PLAYER ONE SPACE

[ONBOARD AI + PROPULSION]

AUTONOMOUS PROTECTION FOR SATELLITES

Buddy sees what is around your satellite. Onboard AI decides, PELTAST-X moves it out of the way, without human in the loop.

01 **DETECT**
BUDDY
Visible, event-based and thermal cameras observe satellite environment in sunlight and in eclipse.

→

02 **DECIDE**
ONBOARD AI
Every object is tracked and assessed onboard, so no ground support is required.

→

03 **MANOEUVRE**
PELTAST-X
The water-based thruster fires 1-5N pulses within milliseconds when commanded so.

DEFENCE & GOVERNMENT

NATIONAL SECURITY

Move away from threats

Buddy spots an approaching objects before they arrive, and PELTAST-X moves the satellite away on its own.

83 km for a sunlit 10-cm object seen approaching

BUDDY + PELTAST-X

TACTICAL OPERATIONS

Act when the link is jammed

Detection, decision and manoeuvre all run onboard, so the satellite protects itself while the ground link is jammed or down.

1 TB of encounters kept until the link returns

BUDDY + PELTAST-X

DEFENCE COMMAND

Fast onboard alerts

Threat detection runs onboard. A short alert reaches the ground in seconds instead of a video download.

2–15 MB per encounter

BUDDY

COMMERCIAL

LARGE CONSTELLATIONS

Automatic collision avoidance

Your satellite can its own avoidance manoeuvres on conjunction warnings without human in the loop.

8 mN to 5 N from station keeping to fast avoidance

PELTAST-X

HIGH-VALUE MISSIONS

Protect valuable assets

Buddy keeps watch in sunlight and in eclipse, so the satellite reacts before a close approach becomes a problem.

88% of crossings by a 10 cm object seen

BUDDY + PELTAST-X

INSURERS

Less risks in orbit, clean deorbit

Situationally aware satellite has lower operational risks and PELTAST-X can deorbit a satellite up to 20 kg.

24 m/s re-entry from 525 km within 5 years

PELTAST-X

PLAYER ONE SPACE

[PRODUCTS]

TWO UNITS. ONE SYSTEM.

Buddy and PELTAST-X can work as stand-alone components or as an integrated subsystem. Both run on 28 V and connect to the host computer over CAN or RS-422, for execution of entire command chain - from detection to manoeuvre action.

BUDDY

SITUATIONAL AWARENESS MODULE · ITAR-FREE

Visible, event-based and thermal cameras with an onboard AI processor. Buddy finds approaching objects both in sunlight and in eclipse and reports them as they happen.



120°
field across the direction of flight

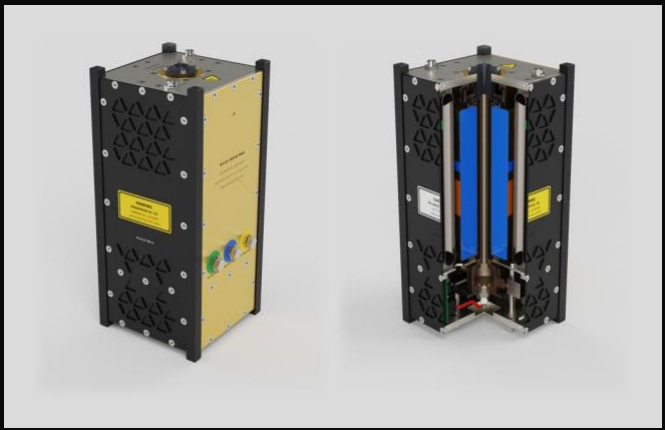
83 km
sunlit 10 cm object, approaching

24 km
1 m object in eclipse conditions

PELTAST-X

PROPULSION MODULE · NON-TOXIC PROPELLANT

Water is split into hydrogen and oxygen in orbit. Cold gas gives fine-grained control while pulsed detonation mode allows for high-thrust manoeuvres using the same nozzle.



1–5 N
In pulsed-detonation thruster mode

470 N·s
total impulse from 250 ml of water

2–5 ms
valve response time on command

SPECIFICATIONS	BUDDY	PELTAST-X
Role	Sees, tracks and reports objects around the satellite	Avoidance, station keeping and deorbit manoeuvres
Size	232 × 191 × 107 mm	2U, 100 × 100 × 227 mm
Mass	2.4 kg	1.8 kg dry, 2.0 kg with water
Power	25 W orbit average, 31 W peak	20 W while generating gas, 3 W standby
Supply voltage	28V DC	28V DC
Data interface	Gigabit Ethernet, CSP over CAN, RS-422, PPS	CSP over CAN, RS-422
Modes	Survey, encounter recording, eclipse watch	cold gas (H_2, O_2 or mixed); pulsed detonation
Performance	120° × 25° visible field; 88% of crossings by a 10 cm object seen	8 mN to 5 N; 470 N·s total impulse, 24 m/s for a 20 kg satellite
Response	Detection report every 0.1 s	Valves open in 2 to 5 ms
Onboard store	1 TB of encounter recordings	250 ml of water, unpressurised at launch

Add Buddy and PELTAST-X into your next mission.

Send all sales and documentation inquiries to dennis@playeronespace.com