operations
- 16 boolean inputs
- 4 boolean outputs
- 5 data storage elements
- Block installation validation check
- Input and output parameter error detection and control
- Auto/Manual output control
- Detection of runtime errors

## BOOLEAN OPERATIONS

- Logical AND, OR (inclusive), XOR (exclusive), NOT, NAN, NOR, NXO

## LOGIC AND TIMING

- One-shot pulse, set-reset flip-flop, master reset flip-flop
- On-delay timer, off-delay timer

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