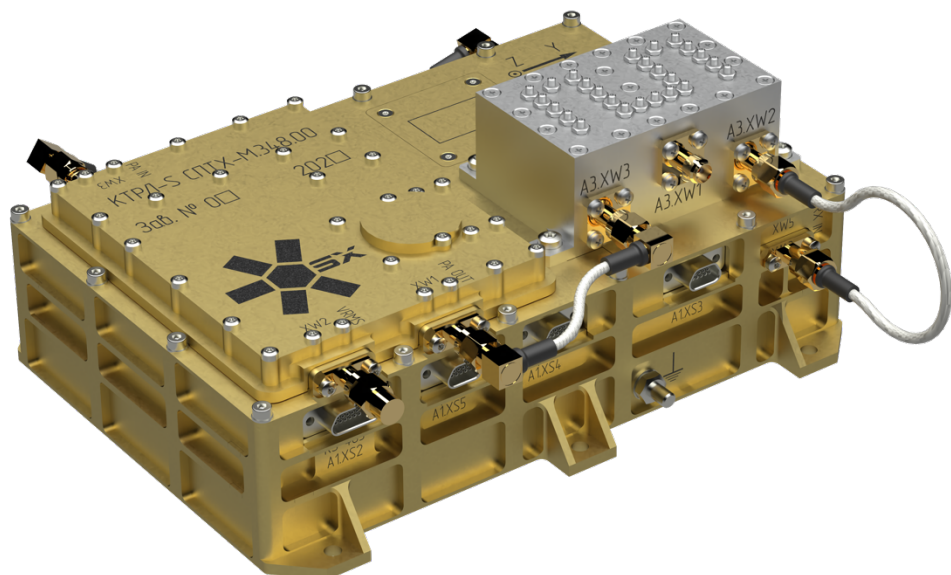




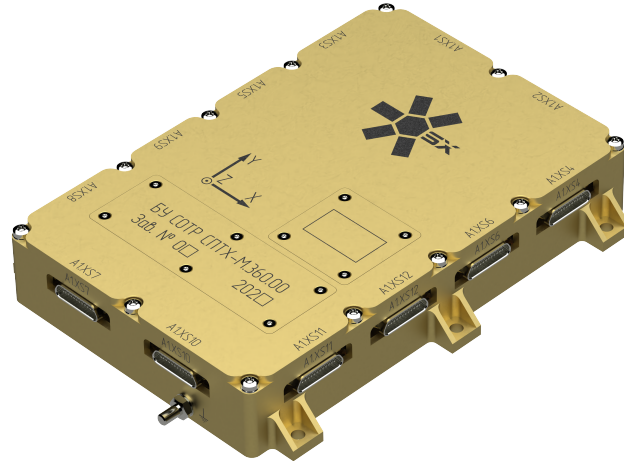
Line of microsatellite devices

Control unit of the thermal regime support
system

SX-SBOX



Control unit of the thermal regime support system
SX-SBOX-THERMU-01



Parameters	Value
Power consumption without heaters included, no more	5 W
Supply voltage	22-33 V
Duplicated interface	CAN2B
The number of half-sets in the device	2 pcs
The number of electric heaters connected to the half-set	14 pcs
Power of a single heater, no more	60 W
The number of analog temperature sensors connected to the half-set	36 pcs
Type of connected analog temperature sensors	P1K0.232.6W.A.010
The number of digital temperature sensors connected to the half-set	14 pcs
Type of connected digital temperature sensors	DS18B20Z
Mass	600 g
Dimensions	200 x 130 x 30 mm

The control unit of the thermal regime support system is designed to ensure the thermal

regime of the service platform and the payload of the spacecraft.

The control unit provides control of the temperature regime of the spacecraft structural elements and payloads by measuring the temperature of the spacecraft structural elements and controlling the heating elements of the spacecraft.

Options of devices delivery

- EM – engineering model
- FM – flight model

The differences between the EM and FM options are in the scope of the tests. Options are shown in the table.

№	Test	Model		Comment
		EM	FM	
1	Preliminary tests: <ul style="list-style-type: none"> - Checking power supply circuits; - Verification of information exchange (with the device and device nodes); - Calibration (if necessary) 	+	+	Carried out in the laboratory of SPUTNIX LLC under normal climatic conditions.
2	Functional Acceptance Tests (FAT)	-*	+*	Checks for compliance of the device with the functional characteristics specified in the Operational Manual and compliance with the MS
3	Vibrodynamic Acceptance Tests	-	+*	Tests for resistance to mechanical external influences specified in Technical conditions (or Operational Manual)
4	Thermovacuum Acceptance Tests	-	+*	Checks for resistance to thermal and climatic external influences

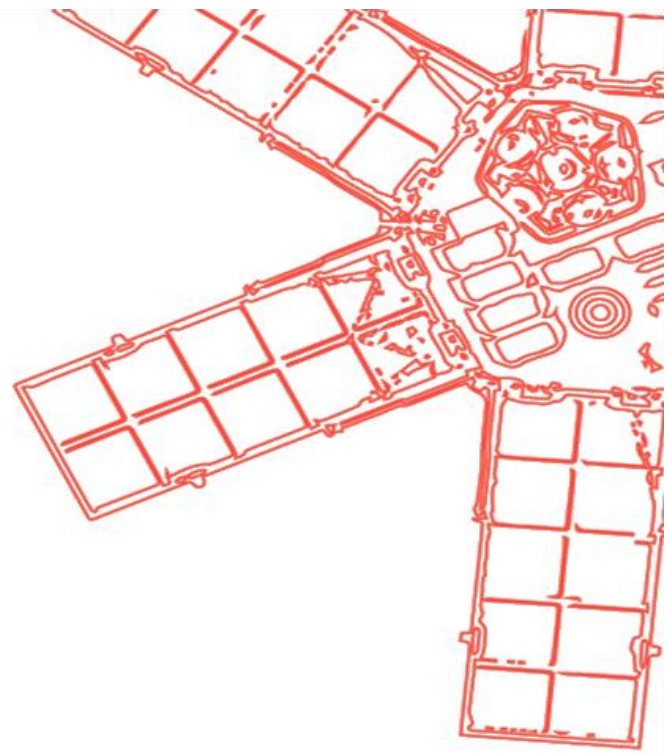
				specified in Technical conditions (or Operational Manual)
5	Electromagnetic Acceptance Tests	-	+*	Tests for resistance to electrical external influences specified in Technical conditions (or Operational Manual)
<p>Notes:</p> <p>*Inspection can be carried out, carried out partially or excluded as agreed with the Customer</p>				

If the requested device intended for laboratory testing will not be installed in a real satellite, EM with test type 1 (minimum test scope) should be used.

If the requested device is intended for use as part of a specialized functional stand, EM should be used with preliminary and functional acceptance tests (1 and 2).

If the requested device is intended for installation on a satellite, or for use as part of a stand for ground experimental testing of a flight product, it is required to use a FM with a full scope of tests (1, 2, 3, 4, 5).

If the requested device is intended for installation on a satellite (flight model), but for some reason it is not possible to conduct a full scope of tests, it is allowed to exclude certain types of tests for external influences (3,4,5) in a combination and sequence discussed with the Supplier. In this case, the responsibility for carrying out the missing tests lies with the Customer.



Contacts:

SPUTNIX LLC

Russia, 121205, Moscow, Technopark Skolkovo,

Bolshoy Boulevard, 42, building 1, office 3.305

+7 (499) 322-43-15

contact@sputnix.ru