

How Will You Fly EPIIC?

EPIIC: Versatile Payload Interface

The Easy-to-use Payload Interoperable Integration Carrier (EPIIC) is a versatile electronic and mechanical payload interface designed to streamline integration by serving as a universal adapter for a wide range of flight platforms. EPIIC is compatible with zero-gravity parabolic platforms, high-altitude balloons, suborbital & orbital vehicles, sounding rockets, and lunar landers thereby enabling a single payload design to be reused across multiple vehicles and providers. This significantly reduces development time, cost, and engineering effort. For instance, as you progress your payload testing from a parabolic flight to a sounding rocket launch, low Earth orbit (LEO) mission, or even a lunar mission, EPIIC minimizes – if not eliminates – costly efforts to redesign and modify the payload for the various vehicle-specific interfaces.

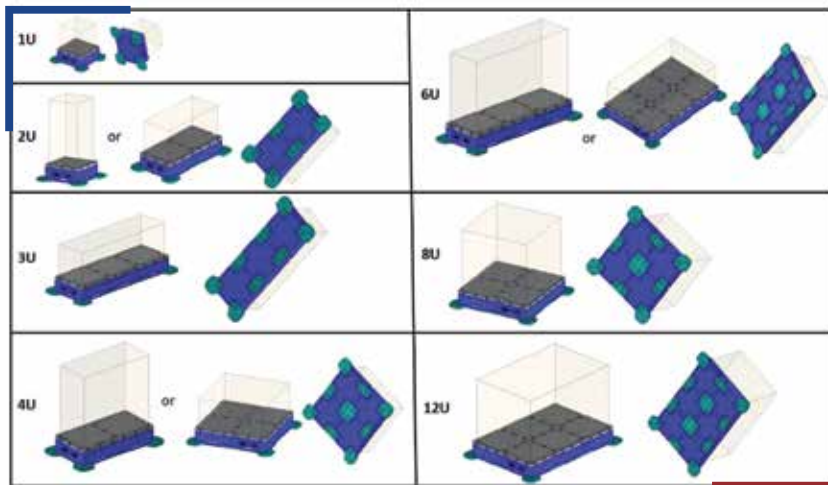
EPIIC: Configurations

Users can also gain a significant advantage from EPIIC's physical versatility —scaling from a 1U to 12U configuration, and anywhere in between. EPIIC is tailored to your evolving needs.

Payload Size (l x w x h)	Mass Limit	Max CG Height
1x1x1 U	2 kg	5 cm
1x1x2 U	4 kg	10 cm
1x2x1 U	4 kg	5 cm
1x3x1 U	6 kg	5 cm
1x2x2 U	8 kg	10 cm
1x3x2 U	12 kg	10 cm
2x2x2 U	16 kg	10 cm
2x3x2 U	24 kg	10 cm

BENEFITS

- Payload integration effort from one vehicle to another is greatly reduced
- Versatile system can be configured:
 - mechanically to various sizes of payloads
 - electrically to support a wide range of power inputs from vehicles
 - electrically to support a wide range of power outputs to payloads on two configurable power buses
 - to communicate over three common data buses to send telemetry from the payload to EPIIC and/or the vehicle
 - to send commanding and/or vehicle telemetry to the payload
 - to store data from the payload (via removable SD card)
- Proven hardware has been analyzed and tested to most rigorous environments per GSFC-STD-7000
- Onboard temperature and accelerometer data



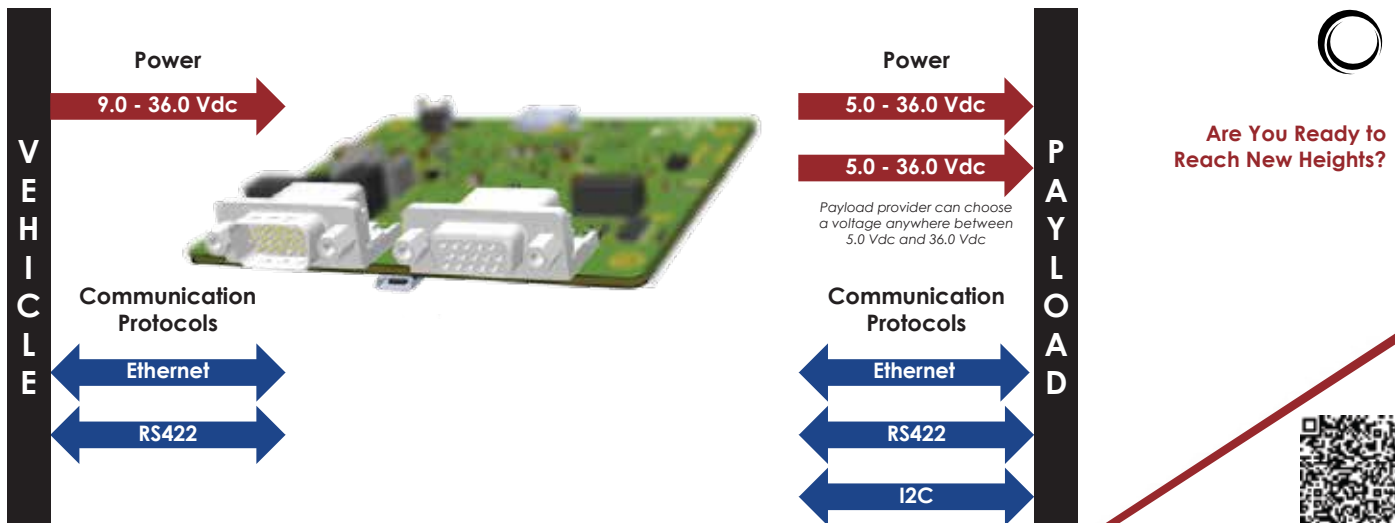


EPIIC Specifications

Learn more about the technical capabilities of EPIIC.

SPECIFICATION	EPIIC CAPABILITY	COMMENTS
Size	Payloads from 1U to 12U	Larger sizes may be possible
Mass	2 - 24kg (4.4 - 52.9 lbs)	See configuration chart
Environmental Limits		
Temperature	-40°C to 85°C (-40°F to 185°F)	
Limit Load	42.3 g's	
Voltage input from vehicle	9.0 - 36.0 Vdc	
Heater input from vehicle	Up to 36 Vdc	Controlled by EPIIC software or external switch
Voltage output to payload (2 software configurable outputs)	5.0 - 36.0 Vdc	
Max output current to payload	Up to 2.0 A	Dependent on input and output voltages
Communications		
Vehicle Ethernet	1 each (10Mbps)	
Vehicle RS-422	1 each (115200-8-N-1)	Controlled by EPIIC software or external switch
Payload Ethernet	1 each (10Mbps)	
Payload RS-422	1 each (115200-8-N-1)	Controlled by EPIIC software or external switch
Payload I2C	User configurable	

Electrical and Communications Block Diagram



Visit our website to learn more about Aegis Aerospace and EPIIC.

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