



# VectorPak<sup>tm</sup> Chassis / System Enclosures VME / cPCI

Chassis



Model 710 Two Piece (Subrack, Enclosure) shown with 5 Slot backplane and lighted System Reset

### Series 710 / 720 6U Horizontal Cards

19.0" internal subrack slides in/out on metal tracks for maximum accessibility. Subrack assembly includes backplane, power supply and fans; it may be rack mounted separately (Model 720). Horizontal cards and space for up to three 3.5" drive bays. Two rear I/O ports, many power options (Page 9)



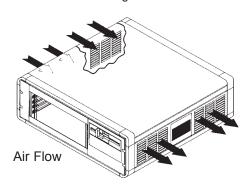
Rear View showing 2 slot rear I/O



Model 720 Removable Internal Subrack

Model 710: Subrack removes





#### Attractive & Extremely Rugged Benchtop/Desktop Outer Enclosures

VectorPak<sup>tm</sup> outer enclosures are available in many standard sizes and colors. They are designed to house standard 19"W or similar rack devices including VectorPak<sup>tm</sup> subracks and fan trays. They were developed for rugged military applications and are constructed of formed sheet and extruded aluminum. Protective rubber feet and rack mount hardware included. Recessed pocket or strap handles.





SE 1322 3U x 21.80"D for 19"W Subrack



Rack Unit	He	eight	VV	riatn	Deptn		Internal
Part Number	Inside Dim.	Outside Dim.	Inside Dim.	Outside Dim.	Inside Dim.	Outside Dim.	Size
SE132216	5.280"	6.410"	17.790"	20.220"	14.400"	16.060"	3U X 19" W X 14.4"D
SE1322	5.280"	6.410"	17.790"	20.220"	17.400"	19.060"	3U X 19" W X 17.4"D
SE1422	5.280"	6.410"	17.790"	20.220"	12.400"	14.060"	3U X 19" W X 12.4"D
SE1522	7.030"	8.160"	17.790"	20.220"	21.890"	23.550"	4U X 19" W X 21.9"D
SE162216	10.530	11.660"	17.790"	20.220"	14.400"	16.060"	6U X 19" W X 14.4"D
SE1722	12.280"	13.410"	17.790"	20.220"	21.940"	23.600"	7U X 19" W X 21.9"D

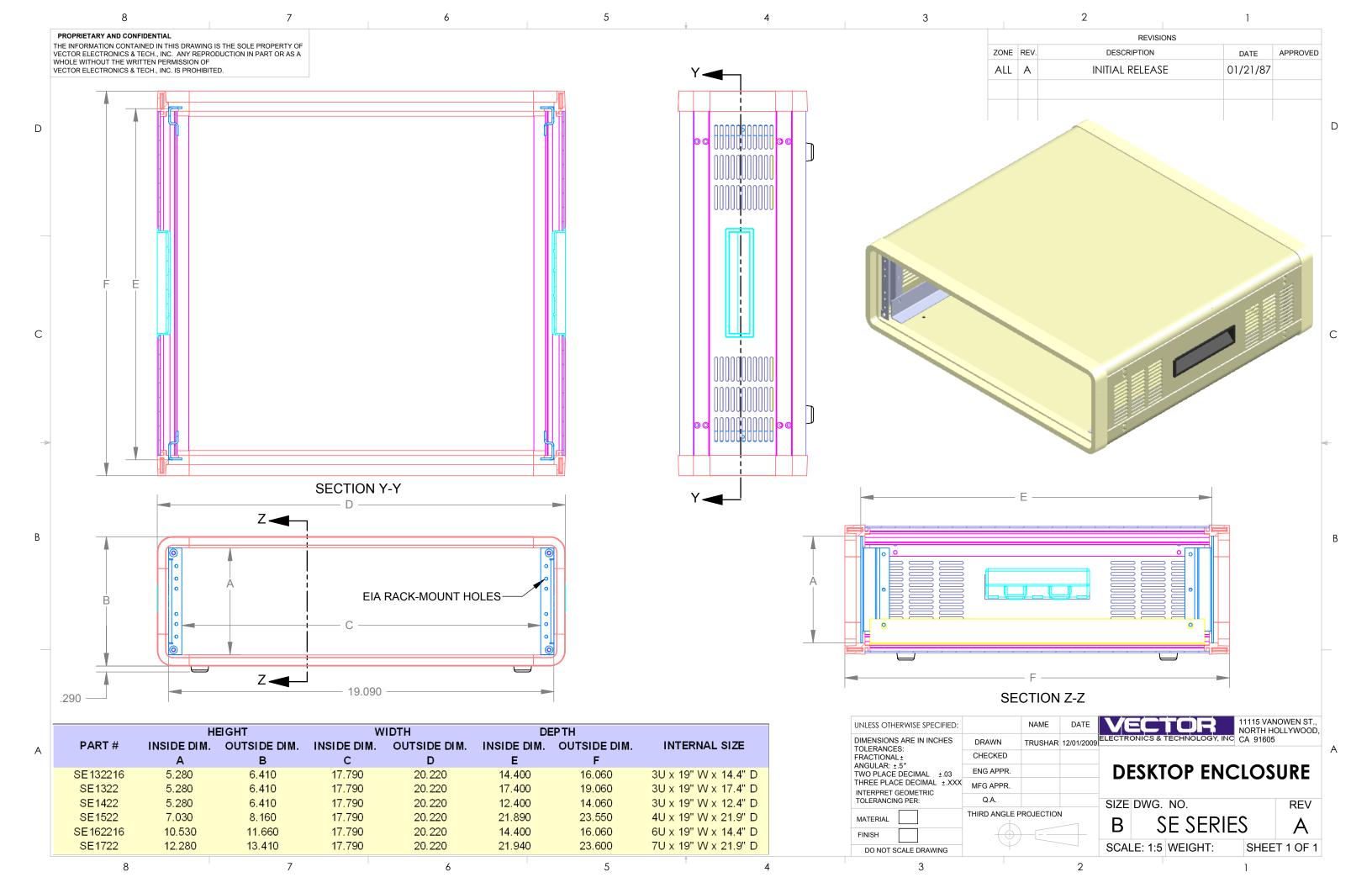
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Specification subject to change without notice

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## **VectorPak<sup>tm</sup> Chassis / System Enclosures** VME / cPCI



732 - 2U chassis shown front and back



732 - 3U chassis shown front and back



733 - 3U chassis with front removable door panel



733 - 3U chassis with clear Lexan hinged removable door panell



4U, 7-slot 64x shown with hinged cover

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# Series 730

#### **6U Horizontal Cards**

Series 730 accommodates VME and VME64X systems for horizontal loaded PC cards. There are three sizes accommodating backplanes with 2 slots to 12 slots. This ruggedized series allows you to customize the enclosure for front and rear covers with special punching, front or rear mounted sub-racks, painting and/or screening.

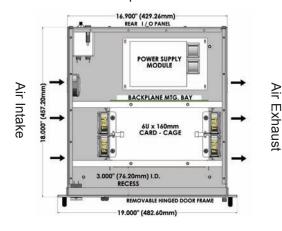
#### Features:

- · Low profile enclosures for horizontal mounted
- Ruggedized 19" rackmount enclosures 2U to 7U
- Accommodates any 6U backplane
- Cooling: side to side (push/pull) 4 ea 89 cfm axial 12VDC fans
- Front mounted Power and Reset switches with safety guards
- Painted Sandtex white or choice of many factory colors
- EMI/RFI power input filter and fuse
- Rear panel removable for custom I/O connector punching without expensive customization
- Designed to meet UL, CSA & TUV requirements



7U Model 12 Slot VME with hinged enlarged custom cover, chassis slides & 4" recessed cableway

Top View





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# Series 730

**6U Horizontal Cards** 









# VectorPak<sup>tm</sup> Chassis / System Enclosures VME / VXI

# Series 761

**6U Horizontal Cards** 

Model 761: 7 slot VME64x

Hinged Lexan door, closed

Chassis

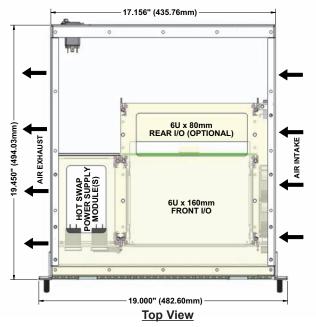


Model 761: 7 SLot VME64x-Hinged Smoked Glass Door (open)



- · 6U cards, up to 280mm card depth
- High reliability-Low MTTR with plug-in fan tray, and power supply modules
- 300W, hot-swap, n+1 dual redundant, plug-in power supplies
- 4U chassis with up to 7 slots of VMEJ1/J2, VME64x or cPCI
- · Front power and reset switches, chassis front panels painted black
- Internal 6Ux80mm rear I/O and rack mount slides available
- · EMI/RFI suppression techniques employed throughout
- Rear panel I/O custom configuration available
- · Front to rear cableway

# Environmental Specifications Cooling Model 761 3 ea., 60mm, 23CFM fans for cards 1 80mm, 46CFM fan for power supplies Operating Temp O°- 50°C (32° - 110°F) Storage Temp -20° - 85°C (-4° to 185°F) Humidity: <95% Non-condensing





## VectorPak<sup>tm</sup> Chassis / System Enclosures Ruggedized VME/cPCI





Ruggedized Series 795 Front view with door



Ruggedized Series 795 Top view showing air flow



Ruggedized Series 792 with EMI/RFI shielded removable panel

#### Chassis Environmental Specifications

Cooling

Operating Temp Storage Temp Humidity - Storage or Transport Humidity - operating Shock & Vibration EMI/RFI 4 ea. 89 cfm DC axial fans side wall mounted, push/pull 0° - 50°C -28.8°C - 85°C >95%, condensing, specially conditioned 30% to 70%

#### Environmental Test Specification - MIL STD 461D Standard

MIL STD 810E

Per MIL STD 461

Testing Frequency Range
Conducted Susceptibility (MIL STD 462, CS101
Radiated Emissions test (RS103)
Altitude Test to MIL STD 810E, Proc. 1&2
High Temperature testing (MIL STD 501.3, Proc. 2)
Low Temperature to MIL STD 501.3, Proc. 1&2
Humidity testing to MIL STD 810E 507.3, Proc. 3
Vibration & Shock

30 Hz 18 gHz 30 to 15 kHz 30 mHZ to 2 gHz; 1 gHZ to 18 gHz To 15,000 ft.

-28.8<sup>O</sup>C

MIL STD 810E Method 514.4, Category I

# **Series 790 & 795**

#### **6U Horizontal Cards**

This is a ruggedized version of the Series 730. It has been designed and tested to MIL-STD 461D for harsh environmental conditions. RFI/EMI frequency protection at high and very low bandwidth interference, condensing humidity and rigorous shake and drop tests are the strong points of this design. A removable rear panel section allows custom I/O connector panelization at minimum cost. This series is also available at a much lower cost than competitive units with the same features.

- MIL STD 461D compliant & certified
- Low Cost
- Withstands high humidity, shock & vibration in storage or transport
- · EMI/RFI Gasketed removable front door
- 300 Watt embedded power supply, conditioned for high humidity
- 6U Monolithic 7 Slot Backplane (other slot sizes available, Pages 16 - 23)
- · Painted with Federal Standard Grey
- · Series 795, front to rear air flow, Push/Pull fans
- · Series 790, side to side air flow, Push/Pull fans
- Rear Panel removable for custom I/O connector punching
- · Light weight
- Field tested



Ruggedized Series 790 Front view with door removed



Ruggedized Series 790 Front view with door

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# VME or VXI System Monitor Specifications Power Supply Specifications





Vector offers a system monitor to report electrical and air temperature conditions within our Series 400 and 760 VME or VXI enclosures. The Power Monitor has four functions:

Detection and Reset of SYSFAIL. A remote reporting capability can be provided via a DIN connector on the back of the enclosure.

+5V SBY indication and battery backup and recharge control circuits

Monitoring of primary voltages, +5V; +12V and -12V. Tri-color LED's report a voltage level within specification. When an interruption or spike occurs, LED's change from GREEN to RED and an audible alarm will sound. When a normal state resumes, the LED's change to AMBER and the audible alarm will go silent. The STATUS CLEAR switch will clear the amber indicator and reset to green.

The normal ranges measured are:

Nominal VDC	Min Limit	Max Limit	Bus
+5V	4.87	5.25	VME
+12	11.64	12.60	VME
-12	-11.64	-12.60	VME
-5VSBY	4.87	5.25	VME & VXI
-2	-1.90	-2.10	VXI
-5.2	-5.04	-5.46	VXI
+24	23.28	25.20	VXI
-24	-23.28	-25.20	VXI

#### Air Temperature Monitor:

A thermocouple circuit is placed at the exhaust fan(s) or other specific slot location(s) At 100 degreesF the circuit will send a signal to the system monitor panel activating a RED Air Temp indicator and sounding an audible alarm.



760 Monitor Panel

#### POWER SUPPLY SPECIFICATIONS

Standard universal 85 to 264VAC power input embedded power supplies currently offered (subject to change). Please contact Vector for more options or special requirements.

Total Power Maximum	DC outputs	Minimum Load	
1000W <u>5V@70A</u> ; <u>3.3V@35</u>	5A; <u>+12V@16.6A</u> ; <u>-12V@16.6A</u>	None	17743
800W <u>5V@70A</u> ; <u>3.3V@3</u>	5A; <u>+12V@16.6A</u> ; <u>-12V@16.6A</u>	None	Brill 11
600W <u>5V@70A</u> ; <u>3.3V@4</u>	OA; <u>+12V@16.6A</u> <u>-12V@16.6A</u>	None	
400W <u>5V@20A</u> <u>3.3V@20</u>	A; +12V@8.3A -12V@8.3A	None	
250W <u>5V@40A</u> ; <u>3.3V@2</u>	<u>0A +12V@4A -12V@1.0A</u>	10% on +5V	STATE OF THE PARTY
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#### AC to DC Plug-In, Hot Swap

The following 90-264 VAC input, 3U, 200W plug-in, hot-swappable power supplies, n+1 redundant, active current share power supplies PICMG 2.11 compliant and can be used in cPCI, VME or VME64x applications. No minimum load required. DC outputs of 5V@25A; 3.3V@35A +12V@8.0A; -12V@1.5A.

#### DC to DC Plug-In, Hot Swap

The following 18-28 or 36-72 VDC input, 3U, 200W plug-in, hot-swappable power supplies, n+1 redundant, active current share power supplies PICMG 2.11 compliant and can be used in cPCI, VME or VME64x applications. No minimum load required. DC outputs of 5V@25A; 3.3V@30A +12V@6.0A; -12V@0.5A.



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## **VectorPaktm Chassis / System Enclosures**

#### **SERIES 700-795 ORDERING INFORMATION**

<u>7XX</u> Model Number 710= 19" removable subrack with desktop outer enclosure -720= 19" removable subrack only 732= REAR card entry, 3,5 or 7 slot 733= FRONT card entry, 3.5 or 7 slot 761= Removable fan & power supply modules 790= Ruggedized, 3U - 5U (5-7 slots) 795= Ruggedized 3U - 5U (5-9 slots) Color · = Santex White, std Plug-in Card Size

Plug-in Card Size — 616 = 6U x 160mm 622 = 6U x 220mm 628 = 6U X 280mm

Backplane type
C = cPCI backplane,
PICMG 2.0, Rev 3
H = cPCI backplane,
H110 backplane

A = Auto Bus Grant (ABG), standard 96-pin VME E = Electronic Bus Grant (EBG)

E = Electronic Bus Grant (EBG) VME64x, 160-pin J1, J2 with P0

<u>00</u> <u>H</u> <u>00</u> Packaging Options Rear I/O Options 00 = Rackmount brackets only 00 = No Front System Reset 01 = Rackmount slides (3U & above) 02 = System Reset 02 = Hinged removable front door panel 03 = Rackmount brackets & slides 04 = Clear Lexan hinge removable door panel Peripheral Drives (Series 710/720 only) - = No drives D = DCH = 1 Half height 5.25" X = ATXJ = 2 Half height 5.25" M = 2 3.5" Power Supply 25 = 1 250W embedded industrial-type 01 = 2-slot horizontal rear I/O, 6U X 80mm 30 = 1 300W ATX embedded industrial-type 40 = 1 400W embedded industrial-type 60 = 1 600W embedded industrial-type 75 = 1 800W embedded industrial-type Backplane No. of Slots 02 = 2 slots 03 = 3 slots thru



#### **Contact Vector For Your Custom Chassis Requirements**



Series 445 VME64x & Dual Hot-Swap



Series 2344



**DIN Metric Subracks with Modules** 



Modified series 445, full EMI/RFI



Custom series 600 for "C" size cards





