19” Rackmount Rugged Chassis Platforms—Air Cooled

RRFAC3—3U Boards

KEY FEATURES

- 2U-7U height rugged chassis platforms for 3U OpenVPX boards
- Versions aligned to the SOSA™ Technical Standard are optional
- Designed for use in MIL-810 and MIL-901D systems for shock/vibration
- Designed to meet MIL-461 for EMI
- Humidity levels of 0% and 95% non-condensing, conformal coating options
- Ruggedized PSUs to MIL specs with VITA 62 options
- Versions with RTM access are optional
- Options with up to 50 ms hold-up time
- 3U OpenVPX or other/custom backplanes
- MIL-grade fans and cabling
- Front-to-rear cooling standard with other cooling options available
- Temperature ranges of –20C to +70C (industrial rugged) up to –40C to +85C (MIL rugged)
- Options with VITA 46.11 and SOSA aligned VPX chassis manager (pluggable or mezzanine)

The RR19XUFAC3 is a rugged rackmount chassis platform for use in Mil/Aero or other harsh environments. It is designed to meet shock/vibration to MIL-810 and 901D and MIL-461 for EMI. The chassis features air and power filtering with optional power redundancy and hold-up time. 3U OpenVPX backplanes are typical, but other options are available.

Various PSU input and output options are available. For rugged designs typically VITA 62 or comparable PSUs are used.

Pixus specializes is customized configurations, contact us to discuss your specific requirements.

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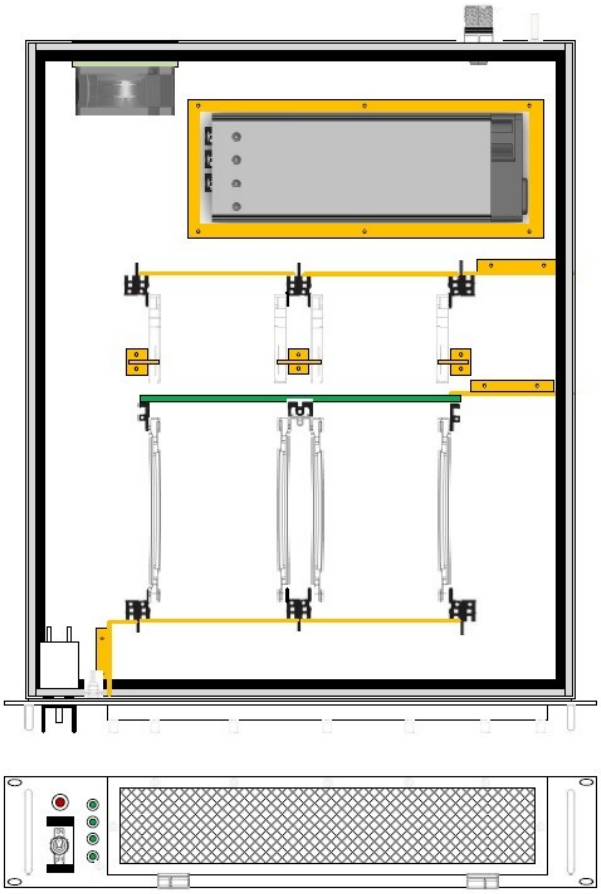
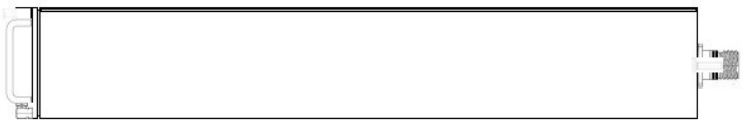
POWER

The RR19XUFAC can employ various grades of PSUs. Typically VITA 62 PSUs are utilized, up to 600W each. However, other PSU options are available. VITA 62 power supplies are designed for avionics and other MIL rugged applications and conform to MIL-STD-704, 461, and 810. There are also various options for AC or DC power feeds (typically 24-48VDC, or 90-264 VAC). Consult Pixus to discuss your application’s power requirements.

EXAMPLE #1 — Horizontal Mount Version





This general example shows a horizontal mount configuration. Various chassis height and depth options are available.

Example #2 — Vertical Mount Version With Front to Rear Airflow, Recessed Card Cage

This 6U tall chassis example has airflow over conduction cooled card mats, providing superior cooling in a highly rugged format. Designed for the high powered SOSA aligned systems.

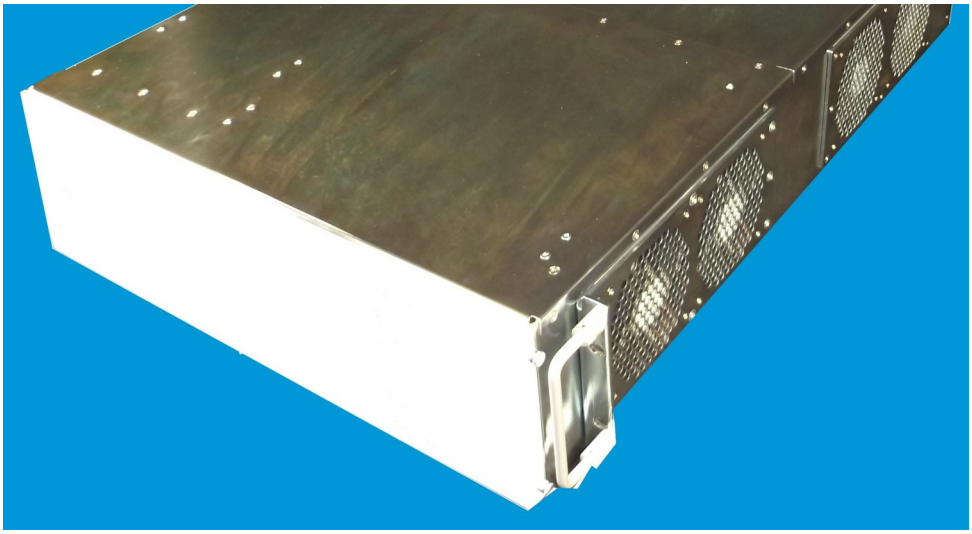
Example #3 — Vertical Mount Version with Front to Rear Airflow

This 4U tall example has various air intake options depending on the application requirements.

Example #4 — Vertical Mount Version with Front to Rear Airflow

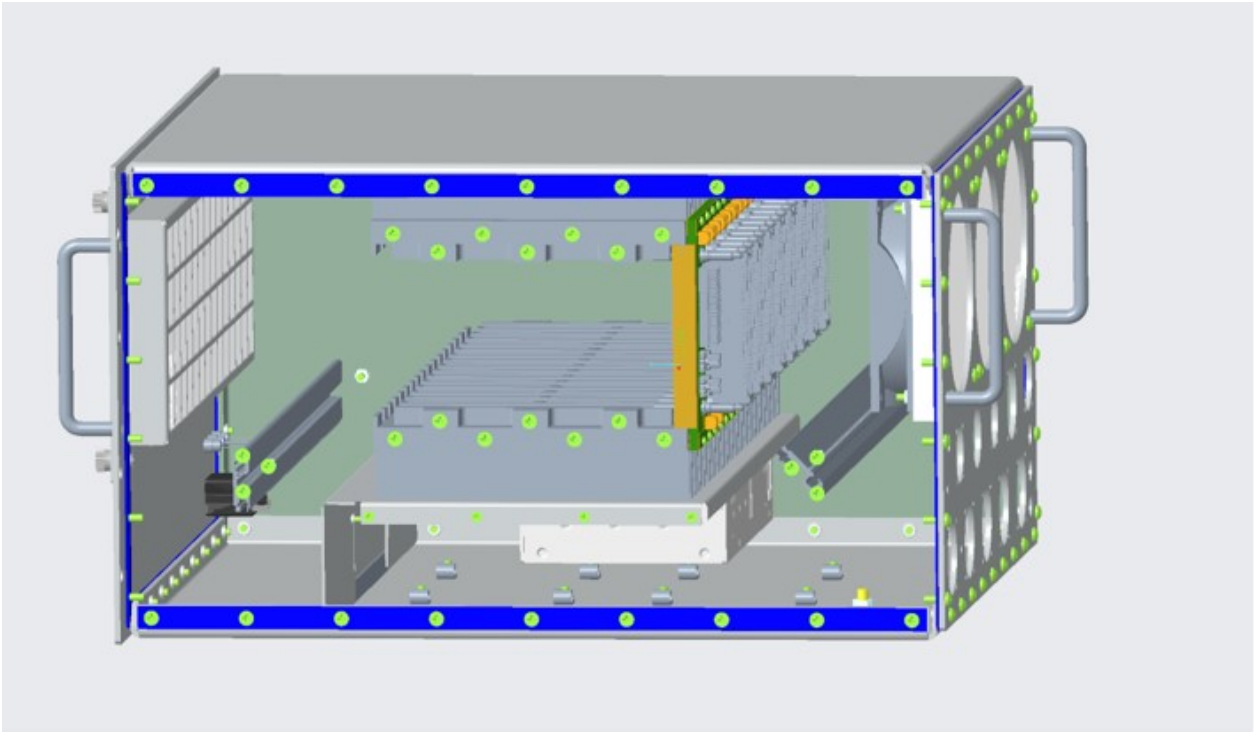
This 5U tall example supports both air cooled and conduction cooled boards.

Example #5 — 3U Horizontal Mount Version With Side to Side Airflow

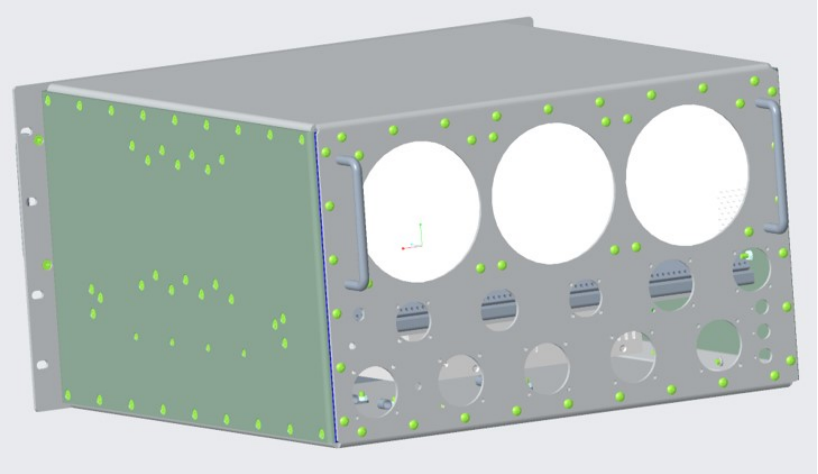


This 3U tall rugged chassis features horizontal loading for 6U, 3U, or a 3U/6U hybrid approach for OpenVPX boards. The cooling is side to side. The boards can be recessed inside the chassis with provisions for MIL 461 for EMI.

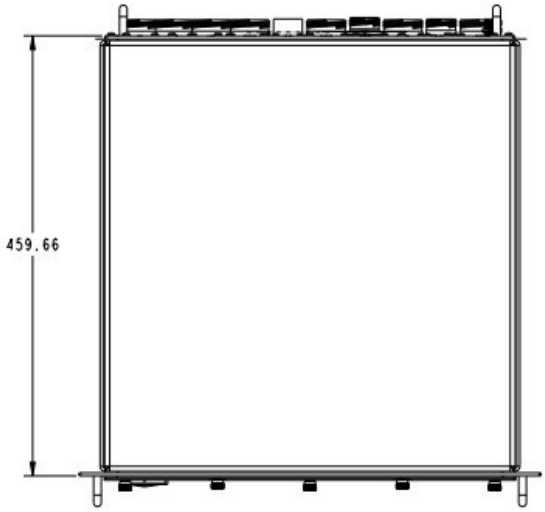
Model of Example #2 (Front to Rear Airflow, Recessed, SOSA Aligned) — Side View

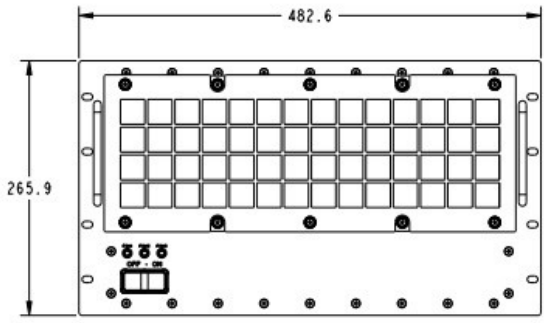


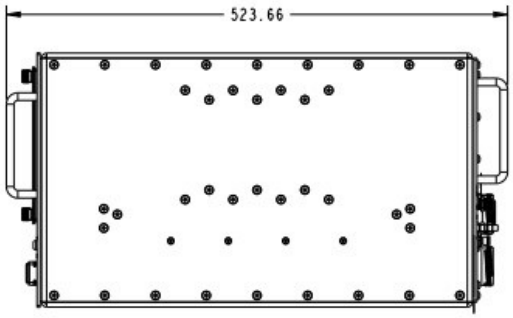
Model of Example #2 (Front to Rear Airflow, Recessed, SOSA Aligned) —Rear View



Drawing of Example #2 (Front to Rear Airflow, Recessed, SOSA Aligned)







SPECIFICATIONS

Architecture		
Physical	Dimensions	Height: 2U-6U
	Pitch	1.0” slot pitch standard, 0.80” optional
		Width: 19”
		Depth: 12.5” - 23”*
Type		*consult Pixus for other size options
Standards		
DO-168	Type	DO-168 options
VITA/ANSI	Backplane, Chassis	VITA 65 for OpenVPX (optional), IEEE 1101.10/.11
MIL-STD	Type	810F (shock, vibration to 20G, environmental), 461F (EMI)
Configuration		
Power	Type	24-28VDC, 48VDC, 90-264VAC input @ 47-880Hz
		Various output options (3.3V, 5.5V, +/- 12V)
Environmental	Temperature	Operating temperature: -40° to +71°C (application dependent)
		Storage temperature: -55° to +90°C
	Altitude	Application dependent, consult Pixus for details
Conformal Coating		Upon request (See page 4 selection “J” for available options)
		0 and 95% humidity, non condensing
Other		
MTBF	Varies, consult factory for specifics	
Certifications	Designed to meet FCC, CE and UL certifications where applicable	
Standards	ISO9001:2010	
Compliance	MIL-STD-810, MIL-STD-461	
Warranty	Two years	
Trademarks and logos	The Pixus Logo is a registered trademark of Pixus Technologies Inc. other registered trade-marks are the property of their respective owners. Specs. subject to change without notice.	

ORDERING OPTIONS

(Previously RR19XUFAC3 prefix)

RRFAC3-HABCCD-EFGI-JK

H = Chassis Height

1 = 2U
2 = 3U
3 = 5U
4 = Other
5 = 6U

A = Backplane

1 = 3U OpenVPX (standard)
2 = Other

B = Backplane Speed

1 = 6.25 GBaud/s
2 = 8 GBaud/s (for PCIe Gen3)
3 = 40GbE
4 = Other
5 = 100GbE

CC = Payload Slots

Example 0n = n slots
01 = 1 slot
02 = 2 slots
03 = 3 slots
09 = 9 slots

D = PSU Slots

1 = 1 VITA 62 slot (standard)
2 = 2 VITA 62 slots
3 = Other

E = PSU Input

1 = 12-36V DC
2 = 90-230V AC
3 = 48V DC
4 = Other

F = PSU Output

1 = Up to 600W
2 = Reserved
3 = Up to 1200W
4 = Reserved
5 = Other

G = Hold-up Time

0 = n/a
1 = 50 ms
2 = Other

I = Cooling

1 = Front-to-rear
3 = Other
2 = Side-to-side

J = Conformal Coating

0 = None
1 = Humiseal 1A33 Polyurethane
2 = Humiseal 1B31 Acrylic

K = Finish/Coating

0 (or Blank) = Clear chromate finish (standard)
1 = Painted (contact Pixus for options)
2 = Anodized (external only)