▶ DRONES:

REMOTE DRONE CIRCUIT BREAKER

SAFETY BATTERY CUT-OFF FOR PROFESSIONAL DRONES

TRUE FULL BATTERY DISCONNECTION:
Cuts the entire power supply, not just the motors – no residual current, no uncontrolled behavior.

LONG-RANGE REMOTE ACTIVATION:
Secure command transmission over several kilometers, even beyond standard drone control range.

DESIGNED FOR SAFETY-CRITICAL SCENARIOS:
Ideal for software failures, system bugs, loss of control, autonomous drone incidents, or emergency situations.

SECURE AND CLOSED COMMUNICATION PROTOCOL:
Paired devices only, protected against external interference or unauthorized commands.

HIGH-POWER CAPABILITY:
Supports professional drones with high current demands and heavy payloads.

ADAPTABLE TO ALL ENVIRONMENTS:
Can be used as:
- an add-on module on a pilot's remote controller,
- or an external emergency stop ("panic button") for autonomous drones.

FLEXIBLE INTEGRATION:
ICM-40627 (6-axis, fitted) for shock and abnormal movement detection.

PRE-PAIRED KIT WITH MAINTENANCE FLEXIBILITY:
Delivered paired by default, with manual re-pairing possible for service or replacement.

FUTURE-PROOF BY DESIGN:
Designed to comply with European standard UAS.2511-01 and professional drone standards.

SAFETY, ENGINEERED BY XAP

Leveraging its deep expertise in electronic board design, embedded systems and secure software, XAP has developed an advanced remote battery cut-off system for professional drones.

Designed as a critical safety device, this system allows operators to instantly and remotely disconnect the main battery power of a drone – whether aerial, ground-based or marine – even from several kilometers away.

Unlike existing market solutions that only stop the motors, the XAP battery cut-off system fully disconnects the drone's power supply, ensuring a true, immediate shutdown when the drone becomes uncontrollable, unsafe, or non-compliant.

This solution directly addresses emerging safety requirements expected to come into force in 2026, positioning drone manufacturers and operators ahead of regulatory constraints, while significantly improving operational safety for heavy-duty, professional drones.

ENGINEERING TOMORROW'S PROJECTS...

MORE INFORMATION ON WWW.XAP.FR

▶ DRONES: *REMOTE DRONE CIRCUIT BREAKER*

TECHNICAL SPECIFICATIONS

System Architecture	Dual-board system: transmitter (ground side) + receiver (onboard power board)
Main function	Remote wireless disconnection of the drone's main battery power supply
Primary application	Safety-critical power isolation for professional drones (aerial, ground, marine)
Communication protocol	LoRa long-range communication (closed protocol, optional encryption) Europe frequency: 860 to 880 MHz
Typical communication range	Up to ~2,2 km (depending on environment and electromagnetic interference)
Control security	Closed, paired communication – no third-party control possible

ENVIRONMENTAL & OPERATIONAL

Operating environments	Urban, rural, mountain, maritime, offshore
Electromagnetic robustness	Designed for high-EMI environments
Target drone category	Professional drones > 5 kg
Operating modes	Manual piloted or fully autonomous systems

MANUFACTURING & COMPLIANCE

Design & manufacturing	100 % XAP – Designed and manufactured in France
Quality control	Electrical, functional and power validation tests
Safety com-pliance	UAS.2511-01 compliance – 2026 European standards
Customization	Electrical limits, cooling configuration, integration support

TRANSMITTER MODULE (GROUND / PILOT SIDE)

Power supply	Integrated rechargeable 5 V battery
Battery charging	Integrated charger via USB Micro-B
External emergency input	Ground input for external emergency stop / panic button
Power management	Onboard switch to disconnect battery when not in use
Status indication	Three configurable status LEDs
Data storage	Embedded EEPROM for pairing and configuration parameters
Installation	Add-on module for remote controller or standalone emergency unit

RECEIVER MODULE (ONBOARD DRONE)

Board supply voltage	8 V to 75 V
Supported battery voltage	Min 8 V – nominal up to 54 V – max 80 V
Current	Up to 120 A (7.5 kW) continuous Up to 300 A (15 kW) peak during 10s
Power switching	High-power transistor stage with integrated precharge circuit
Inrush current protection	Yes (precharge circuit)
Operating temperature	50°C ambient
Cooling options	Passive (finned enclosure) or active (fan) – optional
Pairing interface	Local push-button (one-time operation at first startup)

REFERENCES

PF1009	DRONE CIRCUIT BREAKER REMOTE CONTROL
PF1010	DRONE ONBOARD CIRCUIT BREAKER

XAP TECHNOLOGY
SOLUTIONS FOR YOUR FUTURE

MORE INFORMATION ON
HTTPS://STORE.XAP.FR

XAP TECHNOLOGY
298, rue des Entrepreneurs - 30420 Calvisson - FRANCE
Tél : +33 (0)4 66 02 94 94
Email: contact@xap.fr