



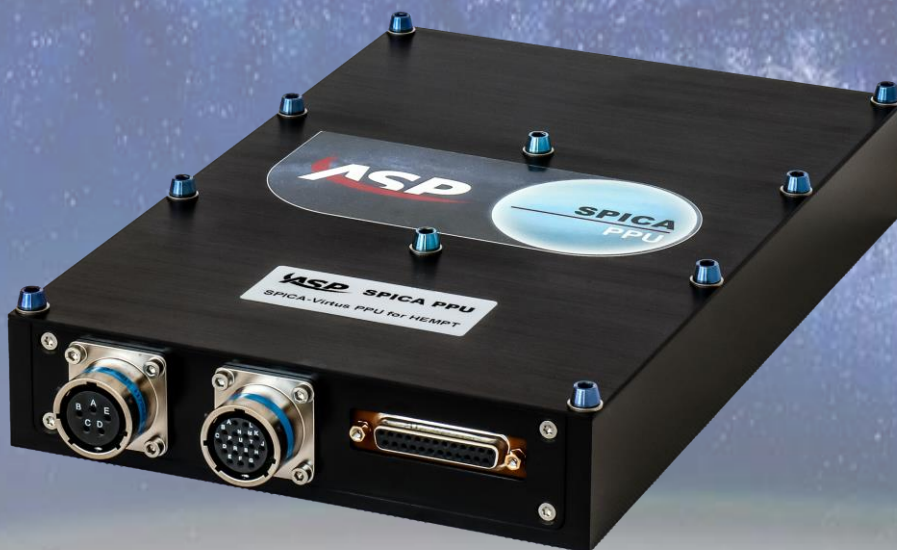
## Satellite Platform

Transforming Power Into Success



With the SPICA-virtus Propulsion Power Unit product line, we pursue the goal of achieving our customers' competitiveness without compromise. To achieve this, we have broken new ground: with our 20 years of experience in the development, manufacturing, qualification and testing of space power supplies and our expertise in the application of novel technologies, the following factors contribute to the success of the SPICA-virtus PPU:

- A full digital implementation enables selection of different operation modes (orbit raising, station keeping), an optimized form factor as well as automated adjustment and serial testing capabilities
- GaN components guarantee the highest possible efficiency and a very favorable form factor
- The piggyback PCB concept facilitates economical series production
- Standardized functional blocks and a customer specific FPGA code enable maximum flexibility with respect to the thruster type
- Control capability of the Flow Control Unit (FCU) is standard for the Spica-virtus PPU
- The automated test and verification concept guarantee highest quality and function of each delivered PPU



Fly a SPICA





# SPICA-virtus PPU

The SPICA-virtus Propulsion Power Unit is optimized for constellation programs and related requirements: The choice of GaN-based components enables a very light and small design. In the standard design, the radiation immunity is 30kRad; with additional shielding, 50kRad is also possible. The piggyback PCB design leads to a simple structure, which results in low manufacturing costs for quantities. The digital controller allows operation in different modes (orbit raising, station keeping), digital commissioning and in-series testing. The PPU for power levels up to 1kW has an optimal form factor and can be electrically contacted by means of various connectors.

## SPICA-virtus PPU for HEMPT - Technical Data

Dimensions: 280x180x40mm, Weight: 2,6kg  
Input voltage: DC 62-77V, RS422 / CAN bus control interface

Outputs	min. voltage [V]	max. voltage [V]	min. load [A]	max. load [A]	max. power [W]
Anode Supply / High Voltage Supply; switchable	550 275	800 400	-	1,2 1,75	700
Neutralizer Keeper Supply	10	40	-	3	80
Neutralizer Heater Supply, Current Source	10 rms/AC	20 rms/AC	-	4 rms/AC	80
Valve driver	12	30	0,1	2	

## SPICA-virtus PPU for HET - Technical Data

Dimensions: 280x180x40mm, Weight: 2,6kg  
Input voltage: DC 24-32V, RS422 / CAN bus control interface

Outputs	min. voltage [V]	max. voltage [V]	min. load [A]	max. load [A]	max. power [W]
Anode Supply / High Voltage Supply; Switchable	230 150	350 230		1,5 2	350
Neutralizer Keeper Supply				0,32	
Neutralizer Ignitor; HV Mode	800	1200		0,002	
Neutralizer Ignitor; Current Source Mode		30	0,05	0,2	6
External & Internal Magnetic Coil Supplies, Current Source		9,6		5,2	50
Thermosthrottle Current Supply		10		5	50
Valve driver	7	32	0,1	2	