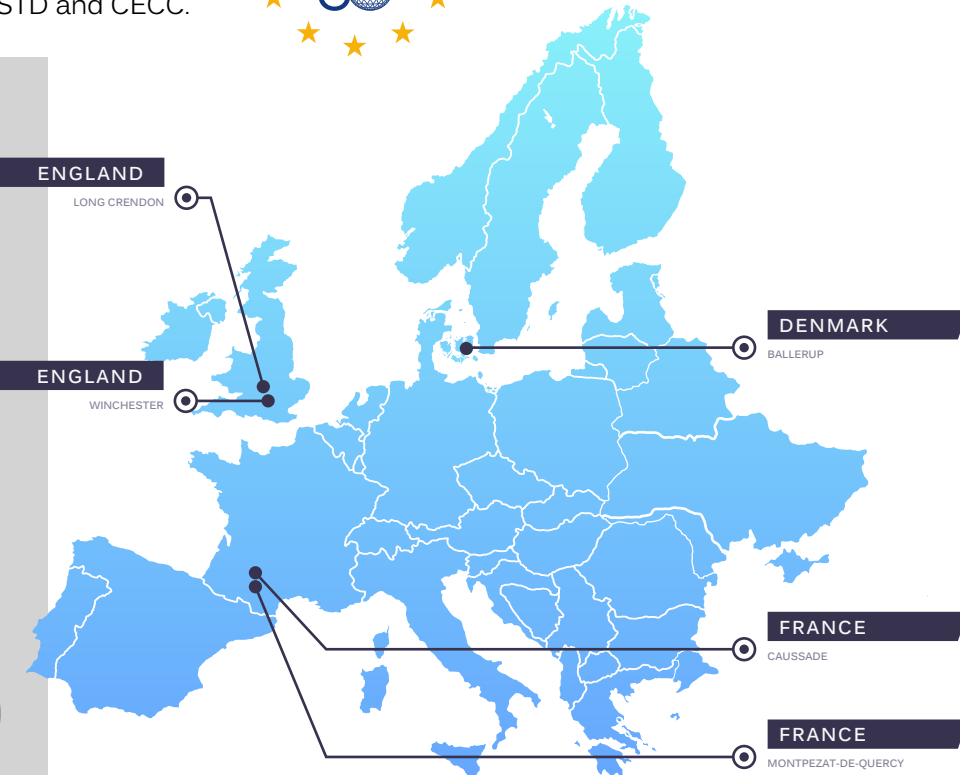


8 REASONS TO CHOOSE FROM THE EURO DEFENCE 50 SELECTION



- 1 IMMEDIATE DELIVERY**
All 50 products in the EURO DEFENCE 50 programme are in stock and ready to ship. Meet your project deadlines without compromise.
- 2 EUROPEAN MANUFACTURER**
Benefit from the reliability and responsiveness of a manufacturer with production sites in Europe. Short lead times, simplified logistics, and trusted sourcing.
- 3 PROVEN MILITARY EXPERIENCE**
These selected 50 COTS HMIs are integrated into key defence programmes across multiple European countries.
- 4 UNCOMPROMISING QUALITY**
Every product meets the highest standards of durability, precision, and resistance to harsh environments.
- 5 CERTIFIED COMPLIANCE**
This selection complies with key industrial and/or defence standards, including MIL-STD and CECC.
- 6 LONG-TERM AVAILABILITY**
Designed for long product lifecycles, these 50 COTS are available for years—supporting system retrofits, export and long-term programmes.
- 7 WIDE RANGE OF TECHNOLOGIES**
Switches, joysticks, keypads, LEDs, hand controllers, accessories - these 50 references, covering all your HMI needs, are ready for immediate integration.
- 8 70+ YEARS OF EXPERTISE**
APEM has been designing and manufacturing HMIs since 1952. We combine historical know-how with continuous innovation to support your critical missions.



WHAT CERTIFICATIONS AND STANDARDS DO OUR HMIs MEET?

- Some of our 50 selected COTS HMIs meet MIL-STD-810, MIL-STD-1472, and MIL-STD-481 requirements.
- We offer QPL-certified (MIL-DTL-3950, MIL-DTL-83731) and CECC-qualified (CECC 96201, 96401) products.
- We are recognised as a NATO Manufacturer (Code: F7607).
- We are certified to ISO 9001, ISO 14001, JOSCAR, Cyber Essentials, and SOFF.



RUGGEDISED HMIs, AVAILABLE NOW.
THE EURO DEFENCE 50 PROGRAMME IS YOUR FAST TRACK TO PROVEN, RUGGED, AND CERTIFIED HUMAN-MACHINE INTERFACES, DESIGNED FOR THE DEMANDS OF HARSH ENVIRONMENTS AND BACKED BY DECADES OF EXPERTISE.
ALL PRODUCTS IN THIS SELECTION ARE IN STOCK, QUALIFIED, AND READY TO DEPLOY. ORDER NOW AND EQUIP YOUR PROGRAMMES WITH CONFIDENCE.



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Scan the QR code to view full product details and find our authorised distributors.



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A selection of 50 references



OUR COMMITMENT TO SERVE

Mission-ready HMIs with immediate delivery*



50 RUGGEDISED HMIs FOR EUROPEAN DEFENCE PROGRAMMES

In a context of rising strategic autonomy and growing demand for interoperable, high-performance equipment—alongside the emergence of new applications such as UAVs and UGVs—APEM launches the EURO DEFENCE 50 programme: a targeted selection of 50 COTS HMI references, specifically designed for the most demanding environments.

Handpicked from thousands of part numbers in the APEM catalogue, these products—switches, joysticks, keypads, LEDs, keyboards, hand controllers, and accessories—represent our most robust, qualified, and versatile solutions. All are rigorously manufactured and qualified in Europe, and available immediately.

- EURO DEFENCE 50 stands for:
- ✓ Fast availability
 - ✓ European manufacturing
 - ✓ Guaranteed long-term support
 - ✓ Compliance with military standards
 - ✓ COTS with MIL, CECC & QPL approvals

Backed by over 70 years of expertise and trusted by major defence integrators, APEM delivers the reliability, ruggedness and precision your mission-critical systems demand.

We understand what it takes to collaborate effectively with defence companies.



COMPLIANCE WITH MILITARY STANDARDS
IMMEDIATE DELIVERY
EUROPEAN DESIGN AND MANUFACTURING

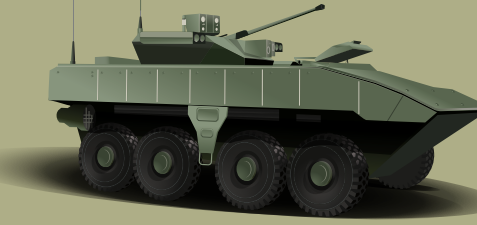
* Guaranteed delivery is offered, but is subject to customer order volume. Ex-stock availability and hence immediate delivery is offered for the APEM MOQ or pack quantity of each part number. For larger orders, APEM will confirm a delivery schedule. Those delivery dates are guaranteed and subject to a 25% price discount should they not be kept. Offer valid only in the EMEA region for all orders placed before 31/12/2026.

KEY DEFENCE APPLICATIONS

PROVEN HMI SOLUTIONS

GROUND VEHICLES

- Armoured personnel carrier
- Amphibious vehicle
- Armoured car
- Main battle tank
- Mobile mortar system
- Self-propelled howitzer
- Reconnaissance vehicle
- Light tactical vehicle
- Military truck



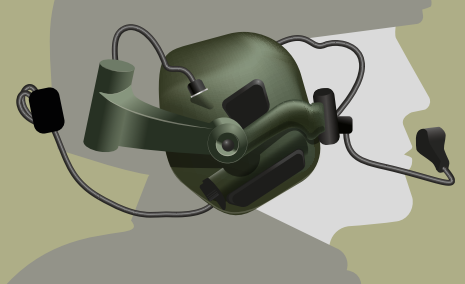
UNMANNED AERIAL VEHICLES

- FPV drone
- Fixed-wing UAV
- Remote control station
- Remote controller
- Decoy system



ACCESSORIES

- Night vision goggles
- Thermal monocular
- Headset PTT
- Rifle scope



OTHER EQUIPMENT

- Anti-tank missile system
- Turret control
- Radio frequency directed energy weapon
- C-UAV
- Soldier system
- Smoke discharger
- Remote weapon station
- Fire suppression system
- High energy laser system



UNMANNED GROUND VEHICLES

- EOD robot
- Tactical robot
- All-terrain tactical logistics robot
- Remote control station
- Remote controller / Handheld controller



MARINE

- Submarine
- Frigate
- R.I.B
- Bridge Control
- Unmanned Naval Vessels



COMMUNICATION

- Radio relay
- Single channel ground and airborne radio system (SINCGARS)
- Personal role radio
- Manpack radio
- UHF radio
- VHF radio

	PRODUCTS	FUNCTIONS	ELECTRICAL SPECIFICATIONS	MECHANICAL SPECIFICATIONS	ENVIRONMENTAL SPECIFICATIONS	COMPATIBLE ACCESSORIES
TOGGLES	12000X778 series 12146-1VX778 12246-2VX778 12246X778 12144-3VX778 12149-3VX778 12149X778 12156-2VX778 12166-2VX778 12146-2VX778 12146X778 12145X778 12147X778 12166X778	Low level, intermediate miniature sealed toggle switches	<ul style="list-style-type: none"> Up to 4 A, 28 VDC DPDT, 3PDT, 4PDT, momentary or latched 	<ul style="list-style-type: none"> Bushing: Ø12 mm Solder-lug, straight PC terminals Up to 150 000 cycles 	<ul style="list-style-type: none"> IP67 sealed even when actuated Operating temperature: -40 °C to +85 °C 	Sealing boots: N35111015 N35111012 Switch guards: MSG22FS6XXX MSG22FN6XXX
	3500 series 3531-001N000 3537-021N000 3537-001N000 3547-001N000 3536-021N000	Heavy duty sealed toggle switches	<ul style="list-style-type: none"> Up to 15 A, 28 VDC SPDT, DPDT, momentary or latched 	<ul style="list-style-type: none"> Bushing: Ø12 mm Screw, solder lug/quick connect terminals Up to 150 000 cycles 	<ul style="list-style-type: none"> IP67 sealed Operating temperature: -40 °C to +85 °C 	Sealing boots: N35111015 N35111012 Switch guards: MSG22KN6XXX MSG22KS6XXX 46 206PN 26 26PN
PUSHBUTTONS	ES series ES1S41653001 ES1S41653	Stop switches, pull-to-reset	<ul style="list-style-type: none"> Up to 1 A, 24 VDC DPST, NC contact, latched 	<ul style="list-style-type: none"> Bushing: Ø22mm Solder lug terminals Up to 6 000 cycles 	<ul style="list-style-type: none"> IP65, IP67, IP69K front sealed Operating temperature: -40 °C to +85 °C IK10 impact test 	-
	IP series IPR3SAD2 IPR3FAD2	Compact front-mounted pushbuttons	<ul style="list-style-type: none"> Up to 5 A, 28 VDC SPST, NO contact, momentary 	<ul style="list-style-type: none"> Bushing: Ø12 mm Solder lug, lying lead terminals Up to 1 000 000 cycles 	<ul style="list-style-type: none"> IP67, IP69K front sealed Operating temperature: -40 °C to +85 °C 	Sealing boots: U5125
	IZ series IZPR3S422	Compact rear-mounted pushbuttons	<ul style="list-style-type: none"> Up to 4 A, 28 VDC SPST, NO contact, momentary 	<ul style="list-style-type: none"> Bushing: Ø16 mm Solder lug terminals Up to 1 000 000 cycles 	<ul style="list-style-type: none"> IP67 front sealed Operating temperature: -40 °C to +85 °C 	-
	WP series WPS456G WPS452G	Ø25 mm large high-performance pushbuttons	<ul style="list-style-type: none"> Up to 4 A, 28 VDC DPDT, momentary 	<ul style="list-style-type: none"> Bushing: Ø22mm Solder lug terminals Up to 50 000 cycles 	<ul style="list-style-type: none"> IP67, IP69K front sealed Operating temperature: -40 °C to +85 °C 	Switch guards: WPG122 WPG126
INDICATORS	13000x778 series 13445-9X778 13245-4X778 13245-9X778 13445-4X778 13445-4X778-01	Compact and rugged pushbuttons	<ul style="list-style-type: none"> Up to 4 A, 28 VDC DPDT, momentary 	<ul style="list-style-type: none"> Bushing: Ø12 mm Solder lug, straight PC terminals Long and short actuator 	<ul style="list-style-type: none"> IP67 sealed even when actuated Operating temperature: -40 °C to +85 °C 	Sealing boots: N33261005
	QRM-NV series QRM-NV85BXXNV-GRA02E QRM85BXXG28E	Night vision compatible indicators	<ul style="list-style-type: none"> 3,3 VDC (no resistor) or 28 VDC power supply 	<ul style="list-style-type: none"> Bushing: Ø8 mm Rigid Pins terminals Up to 100 000 hours life 	<ul style="list-style-type: none"> IP67 sealed Operating temperature: -40 °C to +85 °C 	-
THUMBSTICKS	TS series TS2R1U02A TS4A1S00A	Proportional thumbsticks	<ul style="list-style-type: none"> Supply 5 VDC - 12mA Analog ratiometric output USB and PWM output 	<ul style="list-style-type: none"> X and Y axis Endurance: 1M cycles Pushbutton endurance: 100k cycles Plastic and metal housing, silicon and neoprene boot 	<ul style="list-style-type: none"> IP67 sealing above panel Operating temperature: -40 °C to +85 °C 	-
	MTG ASSY series MTG72AD2 MTG92AD2	Rocker thumbsticks	<ul style="list-style-type: none"> Up to 4 A, 30 VDC SPDT, momentary or latched 	<ul style="list-style-type: none"> Bushing: Ø16,35 mm Solder lug terminals Up to 100 000 cycles 	<ul style="list-style-type: none"> IP68 sealed Operating temperature: -40 °C to +85 °C 	-
	NV series NVH1D1C0CP2S NVH1D1C1CP2S	Switch-based thumbsticks	<ul style="list-style-type: none"> Up to 50 mA, 12 VDC Up to 4 directions + validation 	<ul style="list-style-type: none"> Bushing: Ø16 mm Connector (Molex) terminal Up to 1 000 000 cycles 	<ul style="list-style-type: none"> IP67, IP69K front sealed IPX5, IPX7 rear sealing Operating temperature: -40 °C to +65 °C 	-
KEYPADS/ HAND CONTROLLERS	PKR series PKR306	6-backlighted-button compact full-rubber keypads	<ul style="list-style-type: none"> 12-24 VDC nominal (8-32 VDC) CANopen/J1939 	<ul style="list-style-type: none"> Standard connector: deutsch DT04-4P 3 million operations 	<ul style="list-style-type: none"> Sealing: IP67/IP69K Operating temperature: -40 °C to +70 °C 	-
	PKI series PKI1226SI	12-backlighted-key modular keypads	<ul style="list-style-type: none"> 12-24 VDC CANopen/J1939 	<ul style="list-style-type: none"> Standard connector: deutsch DT04-4P 3 million operations 	<ul style="list-style-type: none"> Sealing: IP67/IP69K Operating temperature: -40 °C to +70 °C 	-
	HC series HCW23	Heavy-duty controllers - Wide (11 buttons)	<ul style="list-style-type: none"> +5 VDC (USB/Ethernet) or +10-30 VDC (CAN/J1939) E-stop circuit 	<ul style="list-style-type: none"> Aluminium 6082 T6 body Stainless fixings Conductive silicone gasket 	<ul style="list-style-type: none"> IP67 panel (IP68 box) Operating temperature: -40 °C to +85 °C 	-