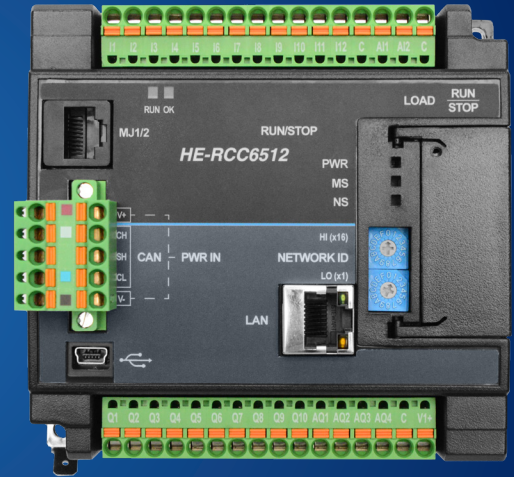# RCC6512

High-speed Remote I/O & Advanced Co-Processor

The RCC6512 is a versatile product to handle high speed applications. This device combines a control co-processor along with high-speed digital and analog I/O with integrated networking.

Control Co-Processor programmed in Cscape

Hardware high-speed I/O accelertor for handling high-speed inputs and outputs

Eight high-speed counters that support totalizing, frequency, counting, pulse width measurement, period measurement or quadrature

Ten sourcing high-speed outputs. Eight of which can be used as PWM signals

Programmable input threshold for zero cross, 5V, 12V and 24V signals

Programmable input filtering for 500kHz, 50kHz, and 5kHz

POWERFUL CO-PROCESSOR

The RCC6512 is designed as an add-on co-processor to any application requiring advanced high-speed counting. The RCC6512 is programmed in Advanced Ladder using Cscape

HIGH-SPEED INPUTS, HIGH-SPEED OUTPUTS

The RCC6512 is built around a FPGA chip which provides speed and flexibility for its generous complement of high-speed I/O. On the input side, up to 8 totalizers or 4 quadrature accumulators can be supported at frequencies up to 500kHz. Analog Filtering prevents spurious noise from interfering with legitimate signals for accurare counting. Digital outputs can be configured as either setpoint controlled outputs or PWM signals. Analog Outputs (+/- 10V) are provided with motor speed control in mind.

FLEXIBLE COMMUNICATIONS

The RCC6512 supports multiple connectivity options. The on-board Ethernet port (10/100Mbps) supports some of the most popular industrial ethernet protocols. These include Modbus TCP Server, Ethernet IP I/O Device and Ethernet Global Data (EGD). Horner's highly efficient CsCAN network is also onboard with its peer-to-peer architecture and superior noise immunity.

CsCan or Ethernet
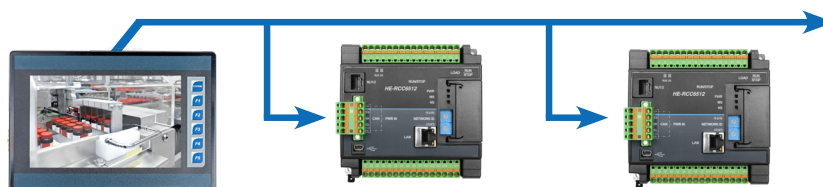
RCC6512 General Specifications

Item	Specification	Item	Specification
Co-Processor Specifications		I/O Specifications	
Cscape Control Language	Advanced Ladder Logic	High-Speed DC Inputs	8 (5V/12V/24V) pos/neg
Logic Size & Scan Rate	16kB, 0.7,uS/kB	Maximum HSC Frequency	500kHz (5k/50k/500k filter)
Programming Ports	USB, RS-232, microSD	General Purpose DC Inputs	4 (24V) pos/neg
General Purpose Registers (words)	2048 (256 Retentive)	High-speed DC Output	8 (5V/12V/24V) pos 0.5A
General Purpose Bits	2048 (Non-Retentive)	Max Frequency	500kHz
Digital I/O Registers	512 Input & 512 Output	General Purpose DC Outputs	2 (5V/12V/24V) pos 0.5A
Analog I/O Registers	256 Input & 256 Output	Analog Inputs	2 (0-10V, 0-20mA)
Dimensions (maximum)	4.67"H x 4.57"W x 2.81"D	Resolution, Accuracy	12-bits, 1% full scale
Required Power (steady-state)	120mA @ 24Vdc	Input Impedance	V: 100kohm mA: 15ohm
Primary Power Range	10-28Vdc	Analog Outputs	4 (-10V to +10V)
Operating/Storage Temperature	-10C to +60C	Resolution, Accuracy	12-bits, 0.25% full scale
Relative Humidity	5-95% Non-condensing	Minimum Load	500ohm

Additional Remote I/O Options

Part Number	Description
SmartBlock Standard	
HE579MIX102	Isolated mixed Digital/Analog I/O module (12/6/4)
HE579RTD100	Isolated RTD Indut Module, 4 channel
HE579RTD200	Isolated RTD Input Module, 8 channel
HE579THM100	Isolated Thermocouple Input Module, 4 channel
HE579MIX577	Isolated Thermocouple Input Module, 8 channel
HE579MIX577	4 Analog Inputs, 2 Analog Outputs (0-10V, 0-5V, 0-20mA, 4-20mA)
HE579MIX977	8 Analog inputs, 4 Analog Outputs (0-10V, 0-5V, 0-20mA, 4-20mA)
HE579ADC570	6 Analog Inputs (0-10V, 0-5V 0-20mA, 4-20mA, and 10 K thermistor)
HE579ADC970	SmartBlock 12x Analog In, +10, 4-20mA, Thermistor
HE579DAC107	4 Analog Outputs (0-10V, 0-5V, 0-20mA, 4-20mA)
HE579DAC207	8 Analog Outputs (0-10V, 0-5V, 0-20mA, 4-20mA)
HE579DIQ880	8 DC inputs and 8 relay outputs
HE579DIQ8881	8 DC inputs and 8-.5 amp DC outputs
HE579MIX105	Isolated Mixed Digital/Analog I/O Module (12/12/2/2)
HE579ACM300	AC power Monitor (3-phase)
HE579ACM302	AC Power Monitor Using Rogowski Inputs

Part Number	Description
SmartBlock Open-style	
HE-RLT12	Replacement relay for HE569DQM212
HE-SSR04	Replacement SSR for HE69DQM204
GE-SSR05	Replacement SSR for HE69DQM205
HE569DQM209	8 High Current Direct Connect Relays
HE569DQM212	8 High Current, Socketed Relays
HE569DQM212-12	8 High Current, Socketed Relays, supports 12V relay coils
HE569DQM204	8 High Current, Socketed SSRs (AC)
HE569DQM205	8 High Current, Socketed SSRS (DC)

Part Number	Description
SmartStix Standard	
HE559DIM610	16 DC Inputs (pos/neg)
HE559DIM710	32 DC Inputs (pos/neg)
HE559DQM602	16 Relay Outputs, 2A max
HE559DQM606	16 DC Outputs (pos) 0.5A max
HE559DQM706	32 DC Outputs (pos) 0.5A max
HE559DIQ816	16 DC Inputs (pos/neg) & 16 DC Outputs (pos) 0.5A max
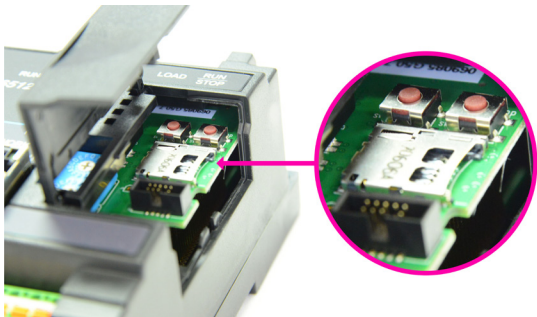
The RCC6512 features a microSD slot for data logging and maintenance functions.

SmartStix Digital I/O can be used alongside SmartBlock I/O & the RCC6512 Co-processor.