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Data Sheet
August 13, 2026

INTERFACE TECHNOLOGY

Interface Technology SR5020 TTL I/O Module

Interface Technology SR5020 TTL I/O VXI Module The Interface Technology SR5020 isasingle-slot C-size VXI TTL digital I/O module for high-speed digital test. A dual-processor architecture pairs a 25 MHz 68030 system processor (message-based VXI Slot-0 interface) withadedicated control processor for real-time branching, looping, sequencing, and logic-analyzer trigger evaluation. Each module provides 32 input and 32 output pins atafull 50 MHz data rate with 64K vectors per channel. Seven 64K-deep memory banks hold stimulus (output, algorithmic, tristate), expected response (expect, algorithmic, mask), and record/compare data. A sixteen-level state machine and nine system-wide digital comparators control record capture. Each input channel includes a 16-bit CCITT CRC register for signature analysis. The Interface Technology SR5020 isasingle-slot C-size VXI TTL digital I/O module for high-speed digital test. A dual-processor architecture pairs a 25 MHz 68030 system processor (message-based VXI Slot-0 interface) withadedicated control processor for real-time branching, looping, sequencing, and logic-analyzer trigger evaluation. Each module provides 32 input and 32 output pins atafull 50 MHz data rate with 64K vectors per channel. Seven 64K-deep memory banks hold stimulus (output, algorithmic, tristate), expected response (expect, algorithmic, mask), and record/compare data. A sixteen

MODEL **Interface Technology SR5020**	CALIBRATION **Available on request**
CONDITION **Used**	STATUS **In stock**
RFQ / SKU **SR5020**	LISTING **https://aumictechlabs.com/products/sr5020-2/**

NIST-traceable cal · SAM registered · 30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Interface Technology SR5020 TTL I/O Module is a high-density digital I/O interface for the SR5000 Digital Test Subsystem, delivering 32 stimulus and 32 response channels per module with 100 ps edge placement resolution. It integrates dual processors - a 68030 System Processor for VXI Bus communication and a Control Processor for real-time digital test functions including conditional branching, looping, and logic analysis triggering. The module scales to 640 total I/O pins when up to 20 SR5020 units are controlled by a single SR5010 Timing/Control Module. Technical Specifications I/O Architecture 32 stimulus pins and 32 response pins per module 7 memory banks, each 64K vectors deep All memory banks operate at up to 50 MHz data rates Up to 20 modules supported per SR5010 controller (640 total pins) Timing and Edge Control Edge placement resolution: 100 ps 16 timing generators per module 8 stimulus timing generator sets (2 pairs per 8-pin group) 2 response timing generators per module with window compare and glitch detection Data Formats and Pattern Support Stimulus formats: NRZ, RZ, R1, RC, RI RAM-backed and algorithmic pattern generation 16-bit CCITT CRC signature analysis on input channels Mask memory for selective pattern comparison Power Consumption +5.0 V: 10.0 A (50 W at 50 MHz; 7.5 A / 37.5 W at 40 MHz) −5.2 V: 4.0 A (20.8 W) Key Features Dual-processor architecture separates VXI bus communication from real-time test execution Conditional test logic enables dynamic test sequences without host intervention Seven independent memory banks support complex stimulus/response scenarios Nanosecond-class timing resolution suits memory, bus emulation, and functional test applications Typical Applications Bus emulation, memory device testing, functional test of TTL-compatible circuits, digital signal stimulus and capture, and signature analysis. Compatibility & Integration Designed for the SR5000 Digital Test Subsystem architecture. Integrates with SR5010 Timing/Control Module for multi-module scaling and centralized test sequencing.

SR5020 Characteristics / Specifications

PARAMETER	VALUE
Model	SR5020
Manufacturer	Interface Technology
Instrument Type	VXI TTL digital I/O / pattern module
Family	SR5000 high performance VXI digital test
Alias	SR 5020; NSN 5998 01 458 4968
VXI Form Factor	C size, single slot
System Processor	68030 at 25 MHz
VXI Interface	message based to Slot 0 controller
Control Processor	real time digital test engine
Input Pins	32
Output Pins	32
Data Rate	50 MHz full rate on all memory banks
Vectors Per Channel	64K
Memory Banks	7
Stimulus Memories	output, algorithmic, tristate
Response Memories	expect, algorithmic, mask
Record Memory	UUT response or compare result (logic analyzer style)
State Machine Levels	16
Digital Comparators	9 system wide
CRC Register	16 bit CCITT per input channel
Output Formats	NRZ, RZ, RONE, RTC, RI
Pattern Modes	RAM backed and algorithmic
Record Control	conditional branching, looping, sequencing, trigger evaluation
Logic Family	TTL
Related SR5020A Rate	50 MHz

PARAMETER	VALUE
Related SR5020A Pins	32 input and 32 output
Related SR5020A Depth	65500 vectors
Related SR55	1M vector depth, expandable to 640 channels
Related SR25	64K or 256K vector depth high channel density
Related DG6	50 MHz digital pattern generator (separate product)

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

Specifications

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CRC Register	16 bit CCITT per input channel
Output Formats	NRZ, RZ, RONE, RTC, RI
Pattern Modes	RAM backed and algorithmic
Record Control	conditional branching, looping, sequencing, trigger evaluation
Logic Family	TTL
Related SR5020A Rate	50 MHz
Related SR5020A Pins	32 input and 32 output

PARAMETER	VALUE
Related SR5020A Depth	65500 vectors
Related SR5500	1M vector depth, expandable to 640 channels
Related SR2500	64K or 256K vector depth high channel density
Related DG600	50 MHz digital pattern generator (separate product)

Notes
Architecture and memory figures from Interface Technology SR5020 product literature (Artisan family page). Full analog timing (levels, skew, edge placement) belongs on the OEM data sheet for the installed firmware. Confirm SR5020 vs SR5020A faceplate and VXI resource manager identity.

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: **sales@aumictech.com** · +1 (484) 841-9341

Aumictech
788 S 500 E, Pleasant Grove, UT 84062
sales@aumictech.com · +1 (484) 841-9341
https://aumictechlabs.com

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