






NIM Power Supply Units

Model	No. of Channels	V Full Scale (kV)	I Full Scale (mA)	Vset/Vmon resolution (V)	Iset/Imon resolution (nA)	Ramp UP/DWN full scale (V/s)	Max Ripple (mVpp)	Connectors	Features
N1470 <i>p.15</i>	4	±8	3 (@3kV)	0.2	50 Iset/Imon 5 Imon ⁽³⁾	500	From 10 ⁽¹⁾ to 30 ⁽²⁾	SHV	Common floating RTN
 N1470A <i>p.15</i>	2	±8	3 (@3kV)	0.2	50 Iset/Imon 5 Imon ⁽³⁾	500	From 10 ⁽¹⁾ to 30 ⁽²⁾	SHV	Common floating RTN
 N1470B <i>p.15</i>	1	±8	3 (@3kV)	0.2	50 Iset/Imon 5 Imon ⁽³⁾	500	From 10 ⁽¹⁾ to 30 ⁽²⁾	SHV	Common floating RTN
 N1471 <i>p.16</i>	4	±5.5	0.3	0.1	5 Iset/Imon 0.5 Imon ⁽⁴⁾	500	5 @ 4kV/100µA	SHV	Common floating RTN
 N1471A <i>p.16</i>	2	±5.5	0.3	0.1	5 Iset/Imon 0.5 Imon ⁽⁴⁾	500	5 @ 4kV/100µA	SHV	Common floating RTN
 N1471B <i>p.16</i>	1	±5.5	0.3	0.1	5 Iset/Imon 0.5 Imon ⁽⁴⁾	500	5 @ 4kV/100µA	SHV	Common floating RTN
N472 <i>p.17</i>	4	± 3 / 6	3 / 1	analog setting	analog setting	1000 (fixed)	30 @ 3 kV 80 @ 6 kV	SHV	
N570 <i>p.17</i>	2	± 10 / 15	1 / 0.5	1	1000	500	250	HV LEMO	

All specifications guaranteed from 10% to 90% of FSR





(1) @ 3kV/200µA

(2) @ 6kV/1mA; 8kV/800µA

(3) Optional Imon x 10 zoom (Imon > 100 nA)

(4) Optional Imon x 10 zoom (Imon > 10 nA)

VME Power Supply Units

Model	No. of Channels	V Full Scale	I Full Scale	Vset/Vmon resolution	Iset/Imon resolution (nA)	Ramp UP/DWN full scale (V/s)	Max Ripple (mVpp)	Connectors	Features
 V6533 P/N/M <i>p.18</i>	6	4 kV	3 mA (9W max)	0.2 V	50 Iset/Imon 5 Imon ⁽¹⁾	500	From 10 ⁽⁴⁾ to 25 ⁽³⁾	SHV	Common floating RTN
 V6534 P/N/M <i>p.18</i>	6	6 kV	1 mA	0.2 V	20 Iset/Imon 2 Imon ⁽²⁾	500	From 10 ⁽⁶⁾ to 25 ⁽⁷⁾	SHV	Common floating RTN
 V6521 P/N/M <i>p.18</i>	6	6 kV	300 µA	0.2 V	5 Iset/Imon 0.5 Imon ⁽³⁾	500	10	SHV	Common floating RTN
 V6519 P/N/M <i>p.18</i>	6	500V	3mA	10 mV	50 Iset/Imon 5 Imon ⁽¹⁾	50	5	SHV	Common floating RTN

All specifications guaranteed from 10% to 90% of FSR

(1) Optional Imon x 10 zoom (Imon > 100 nA)

(2) Optional Imon x 10 zoom (Imon > 50 nA)

(3) Optional Imon x 10 zoom (Imon > 10 nA)



(4) @ 3.5kV/200µA

(5) @ 3.5kV/2mA

(6) @ 5kV/200µA

(7) @ 5kV/2mA

Power Supply System - Mainframes







Model	Max power (W)	Power requirements	Width	Height	Depth	Supported boards	Max # boards	Local control	Remote control
SY1527 <i>p.20</i>	2250	100 ÷ 230 Vac, 50 ÷ 60 Hz, 3400 W	19"	8 U	77 cm	A15xx, A17xx, A18xx, 19xx	16	Keypad, 7.7" color LCD	RS232, TCP/IP HS CAENET
SY1527LC <i>p.21</i>	2250	100 ÷ 230 Vac, 50 ÷ 60 Hz, 3400 W	19"	8 U	77 cm	A15xx, A17xx, A18xx, 19xx	16	n/a	RS232, TCP/IP
SY2527 <i>p.21</i>	750	100 ÷ 230 Vac, 50 ÷ 60 Hz, 1700 W	19"	4 U	77 cm	A15xx, A17xx, A18xx, 19xx	6	Keypad, 7.7" color LCD	RS232, TCP/IP HS CAENET
 SY2527LC <i>p.22</i>	750	100 ÷ 230 Vac, 50 ÷ 60 Hz, 1700 W	19"	4 U	77 cm	A15xx, A17xx, A18xx, 19xx	6	n/a	RS232, TCP/IP
 SY8800 <i>p.19</i>	2500 @ 220Vac 1500 @ 115Vac	3300 @ 220Vac 2000 @ 115Vac	19"	3 U	35 cm	Mx1, Bx1, Bx2	6	OLED display Ergonomic Pointer	RS232, TCP/IP CAN bus, USB 2.0

SY1527 - SY2527 LV Floating Power Supply Boards

Model	No. of Channels	V Full Scale	I Full Scale	Vset/Vmon resolution (mV)	Iset/Imon resolution	Ramp UP/DWN full scale (V/s)	Max Ripple (mVpp)	Connectors	Features
A1513B p.23	6	10 V	2.7 A	10	10 mA	19	5	DB37	Floating Channels
A1516B p.23	6	15 V	1.5 A	10	10 mA	29	5	DB37	Floating Channels
A1517B p.23	6	7 V	4 A	10	10 mA	14	5	DB37	Floating Channels
A1518B p.23	6	4.5 V	6 A	10	10 mA	9	5	DB37	Floating Channels

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SY1527 - SY2527 HV Floating Power Supply Boards

Model	No. of Channels	V Full Scale	I Full Scale	Vset/Vmon resolution (mV)	Iset/Imon resolution	Ramp UP/DWN full scale (V/s)	Max Ripple (mVpp)	Connectors	Features
A1510 p.23	12	100 V	10 / 1 mA	20	1 μ A	50	20	DB37	Floating Channels
A1511B p.23	12	500 V	10 / 1 mA	100	1 / 0.1 μ A	50	30	DB37	Floating Channels
A1512 p.23	12	500 V	1 / 0.1 mA	100	100 / 10 nA	50	30	DB37	Floating Channels
A1519B p.23	12	250 V	1 / 0.1 mA	50	100 / 10 nA	50	30	DB37	Floating Channels
A1520P p.24	12	+500 V	15 mA	1	set: 250 nA mon: 25 nA	50	20	AMP75	Floating Channels
A1526 P/N p.25	6	15 kV	1 / 0.1 mA	1000	100 / 10 nA	500	40	CPE HV	Common floating RTN
A1533 P/N p.24	6	4 kV	3 mA	500	500 nA	500	25	SHV	Floating Channels
A1534 P/N p.24	6	8 kV	200 μ A	500	20 nA	500	50	CPE 3 pole	Floating Channels
A1535 P/N p.25	24	3.5 kV	3 mA	500	500 nA	500	20	Radiall 52	Common floating RTN
 A1535D P/N p.26	12	3.5 kV	3 mA	500	500 nA	500	30	SHV	Common floating RTN
 A1535S P/N p.26	24	3.5 kV	3 mA	500	500 nA	500	30	SHV	Common floating RTN
 A1535SM ⁽¹⁾ p.26	24	3.5 Kv	3 mA	500	500 nA	500	30	SHV	Common floating RTN
 A1550 P/N p.27	24	5 kV	1 mA	500	100 nA	500	25	Radiall 52	Common floating RTN
 A1550D P/N p.27	12	5 kV	1 mA	500	100 nA	500	25	SHV	Common floating RTN
 A1580 p.28	6	\pm 8 kV	3 mA @ 3 kV	200	50 nA	500	From 10 ⁽²⁾ to 30 ⁽³⁾	SHV	Common floating RTN
A1932A P/N p.28	48	3 kV	500 μ A	200	-	500	30	Radiall 52	Common floating RTN

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(1) 12 ch positive, 12 ch negative

(2) @ 3kV/200 μ A




(3) @ 6kV/1mA; 8kV/800 μ A

SY1527 - SY2527 HV Power Supply Boards

Model	No. of Channels	V Full Scale (kV)	I Full Scale (mA)	Vset/Vmon resolution (mV)	Iset/Imon resolution (nA)	Ramp UP/DWN full scale (V/s)	Max Ripple (mVpp)	Connectors
A1732 P/N <i>p.29</i>	12	6	1	500	100	500	30	SHV
A1733 P/N <i>p.29</i>	12	3/4	3 / 2	250	200	500	30	SHV
A1735 P/N <i>p.29</i>	12	1.5	7	100	500	500	30	SHV
A1737 P/N <i>p.29</i>	12	0.25	1	20	100	50	20	SHV
A1738 P/N <i>p.29</i>	12	1.3	10	100	500	500	30	SHV
A1821 P/N <i>p.29</i>	12	3	0.2 / 0.02	250	20 / 2	500	30	SHV
A1821H P/N <i>p.29</i>	12	3	0.2 / 0.01	250	20 / 1	500	30	SHV
A1832 P/N <i>p.29</i>	12	6	1 / 0.2	500	100 / 20	500	30	SHV
A1832E P/N <i>p.29</i>	12	6	1 / 0.2	500	100 / 20	500	30	SHV
A1833 P/N <i>p.29</i>	12	3/4	3 / 2 / 0.2	250	200 / 20	500	30	SHV
A1835 P/N <i>p.29</i>	12	1.5	7 / 0.2	100	500 / 20	500	30	SHV
A1837 P/N <i>p.29</i>	12	0.25	1 / 0.1	20	100 / 10	50	20	SHV

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Powered Crates

Model	Package	No. Of Slots	Width	Height	Backplane connectors	Pluggable power supplies	Pluggable fan unit	Remote control	Output power
NIM8301 <i>p.67</i>	NIM	12	19"	7U	NIM	Yes	Yes	RS232, USB (2.0), CANBUS, Ethernet	300W 600W
NIM8302 <i>p.67</i>	NIM short size	10	19"	5U	NIM	Yes	No fan unit	No	150W
NIM8303 <i>p.67</i>	NIM	12	19"	5U	NIM	Yes	No fan unit	No	300W 600W
 NIM8304 <i>p.68</i>	NIM	12	19"	7U	NIM	Yes	Yes	CAN bus, Ethernet, USB and RS232	1000 W @ 110 Vac 2000 W @ 220 Vac
 NV8020 <i>p.69</i>	NIM/ VME64	5+6	19"	7U	NIM/ VME64 J1/J2	Yes	No	No	NIM 150W VME64 400W
VME8002 <i>p.66</i>	VME64	9 (6U)	19"	5U	VME64 J1/J2	Yes	No	CANBUS	350W
 VME8001 <i>p.66</i>	VME64	2 (6U)	19"	1U	VME64 J1/J2	Nov	No	No	200W
VME8010 <i>p.66</i>	VME64	21(6U)	19"	7U	VME64 J1/J2	No	Yes	No	470W
VME8011 <i>p.66</i>	VME64	21(6U)	19"	7U	VME64 J1/J2	Yes	Yes	No	470W
VME8100 <i>p.65</i>	VME64, VME64X	21(6U)	19"	8U	VME64 J1/J2, VME64X J1/J2, VME64X J1/J0/J2	Yes	Yes	RS232, USB (2.0), CANBUS, Ethernet	1200 W @ 100 Vac 2530 W @ 211 Vac

T8

ADCs (Peak Sensing)

Model	Package	No. of Channels	Resolution (bits)	Conversion Time (μ s)	LSB (mV)	Full Scale Range (V)	Gate Width (μ s)	Fast Clear (ns)	Connectors
N957 <i>p.34</i>	NIM	1	13	1.2	1	10	2 \div 32	600	LEMO
V1785 <i>p.49</i>	VME	8	12	2.8	1 / 0.125 (Dual)	4 / 0.5 (Dual)	0.25 \div 1000	600	LEMO
V785 <i>p.49</i>	VME	32	12	5.7	1 / 2	4 / 8	0.25 \div 1000	600	Std. Flat
V785N <i>p.49</i>	VME	16	12	2.8	1	4	0.25 \div 1000	600	LEMO
















ADCs C-RAMS (CAEN - Readout for Analog Multiplexed Signals)

T9

Model	Package	No. of Channels	Resolution (bits)	Sampling Rate (MHz)	LSB (μ V)	Full Scale Range (V)	Fast Clear	Connectors
V550 <i>p.50</i>	VME	2	10	5	150 / 1500	0.15 / 1.5	Yes	LEMO
V550A <i>p.50</i>	VME	2	12	5	40 / 400	0.15 / 1.5	Yes	LEMO





Sampling ADC

T10

Model	Package	No. of Channels	Bandwidth (MHz)	Resolution (bits)	Max Sampling Rate (MS/s)	LSB (μ V)	Full Scale Range (V)	Board Memory Samples/ch	Connectors
 DT5720 <i>p.72</i>	Desktop	4	125	12	250	500	\pm 1	1.25 M	MCX
 DT5724 <i>p.72</i>	Desktop	4	40	14	100	140 / 600	\pm 1.125 / 5	512 k	MCX
 DT5740 <i>p.72</i>	Desktop	32	30	12	65	500 / 2500	\pm 1	192 k	SMC 68P
 DT5742 <i>p.72</i>	Desktop	16+1	tbd	12	5000	250	\pm 0.5	0.128 M	MCX
 DT5751 <i>p.72</i>	Desktop	2/4	500	10	1000 -2000	1000	\pm 0.5	1.8 - 3.6 M	MCX
 N6720 <i>p.72</i>	NIM	4	125	12	250	500	\pm 1	1.25 M	MCX
 N6724 <i>p.72</i>	NIM	4	40	14	100	140 / 600	\pm 1.125 / 5	512 k	MCX
 N6740 <i>p.72</i>	NIM	32	30	12	65	500 / 2500	\pm 1	192 k	SMC 68P
 N6742 <i>p.72</i>	NIM	16+1	tbd	12	5000	250	\pm 0.5	0.128 M	MCX
 N6751 <i>p.72</i>	Desktop	2/4	500	10	1000 -2000	1000	\pm 0.5	1.8 - 3.6 M	MCX
N1728A <i>p.34</i>	NIM	4	40	14	100	125	\pm 1.0	1 M (*)	LEMO EPG0B
 N1728B <i>p.34</i>	NIM	4	40	14	100	125	\pm 1.0	1 M (*)	LEMO
 P7720 <i>p.72</i>	PCI Express	2	125	12	250	500	\pm 1	1.25 M	MCX
 P7724 <i>p.72</i>	PCI Express	2	40	14	100	140 / 600	\pm 1.125 / 5	512 k	MCX
 P7731 <i>p.72</i>	PCI Express	1/2	200 - 500	8	500 -1000	4000	\pm 0.5	2 - 4 M	MCX
V1720 <i>p.72</i>	VME	8	125	12	250	500	\pm 1	1.25 - 10 M	MCX or Modu II
V1721 <i>p.72</i>	VME	8	200	8	500	4000	\pm 0.5	2 M	MCX or Modu II
 V1724 <i>p.72</i>	VME	8	40	14	100	140 / 600	\pm 1.125 / 5	512 - 4000 k	MCX or Modu II
V1729A <i>p.50</i>	VME	4	300	14	2000	125	\pm 1	2520	LEMO
V1731 <i>p.72</i>	VME	4/8	200 - 500	8	500 -1000	4000	\pm 0.5	2 - 4 M	MCX or Modu II

(*) Maximum capability in case of acquisition on a single channel

Sampling ADC - continue

Model	Package	No. of Channels	Bandwidth (MHz)	Resolution (bits)	Max Sampling Rate (MS/s)	LSB (μ V)	Full Scale Range (V)	Board Memory Samples/ch	Connectors
V1740 <i>p.72</i>	VME	64	30	12	65	500 / 2500	± 1	192 - 1500 k	SMC 68P
 V1742 <i>p.72</i>	VME	32+2	tbd	12	5000	250	± 0.5	0.128 M	MCX
 V1751 <i>p.72</i>	VME	4/8	500	10	1000-2000	1000	± 0.5	1.8 - 3.6 M	MCX or Modu II
VX1720 <i>p.72</i>	VME64X	8	125	12	250	500	± 1	1.25 - 10 M	MCX or Modu II
VX1721 <i>p.72</i>	VME64X	8	200	8	500	4000	± 0.5	2 M	MCX or Modu II
VX1724 <i>p.72</i>	VME64X	8	40	14	100	140 / 600	$\pm 1.125 / 5$	512 - 4000 k	MCX or Modu II
VX1731 <i>p.72</i>	VME64X	4/8	200 - 500	8	500-1000	4000	± 0.5	2 - 4 M	MCX or Modu II
VX1740 <i>p.72</i>	VME64X	64	30	12	65	500 / 2500	± 1	192 - 1500 k	MCX or Modu II
 VX1742 <i>p.72</i>	VME64X	32+2	tbd	12	5000	250	± 0.5	0.128 M	MCX
 VX1751 <i>p.72</i>	VME64X	4/8	30	10	1000-2000	1000	± 0.5	1.8 - 3.6 M	MCX or Modu II

Amplifiers (Fast)


T11

Model	Package	No. of Channels	Gain	Bandwidth (MHz) ⁽¹⁾	Coupling	Input Impedance (Ohm)	Output Rise Time (ns)	Output Dynamics (V)	Equivalent Input Noise (μ V RMS)	In Conn.	Out Conn.
N978 <i>p.35</i>	NIM	4	1 \div 10	250	DC	50	< 1.5	± 2	< 50	LEMO	LEMO
N979 <i>p.36</i>	NIM	16	10	250	DC	50	< 1.5	± 2	< 50	LEMO	LEMO
V974 <i>p.51</i>	VME	4	1 \div 10	170	DC	50	< 3	± 2	< 70	LEMO	LEMO
V975 <i>p.51</i>	VME	8	10	250	DC	50	< 1.5	± 2	< 50	LEMO	LEMO

(1) Bandwidth measured with ± 25 mV input signal

Amplifiers (Spectroscopy)

T12

Model	Package	No. of Channels	Gain	Coupling	Shaping	Input Impedance (Ohm)	Output Rise Time (ns)	Output Dynamics (V)	Integral Non-linearity	Equivalent Input Noise (μ V RMS)	In Conn.	Out Conn.
 N1568A <i>p.37</i>	NIM	16	Coarse: 2bit Fine: 8bit	DC	gaussian	50	-	0 \div ± 8 on 1 M Ω	< 0.005% ⁽²⁾	< 10	Strip Header	Strip Header
N568B <i>p.36</i>	NIM	16	0.15 \div 480	DC	gaussian type	50	25 ⁽¹⁾	± 8	< 0.05%	< 15 (@gain=100)	LEMO	Strip Header
N568LC <i>p.36</i>	NIM	16	0.15 \div 480	DC	gaussian type	50	25 ⁽¹⁾	± 8	< 0.05%	< 25 (@gain=100)	LEMO	Strip Header
N968 <i>p.37</i>	NIM	1	1 \div 3000	DC	semi-gaussian	1000	-	10	< 0.025%	< 3.5 (@gain=1000)	BNC	BNC

(1) Typical value on FAST_OUT

(2) 20 \div 90% of the full scale @ Gain=Max and 4 μ s shaping time



Attenuators

T13

Model	Package	No. of Sections	Range per Section (dB)	Resolution (dB)	Max Frequency (MHz)	I/O Delay (ns)	Insert Loss (dB)	I/O Connectors
N858 <i>p.38</i>	NIM	2	0 \div 44.5	0.5	300	< 5	< 0.10	LEMO
V859 <i>p.51</i>	VME	2	0 \div 44.5	0.5	300	< 5	< 0.10	LEMO

T14

Charge Sensitive Preamplifiers

Model	Package	No. of Channels	Sensitivity	Equivalent Input Noise FWHM (keV)	Output Rise Time (ns)	Output Linear Range (V)	Integral Non-linearity	Max Detector Bias Voltage (V)	Test Capacitance (pF)	In Conn.	Out Conn.
A422 <i>p.71</i>	14 pin SIP hybrid	1	0.550 ⁽²⁾ mV/fC (max gain selected)	< 9.8 @ 470 pF	< 20	± 8 ⁽²⁾ ± 4 ⁽¹⁾	< 0.05%	±1000	10	-	-
A422A <i>p.71</i>	Shielded box	1	0.425 ⁽²⁾ mV/fC (max gain selected)	< 17.5 @ 1 nF	< 50	± 8 ⁽²⁾ ± 4 ⁽¹⁾	< 0.045%	±5000	10	SHV	BNC
 A1422F2 ⁽³⁾ <i>p.71</i>	Shielded box	1/4/8	5/45/90 mV/MeV	< 1.6 @ 0 pF < 3.9 @ 200 pF	< 6 @ 0 pF < 30 @ 200 pF ⁽⁶⁾ < 52 @ 200 pF ⁽⁷⁾	± 4 ⁽¹⁾	<± 0.05% (0 ÷ ±8 V peak output)	±2000	1	SHV or BNC	LEMO or BNC
 A1422F3 ⁽⁴⁾ <i>p.71</i>	Shielded box	1/4/8	5/45/90 mV/MeV	< 9.6 @ 390 pF < 13.8 @ 1000 pF	< 7 @ 390 pF ⁽⁵⁾ < 24 @ 1000 pF ⁽⁵⁾ < 35 @ 390 pF ⁽⁶⁾ < 59 @ 1000 pF ⁽⁶⁾ < 58 @ 390 pF ⁽⁷⁾ < 105 @ 1000 pF ⁽⁷⁾	± 4 ⁽¹⁾	<± 0.05% (0 ÷ ±8 V peak output)	±2000	10	SHV or BNC	LEMO or BNC

(1) Measured with 50 Ohm termination (2) Measured with 1 MOhm termination

(3) 1422x00xF2 series, for detector capacitance < 200 pF

(4) 1422x00xF3 series, for detector capacitance < 1000 pF

(5) gain: 5 mV/MeV (6) gain: 45 mV/MeV (7) gain: 90 mV/MeV

Coincidence/Logic/Trigger Units

T15

Model	Package	No. Of Sections	Function	Input per Section	Output per Section	I/O Delay (ns)	Input Bandwidth (MHz)	Majority	Strobe/Veto	Connectors
N113 <i>p.38</i>	NIM	2	OR	12 NIM	2 NIM	< 10	130	No	Yes	LEMO
N405 <i>p.38</i>	NIM	3	Logic Unit	4 NIM	2+1 NIM	< 14	100	Yes	Yes	LEMO
N455 <i>p.39</i>	NIM	4	Coincidence	2 NIM	3+1 NIM, 1 NIM Overlap	< 16	130	No	Yes	LEMO
V1495 <i>p.52</i>	VME	1	Programmable Trigger Unit	64 ECL/PECL/LVDS+2 bidirectional NIM/TTL (expandable up to 162)	32 LVDS+2 bidirectional NIM/TTL (expandable up to 130)	n/a	200	Yes	Yes	Robinson Nugent Flat/LEMO
V976 <i>p.54</i>	VME	4	Logic Unit	4 NIM/TTL	4 NIM/TTL	< 9	150	Yes	No	LEMO

Controller (VME)

T16

Model	Package	Link	Max Transfer Rate (MByte/s)	Programmable I/O	Data-way Display	I/O Connectors
V1718 <i>p.54</i>	VME	USB 2.0	30	5 out + 2 in TTL/NIM	Yes	LEMO
V2718 <i>p.55</i>	VME	PCI/Optical	70	5 out + 2 in TTL/NIM	Yes	LEMO
VX1718 <i>p.54</i>	VME64X	USB 2.0	30	5 out + 2 in TTL/NIM	Yes	LEMO
VX2718 <i>p.55</i>	VME64X	PCI/Optical	70	5 out + 2 in TTL/NIM	Yes	LEMO

Controller (CAMAC)

T17

Model	Package	Link	Programmable I/O
C111C <i>p.45</i>	CAMAC 2U	Ethernet 10/100	4 out + 4 in + 2 combo

Discriminators

Model	Package	No. of Channels	Function	Updating	Min Input (mV)	Output Width (ns)	I/O Delay (ns)	Outputs	Input Bandwidth (MHz)	In Conn.	Out Conn.
C808 p.45	CAMAC	16	Const. Fraction	No	- 5	15 ÷ 250	n/a ⁽¹⁾	2 ECL	n/a	LEMO	Std. Flat
C894 p.46	CAMAC	16	Leading Edge	Selectable	- 5	5 ÷ 40	10	2 ECL	140	LEMO	Std. Flat
N840 p.39	NIM	8	Leading Edge	Selectable	- 5	5 ÷ 40	10	2 + /1 NIM	140	LEMO	LEMO
N841 p.39	NIM	16	Leading Edge	Selectable	- 5	5 ÷ 40	10	2 + /1 NIM	140	LEMO	LEMO
N842 p.40	NIM	8	Const. Fraction	No	- 5	16.5 ÷ 273	n/a ⁽¹⁾	2 + /1 NIM	n/a	LEMO	LEMO
N843 p.40	NIM	16	Const. Fraction	No	- 5	16.5 ÷ 273	n/a ⁽¹⁾	2 + /1 NIM	n/a	LEMO	LEMO
N844 ⁽²⁾ p.40	NIM	8	Low Threshold	No	- 3	5 ÷ 90	10	2 + /1 NIM	60	LEMO	LEMO
N845 p.40	NIM	16	Low Threshold	No	- 3	5 ÷ 90	10	2 + /1 NIM	60	LEMO	LEMO
V812 p.55	VME	16	Const. Fraction	No	- 5	15 ÷ 250	n/a ⁽¹⁾	2 ECL	n/a	LEMO	Std. Flat
V814 ⁽²⁾ p.56	VME	16	Low Threshold	No	- 1	6 ÷ 95	10	2 ECL	60	LEMO	Std. Flat
V895 p.56	VME	16	Leading Edge	Selectable	- 5	5 ÷ 40	10	2 ECL	140	LEMO	Std. Flat

(1) For constant fraction discriminators, the I/O delay depends on delay set value

(2) Also available with positive inputs

Fan In - Fan Out Units⁽¹⁾

Model	Package	No. of Sections	Type	Input per Section	Output per Section	I/O Delay (ns)	Input Bandwidth (MHz)	Connectors
N454 p.41	NIM	4	Logic	4 NIM	4+2 NIM	< 8	100	LEMO
N625 p.41	NIM	4	Linear	4 Bipolar	4 Bipolar	< 4	100	LEMO
V1495 p.52	VME	1	Logic	64 ECL/PECL/LVDS +2 bidirectional NIM/TTL (expandable up to 162)	32 LVDS +2 bidirectional NIM/TTL (expandable up to 130)	< 15	200	Robinson Nugent Flat/ LEMO
V925 p.57	VME	4	Linear	3x4+1x3 Bipolar	3x4+1x3 Bipolar	< 4	120	LEMO
V976 p.54	VME	4	Logic	4 NIM/TTL	4 NIM/TTL	< 9	150	LEMO

(1) All modules are DC coupled

HS Caenet Controllers

Model	Package	Link	Max Transfer Rate (kByte/s)
A1303 p.83	PCI	HS CAENET	125

I/O Registers

Model	Package	No. of Sections	Function	Input per Section	Output per Section	In Connectors	Out Connectors
C219 p.46	CAMAC	1	I/O register	16 NIM	16 NIM	LEMO	LEMO
V1495 p.52	VME	1	I/O register	64 ECL/PECL/LVDS +2 bidirectional NIM/TTL (expandable up to 162)	32 LVDS +2 bidirectional NIM/TTL (expandable up to 130)	Robinson Nugent Flat/ LEMO	Robinson Nugent Flat/ LEMO
V259 p.57	VME	1	Pattern Unit	16 NIM / ECL	1 NIM	LEMO (NIM) / Std. Flat (ECL)	LEMO
V977 p.58	VME	1	Pattern Unit, I/O register	16 NIM / TTL	16 NIM / TTL	LEMO	LEMO

T22

Multi Channel Analyzers

Model	Package	No. of Sections	Resolution (bits)	Conversion Time (μ s)	Sampling frequency (MS/s)	LSB (mV)	Full Scale Range (V)	Gate Width (μ s)	Fast Clear (ns)	Connectors
N1728A <i>p.34</i>	NIM	4	14	-	100	0.125	± 1.0	-	n/a	LEMO EPG0B
N1728B <i>p.34</i>	NIM	4	14	-	100	0.125	± 1.0	-	n/a	LEMO
N957 <i>p.34</i>	NIM	1	13	1.2	-	1	8	2 \div 32	600	LEMO

QDCs


T23

Model	Package	No. of Channels	Resolution (bits)	Conversion Time (μ s)	LSB (fC)	Full Scale Range (pC)	Gate Width (μ s)	Fast Clear (μ s)	Connectors	Features
C1205 <i>p.47</i>	CAMAC	16	12 (17 dyn.)	< 6	21 / 160 / 1300	80 / 650 / 6000	0.01 \div 0.5	1	LEMO	triple range
V792 <i>p.58</i>	VME	32	12	5.7	100	400	0.05 ⁽¹⁾	0.6	Std. Flat	-
V792N <i>p.58</i>	VME	16	12	2.8	100	400	0.05(1)	0.6	LEMO	-
V862 <i>p.59</i>	VME	32	12	5.7	100	400	0.05(1)	0.6	Robinson Nugent Flat	individual gate
V965 <i>p.59</i>	VME	16	12 (15 dyn.)	5.7	25 / 200	100 / 900	0.05(1)	0.6	LEMO	dual range
V965A <i>p.59</i>	VME	8	12 (15 dyn.)	2.8	25 / 200	100 / 900	0.05(1)	0.6	LEMO	dual range

(1) Minimum Gate Width

Scalers

T24

Model	Package	No. of Channels	Input Type	Count Rate (MHz)	Count Depth per Channel	Connectors
C257 <i>p.47</i>	CAMAC	16	NIM / TTL / ECL	100	24 bit	LEMO (Flat for ECL)
N1145 <i>p.41</i>	NIM 2U	4+1 downcounter	NIM / TTL	4x250 + 1x80	4x8 + 1x7 digit	LEMO
V560 <i>p.60</i>	VME	16	NIM	100	32 bit	LEMO
V830 <i>p.60</i>	VME	32	ECL / LVDS	250	32 bit	Std. Flat
 FW1495SC ⁽¹⁾ <i>p.53</i>	VME	64 (expandable up to 128)	ECL / LVDS / PECL NIM / TTL ⁽²⁾	270	32 bit	Robinson Nugent Flat / LEMO

(1) Firmware for Mod. V1495

(2) For NIM / TTL max 16 channels

Sequencer

T25

Model	Package	Max Transfer Rate	CTRL Connectors
V551B <i>p.50</i>	VME	5 MHz	LEMO / Std. Flat

(1) Sequencer for CAEN Readout for Analog Multiplexed Signals (V550 and V550A)

TDCs

Model	Package	No. of Channels	Resolution (bit)	Double Hit Resolution (ns)	Conversion Time (µs)	LSB (ps)	Full Scale Range (µs)	Input Type	Connectors
V1190A <i>p.61</i>	VME	128	19 / 17 ⁽¹⁾	5	-	100 / 200 / 800	52 / 104	ECL / LVDS	Robinson Nugent Flat
V1190B <i>p.61</i>	VME	64	19 / 17 ⁽¹⁾	5	-	100 / 200 / 800	52 / 104	ECL / LVDS	Robinson Nugent Flat
V1290A <i>p.61</i>	VME	32	21	5	-	25	52	ECL / LVDS	Std. Flat
V1290N <i>p.61</i>	VME	16	21	5	-	25	52	NIM	LEMO
V775 <i>p.62</i>	VME	32	12	-	5.7	35 / 300	0.14 / 1.2	ECL	Std. Flat
V775N <i>p.62</i>	VME	16	12	-	2.8	35 / 300	0.14 / 1.2	NIM	LEMO
VX1190A <i>p.61</i>	VME64X	128	19 / 17 ⁽¹⁾	5	-	100 / 200 / 800	52 / 104	ECL / LVDS	Robinson Nugent Flat
VX1190B <i>p.61</i>	VME64X	64	19 / 17 ⁽¹⁾	5	-	100 / 200 / 800	52 / 104	ECL / LVDS	Robinson Nugent Flat
VX1290A <i>p.61</i>	VME64X	32	21	5	-	25	52	ECL / LVDS	Std. Flat
VX1290N <i>p.61</i>	VME64X	16	21	5	-	25	52	NIM	LEMO

(1) Depending on the selected range)

Timing Units

Model	Package	No. of Sections	Function	Input per Section	Output per Section	Output Width/Delay	In Conn.	Out Conn.
N108A <i>p.42</i>	NIM	2	Delay	1 Analog	1 Analog	1.6 ÷ 65.1 ns	LEMO	LEMO
N93B <i>p.42</i>	NIM	2	Timer	1 NIM + 1 ECL	2+1 NIM+ 1 ECL	50 ns ÷ 10 s	LEMO / Pin couple	LEMO / Pin couple
V972 <i>p.62</i>	VME	1	Delay	1 Analog	1 Analog	2.6 ÷ 34.1 ns	LEMO	LEMO
V993B <i>p.63</i>	VME	2	Timer	1 NIM/TTL + 1 ECL	2+1 NIM/TTL+ 1 ECL	50 ns ÷ 10 s	LEMO / Pin couple	LEMO / Pin couple

Translators

Model	Package	No. Of Sections	Function	Input/Section	Output/Section	I/O delay (ns)	Input Bandwidth (MHz)	In Conn.	Out Conn.
N638 <i>p.43</i>	NIM	2	NIM to ECL/NIM; ECL to NIM/ECL	8 NIM / 8 ECL	2x8 NIM / 8 ECL	< 3.5	300	LEMO / Std. Flat	LEMO / Std. Flat
N89 <i>p.42</i>	NIM	2	NIM to TTL; TTL to NIM	4	4	< 10	60 / 40	LEMO	LEMO
V1495 <i>p.52</i>	VME	1	Depending on board configuration	64 ECL/ PECL/ LVDS+2 bidirectional NIM/TTL (expandable up to 162)	32 LVDS+2 bidirectional NIM/TTL (expandable up to 130)	< 15	200	Robinson Nugent Flat/ LEMO	Robinson Nugent Flat/ LEMO
V538A <i>p.63</i>	VME	1	NIM to ECL/NIM; ECL to NIM/ECL	8 NIM / 8 ECL	2x8 NIM / 2x8 ECL	< 3	300	LEMO / Std. Flat	LEMO / Std. Flat
V976 <i>p.54</i>	VME	4	NIM to TTL; TTL to NIM	4	4	< 11.5	150	LEMO	LEMO