

Specifications

Category	Feature	Phoenix AM	Phoenix RT	Phoenix C3
High-Speed Analog Inputs	# Channels	12 per module Up to 24 without Phoenix RT Up to 48 with Phoenix RT	NA	2 on main processor 4 per input module Up to 14 channels
	Resolution	16-bit		16-bit
	Acquisition Rate	20,000 RPM at 0.1° 2 Mhz		8,000 RPM at 0.1° 2 Mhz
	Low-pass filters	None, 12.5kHz, 25kHz, 50kHz		None, 12.5kHz, 25kHz, 50kHz
	Input Ranges	± 1 V, ± 2 V, ± 5 V, ± 10 V, ± 50 V		± 1 V, ± 5 V, ± 10 V
	Input Impedances	~25 kΩ (~100 kΩ on ± 50 V range)	10 kΩ, 100 kΩ, 1 MΩ, 10 MΩ	
Low-Speed Analog Inputs	# Channels	N/A	N/A	2
	Resolution			12-bit
	Acquisition Rate			8,000 RPM at 0.1° 500 KHz
	Input Ranges			± 10 V
Analog Outputs	# Channels	N/A	16	N/A
	Resolution		16-bit	
	Update Rate		100 Hz	
	Output Range		± 10 V	
Digital Inputs	# Channels (Up to four used by an encoder)	8 per module	N/A	4 inputs or outputs on mainboard 4 per input module
	Input Ranges	± 5 V		± 5 V
	Maximum Encoder Resolution	0.1°		0.1°
Digital Outputs	# Channels	N/A	16	4 inputs or outputs on mainboard
	Update Rate		100 Hz (based on engine RPM)	100 Hz (based on engine RPM)
Data & Analysis	Analysis Method	Data is streamed to host PC for complete analysis	Real-time cycle-by-cycle data is streamed to DSP core on-board Phoenix RT for analysis	Real-time cycle-by-cycle data is streamed to the DSP core on board Phoenix C3 for analysis
	Analysis rate without missing an engine cycle	Loss-less real-time analysis not guaranteed over 1,200 RPM	12,000 RPM at 0.1°	8,000 at 0.1°
	System Memory	256 MB	2 GB	1 GB (plus SD card for data storage)
	Non-volatile logging	N/A	USB, SD, eSATA, SATA	SD
	Test Bench Interfaces	Winsocket and ASAP3	Winsocket, ASAP3, UDP, XCP and CANbus	XCP and CANbus
	Host PC Connection	1 Gigabit Ethernet	1 Gigabit Ethernet	1 Gigabit Ethernet
	Headless Operation	No	No	Yes
Power & Mechanical	Input Power	10 - 16 volts DC (50 watts @ 12VDC) 120/240 V 50/60 HZ VAC external power supply	10 - 30 volts DC (50 watts @ 12VDC) 120/240 V 50/60 HZ VAC external power supply	9-30 volts DC (20 watts @ 12VDC) 120/240 V 50/60 HZ VAC external power supply
	Dimensions (Single Module)	343mm (W) x 194mm (D) x 44mm (H) 13.5" (W) x 7.6" (D) x 1.8" (H)	343mm (W) x 200mm (D) x 44mm (H) 13.5" (W) x 7.9" (D) x 1.8" (H)	165mm (W) x 197mm (D) x 45mm (H) 6.5" (W) x 7.75" (D) x 1.75" (H)
	Weight (Single Module)	2.2 kgs. (4.9 lbs.)	2.2 kgs. (4.9 lbs.)	CPU board 1.0 kg (2.2 lb.) Add-on board 0.6 kg (1.4 lb.)
Environmental	Operating temperature	0 °C to 50 °C (32 °F to 122 °F)	0 °C to 50 °C (32 °F to 122 °F)	-40 °C to 70 °C (-40 °F to 158 °F)
	Operating humidity	0% to 95% humidity non-condensing	0% to 95% humidity non-condensing	0% to 95% humidity non-condensing