



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.

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.



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.



BUILT FOR HARSH ENVIRONMENTS



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

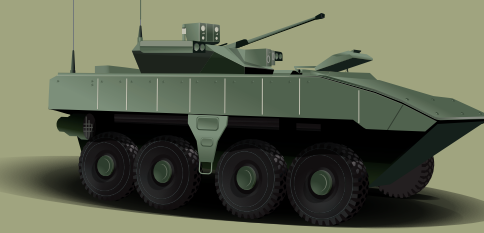
* Guaranteed delivery is offered, but is subject to customer order volume.

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



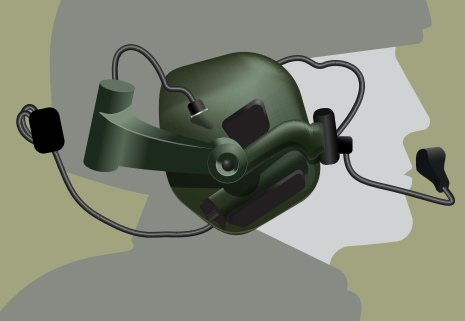
UNMANNED AERIAL VEHICLES

- 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	<div>12146-1VX778</div> <div>12246-2VX778</div> <div>12246X778</div> <div>12144-3VX778</div> <div>12149-3VX778</div> <div>12149X778</div> <div>12156-2VX778</div> <div>12166-2VX778</div> <div>12146-2VX778</div> <div>12146X778</div> <div>12145X778</div> <div>12147X778</div> <div>12166X778</div>	Low level, intermediate miniature sealed toggle switches	<ul style="list-style-type: none">Up to 4 A, 28 VDCDPDT, 3PDT, 4PDT, momentary or latched	<ul style="list-style-type: none">Bushing: Ø12 mmSolder-lug, straight PC terminalsUp to 150 000 cycles	<ul style="list-style-type: none">IP67 sealed even when actuatedOperating temperature: -40 °C to +85 °C	<div>Sealing boots:</div> <div>N35111015</div> <div>N35111012</div> <div>Switch guards:</div> <div>MSG22FS6XXX</div> <div>MSG22FN6XXX</div>
	3500 series	<div>3531-001N000</div> <div>3537-021N000</div> <div>3537-001N000</div> <div>3547-001N000</div> <div>3536-021N000</div>	Heavy duty sealed toggle switches	<ul style="list-style-type: none">Up to 15 A, 28 VDCSPDT, DPDT, momentary or latched	<ul style="list-style-type: none">Bushing: Ø12 mmScrew, solder lug/quick connect terminalsUp to 150 000 cycles	<ul style="list-style-type: none">IP67 sealedOperating temperature: -40 °C to +85 °C	<div>Sealing boots:</div> <div>N35111015</div> <div>N35111012</div> <div>Switch guards:</div> <div>MSG22KN6XXX</div> <div>MSG22KS6XXX</div> <div>46</div> <div>206PN</div> <div>26</div> <div>26PN</div>
PUSHBUTTONS	ES series	<div>ES1S41653001</div> <div>ES1S41653</div>	Stop switches, pull-to-reset	<ul style="list-style-type: none">Up to 1 A, 24 VDCDPST, NC contact, latched	<ul style="list-style-type: none">Bushing: Ø22mmSolder lug terminalsUp to 6 000 cycles	<ul style="list-style-type: none">IP65, IP67, IP69K front sealedOperating temperature: -40 °C to +85 °CIK10 impact test	-
	IP series	<div>IPR3SAD2</div> <div>IPR3FAD2</div>	Compact front-mounted pushbuttons	<ul style="list-style-type: none">Up to 5 A, 28 VDCSPST, NO contact, momentary	<ul style="list-style-type: none">Bushing: Ø12 mmSolder lug, lying lead terminalsUp to 1 000 000 cycles	<ul style="list-style-type: none">IP67, IP69K front sealedOperating temperature: -40 °C to +85 °C	<div>Sealing boots:</div> <div>U5125</div>
	IZ series	<div>IZPR3S422</div>	Compact rear-mounted pushbuttons	<ul style="list-style-type: none">Up to 4 A, 28 VDCSPST, NO contact, momentary	<ul style="list-style-type: none">Bushing: Ø16 mmSolder lug terminalsUp to 1 000 000 cycles	<ul style="list-style-type: none">IP67 front sealedOperating temperature: -40 °C to +85 °C	-
	WP series	<div>WPS456G</div> <div>WPS452G</div>	Ø25 mm large high-performance pushbuttons	<ul style="list-style-type: none">Up to 4 A, 28 VDCDPDT, momentary	<ul style="list-style-type: none">Bushing: Ø22mmSolder lug terminalsUp to 50 000 cycles	<ul style="list-style-type: none">IP67, IP69K front sealedOperating temperature: -40 °C to +85 °C	<div>Switch guards:</div> <div>WPG122</div> <div>WPG126</div>
	13000x778 series	<div>13445-9X778</div> <div>13245-4X778</div> <div>13245-9X778</div> <div>13445-4X778</div> <div>13445-4X778-01</div>	Compact and rugged pushbuttons	<ul style="list-style-type: none">Up to 4 A, 28 VDCDPDT, momentary	<ul style="list-style-type: none">Bushing: Ø12 mmSolder lug, straight PC terminalsLong and short actuator	<ul style="list-style-type: none">IP67 sealed even when actuatedOperating temperature: -40 °C to +85 °C	<div>Sealing boots:</div> <div>N33261005</div>
INDICATORS	QRM-NV series	<div>QRM-NV85BXXNV-GRA02E</div> <div>QRM85BXXG28E</div>	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 mmRigid Pins terminalsUp to 100 000 hours life	<ul style="list-style-type: none">IP67 sealedOperating temperature: -40 °C to +85 °C	-
THUMBSTICKS	TS series	<div>TS2R1U02A</div> <div>TS4A1S00A</div>	Proportional thumbsticks	<ul style="list-style-type: none">Supply 5 VDC - 12mAAnalog ratiometric outputUSB and PWM output	<ul style="list-style-type: none">X and Y axis Endurance: 1M cyclesPushbutton endurance: 100k cyclesPlastic and metal housing, silicon and neoprene boot	<ul style="list-style-type: none">IP67 sealing above panelOperating temperature: -40 °C to +85 °C	-
	MTG ASSY series	<div>MTG72AD2</div> <div>MTG92AD2</div>	Rocker thumbsticks	<ul style="list-style-type: none">Up to 4 A, 30 VDCSPDT, momentary or latched	<ul style="list-style-type: none">Bushing: Ø16,35 mmSolder lug terminalsUp to 100 000 cycles	<ul style="list-style-type: none">IP68 sealedOperating temperature: -40 °C to +85 °C	-
	NV series	<div>NVH1D1C0CP2S</div> <div>NVH1D1C1CP2S</div>	Switch-based thumbsticks	<ul style="list-style-type: none">Up to 50 mA, 12 VDCUp to 4 directions + validation	<ul style="list-style-type: none">Bushing: Ø16 mmConnector (Molex) terminalUp to 1 000 000 cycles	<ul style="list-style-type: none">IP67, IP69K front sealedIPX5, IPX7 rear sealingOperating temperature: -40 °C to +65 °C	-
KEYPADS/ HAND CONTROLLERS	PKR series	<div>PKR306</div>	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 DT04-4P3 million operations	<ul style="list-style-type: none">Sealing: IP67/IP69KOperating temperature: -40 °C to +70 °C	-
	PKI series	<div>PKI1226SI</div>	12-backlighted-key modular keypads	<ul style="list-style-type: none">12-24 VDCCANopen/J1939	<ul style="list-style-type: none">Standard connector: deutsch DT04-4P3 million operations	<ul style="list-style-type: none">Sealing: IP67/IP69KOperating temperature: -40 °C to +70 °C	-
	HC series	<div>HCW23</div>	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 bodyStainless fixingsConductive silicone gasket	<ul style="list-style-type: none">IP67 panel (IP68 box)Operating temperature: -40 °C to +85 °C	-