Technical specifications

Spectrometer	
Channels	1024
Differential nonlinearity	<0.2% over top 99.5%
Integral nonlinearity	<0.01% over top 99.5%
Zero dead time[1]	✔
Baseline restoration	Digital (IPBR)[2]
Pulse shaping	Digital (AOPS)[3]
Pile-up rejection	Digital (<40nS)
Pile-up contamination	<1% @ 250kcps
Sample rate	0.1-10 sec^{-1}
Timing Internal/External	
Gain stabilization	Automatic multi-peak
I/O	Ethernet
	RS-232 19200115200 bit/s
	USB memory stick
Outputs	
Composite spectrum	✔
Individual spectra	✔
State of health	✔
Inputs	
Detector configuration	✔
Operational parameters	✔
Trigger signal	✔
Calibration data	✔

Gamma Detector	
RSX-1	4L NaI(Tl)
RSX-3x3	0.4L NaI(Tl)
Energy resolution	<8.5%[4]
Neutron Detector	
Tube Size	2” dia x 32” active length ^{3}He
Tube pressure	2.7 atm (no transportation limits)
Moderator	Medium moderated for optimum performance
Power	
RSX-1 & RSX-3x3	9-40 VDC, 6 W
RS-701 Console	15 W
Weight	
RSX-1	22.7 kg (50 lb)
RSX-3x3	6.8 kg (15 lb)
RS-701 Console	6.8 kg (15 lb)
NSX- 4/4	27 kg (60 lb)
Rooftop Carrier	9 kg (20 lb)
Size	
RSX-1	731 mm x 162mm x 172mm (26.80in L x 6.4in W x 6.8in H)
RSX-3x3	381 mm x 101 mm x 101 mm (15in L x 4in W x 4in H)
NSX-4/4	1,176 mm x 177 mm x 177 mm (46.3in L x 7 in W x 7in H)
RS-701 Console	233 mm x 112 mm x 198 mm) (9.2 in W x 4.4 in H x 7.8 in D)
Environmental	
Operating Temperature	-30°C to +45°C

Notes
[1] The RS-700 has no dead time in a traditional sense. A live time clock will be adjusted for loss of system measured pile-up rejections to give an apparent dead time to ensure the absolute count rate is correct.
[2] IPBR - Individual Pulse Baseline Restoration. The baseline is established for each individual pulse for maximum pulse height accuracy.
[3] AOPS - Automatic Optimized Pulse Shaping. Pulses are continuously analyzed and the signal pulse shaping adjusted for optimum performance.
[4] Stated energy resolution is for new systems. Refurbished system performance depends on quality of Xtals supplied.

Radiation Solutions Inc. is a Canadian company specializing in nuclear instrumentation for the detection, measurement and analysis of low level ionizing radiation from both naturally occurring or man made sources.

RSI’s focus is the design and manufacture of airborne and mobile systems using advanced DSP (Digital Signal Processing) technology. This technology provides a level of quality previously only attainable in laboratory equipment.

RSI's philosophy is to work as closely as possible with customers in all aspects of the product life cycle including; product requirement, application, training, support and product improvement. It is this philosophy that will enable RSI to supply industry leading software techniques and hardware components that not only meet, but exceed the customer's requirements.

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