PRIMARY NETWORKS

i-Louvar Mini Series | ZX4

SPECIALISED COMPUTERS

> “74% smaller than it’s big brother, *the Louvar ZX3… but punches well* above it’s weight in this small, compact computer class segment of the market.”

An ultra small, compact, highly reliable User Access Device (PC / computer) certified for Naval and military use. Thin client configuration allows considerable options.

The i-Louvar Mini Series is based on the highly regarded and successful Louvar ZX3 series and comes from the same stable in respect to design and performance. The same engineering principles have been applied in its development to create an ultra compact PC / computer which despite it’s size, still remains rugged and meets all necessary shock, vibration and EMC criteria as required by naval and military users. With such a tiny footprint it can be used for thin client applications and it can be mounted anywhere including on the back of a monitor, on a desk or even attached to fixtures or bulkheads.

The GPS model allows for mobile options to include the mobile fleet, military vehicles, Land Rovers etc.

The i-Louvar Mini Series is designed for a specific task; it meets all environmental testing requirements and has a longer production life owing to higher quality selected components which are available for many years longer than commercial components.

It was quickly realised that by taking commercial machines and putting them in enclosures to meet Tempest and other environmental standards was an unreliable and inefficient solution.

The equipment was not sufficiently robust and as these commercial products kept changing specification then the final delivered solution became variable in terms of quality and functionality. This can significantly affect software builds, spare parts and total ownership costs.

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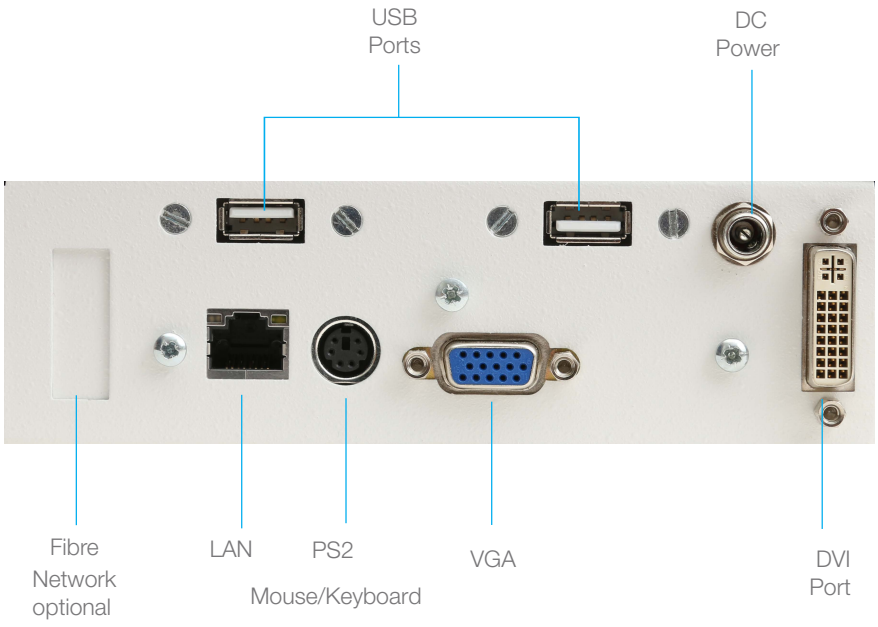
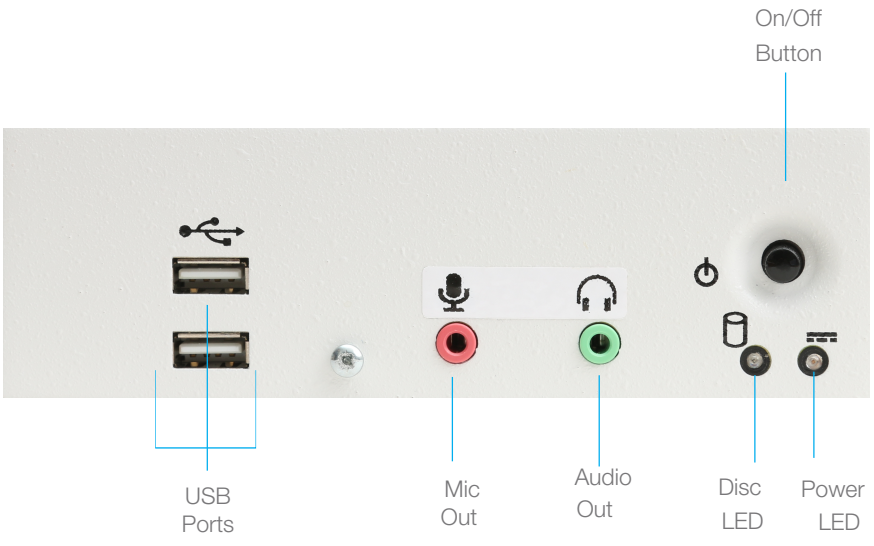
i-Louvar Mini Series ZX-4 brochure – full, issue 001

Key features

- Designed for a **harsh environment** with strict defence and environmental testing in mind
- **Shock, vibration** and **EMC tested** to meet Naval and defence standards.
- **Ultra small**, compact size – only 6 inches square and less than 2 inches high (15cm square and 5cm high).
- Fast processing thanks to a **powerful Intel processor**
- Fully **portable, compact and rugged**, can run on a 12v power supply as has low power consumption.
- **GPS option** allows the i-Louvar mini series to be used for mobile applications for military or services vehicles.
- Fully **sealed case** and requires virtually no maintenance so can be fitted into areas which are inaccessible.
- **DVI port** for connectivity to a wide choice of screens.
- DEF STAN, MIL STD and Tempest tested approved products available so secure network can run on NATO Secret information systems
- **Choice of mountings** from stacking brackets to wall mounts and desktop or monitor options.
- **Long life expectancy** with virtually zero failures, offers excellent Return on Investment (ROI)
- **Supports Windows 7, 8 and 10 operating systems as well as Linux**. Dedicated software can be quickly and easily loaded





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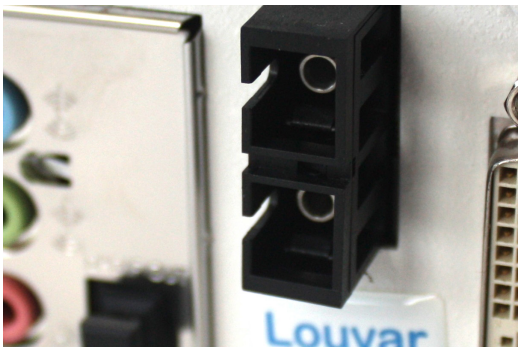
Easy installation on ships and instrument panels

High quality British design and manufacture



Secure and fast data transmission through fibre port connection

Features and benefits

General

- Naval User Access Device (PC/computer) designed for full integration into a ship, submarine or Naval vessel.
- Ready built 'standard configuration' pre-tested machines available.
- British design, test and build to ensure a highly engineered reliable product.
- Asset tagging – built into BIOS allows each machine to be assigned a reference so it can be easily identified on the network. Ideal for distributed software builds.

Environmental

- Enable the operation of a highly secure network to run on NATO Secret information systems with Tempest and Def Stan versions available.
- Ultra light – tough and rugged but weighing in at just 1.25Kg allows transportation if required and easy fitting into tight or awkward spaces.
- Temperature and humidity – meets current defence environmental standards.
- Documentation includes CE safety approval and full installation and instruction manual
- Hardened and tough semi-gloss paint finish protects chassis from chipping and gives a clean, fresh appearance. Light gray available plus 12 colours to choose from.

Security

- Fibre network connection 10/100/1000 mbps – for high speed and secure transmission of data.

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Low ownership cost makes financial sense

59 point plan for every Louvar leaving the factory

Identical build ensures stability and performance

Features and benefits (continued)

Performance

- Fast processing using Intel i3, i5 and i7 cpu's.
- Hardened tough hard drives selected provide rugged and shock protection. Optional Solid State Drives (SSD) are also available.
- External power supply allows an easy swap out without having to remove the cover from the machine (Tempest certified and other approved power supplies available).
- Quick and easy booting using C-Flash (no need for hard drive) for specific software applications.
- Mobile applications supported using WLan support with antenna enables GPS and Sat Nav software to provide a truly ruggedized mobile solution, ideal for emergency services and military vehicles.

Long Life and Reliability

- Rigorously tested before leaving factory with a 59 point check plan.
- Proven reliability in the field and an impressive pedigree in designs trusted by Navies around the world. Purchase risk minimised with 2 years standard warranty.
- Low total cost of ownership - long product availability – most Louvar products available for approximately 5 to 7 years. Ideal for long term builds and deployment enabling forward operational and financial planning. Significantly cuts the cost of ownership.
- Full audit trail of system includes component serial numbers for every machine.
- Identical build production runs with full audit trail – 'same machine from first to last' means no risk of different configurations and software build.
- Industrial grade components based on COT's standard components.
- Fast, easy maintenance – emergency component changes can be made easily using a simple screwdriver **

** The Louvar is not designed to have component changes throughout the life of the product. Opening the case may break tamper proof seals which may invalidate warranty and environmental testing criteria. In all cases check first with the manufacturer.

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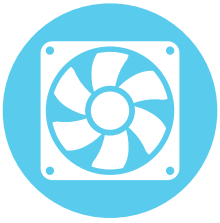
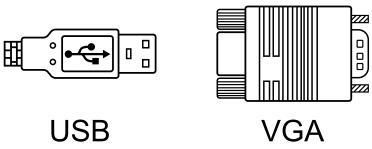
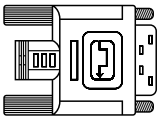
Low power consumption makes it ideal for military vehicles



Low heat generation thanks to low power keeps everything running cool





Supports all standard monitors

Mounting brackets allow strong fixings to multiple units

Flexible connectivity with a wide range of ports front and back.

Features and benefits (continued)

Power

- Multiple power options to include AC power (115v to 240v) or a DC 12v supply ideal for mobile units or for use in military vehicles.
- Recessed front power switch / reset button allows machine to be easily powered off and reduces risk of accidental knocks and pushes.

Green

- Stays cool, designed for maritime and naval environment, the Louvar stays cool even when packed in against other equipment.
- Environmentally friendly packing – 100% recyclable, minimal waste, maximum product protection, individually boxed, packed in units of 5 per outer carton makes transit to site easy and safe.
- Green credentials, low energy requirement, heat output is minimised due to efficient cooling and inherent low power of components.
- Wide power input – works anywhere in the world.

Connectivity

- Flexible connectivity, front and rear mounted ports for USB, VGA, DVI, RS232 and legacy PS2 for mice and keyboard connection.
- Monitor support for most screens using DVI–D or VGA connection or USB ports.

Fixing / Physical Mounting

- Mounting brackets - designed specifically for vertical and horizontal installation to include stacking to optimise storage space. Or desk mount using securing brackets to give rugged, safe and strong fixing (fittings kits included).
- External chassis fixing points for easy installation into instrument / equipment consoles, control panels, bulkheads, vehicles etc.

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Options

1. **Rackmount kit** - allows one to two Louvars with optional KVM switch to be mounted in a cabinet.

2. **Rackmount drawer, screen and keyboard** - to work in conjunction with the Rackmount kit.

3. **Mounting brackets/Deskmount kits** - these brackets enable the Louvar to be securely fixed to a desk or wall in a horizontal or vertical plane.

   Mounting brackets can be colour coded to match the machine or painted a different colour (up to 12 colours available). Each bracket set comes complete with fixing screws kit and instructions.

4. **Stacking kits** - these brackets allow multiple Louvars to be stacked horizontally or vertically and offer a compact space saving solution whilst offering a strong physical mounting.

5. **Tamperproof security screw fixings** - use with any of the mountings. Manufactured in stainless steel, alloy or case hardened steel, offer strength for high security applications. A custom key is cut to a unique specification allowing screws to be power driven when installing. The screw design means it repels all security bit tips and vice grips.

6. **Mobile applications*** - supported using optional WLan support with" antenna enables GPS and Sat Nav software to provide a truly ruggedized" mobile solution, ideal for emergency services and military vehicles." Software packages available for specific purposes.

7. **Fibre connection upgrade** - from standard 100FX fiber port to Gigabit (1000FX fiber port) to give faster transfer of secure information and reduce delays on high volume data or large file sizes.

* may require additional software

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Options (continued)

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8. **Secure encrypted USB ports** - allow authorised users only on specific machines.

9. **Extra mounting security** - using secure lock and cable to bolt to desk or bulkhead to protect other associated equipment as well.

10. **Storage media** - hard drive or solid state drive (SSD) - various sizes available.

11. **Screens, keyboards, mice, cables and KVM switches** - can be integrated into a comprehensive tested solution as required.

12. **Ports disabled** - selected ports may be secured, disabled or blanked.

13. **Choice of 12 colours available** - including light gray for the British Royal Navy.

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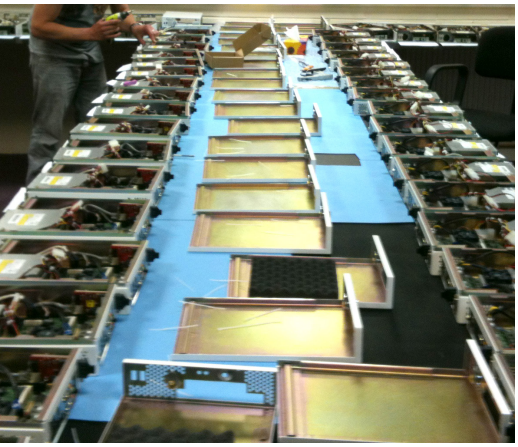
Fit it almost anywhere for naval and land based installations

Mobile applications ideal thanks to compact size and ruggedisation



Flexible methods allows manufacturing capacity from small runs to 1,000 per month or more

Applications

- On board Naval ships or submarines.
- Land based secure applications
- Commercial shipping needing secure and ruggedised computers
- Land cruising / safari
- Land / sea endurance situations
- Military vehicles or mobile units in the field

Testing / Environmental

The Louvar series is designed to reflect customer specific tests:

- Tempest NATO SDIP 27, level B
- DefStan
- Land Class A
- Below Decks
- MIL-STD 810G

Individual test certificates available for specific categories of test when requested.

Design Service

- The Louvar series is a bespoke design tailored for individual customers although standard configurations are available. Our expertise and custom design service enables a customer to have the exact machine built to suit their application. We recognise that sometimes a system needs to be built around a pre-existing piece of kit ie, unusual size, shape, mountings etc, and our design team will work hard to find a solution which can meet these criteria.
- A full design service includes a brief and initial prototype through to full manufacturing, test and delivery. This can include all aspects of specific testing such as Tempest or MIL-STD etc where our specialised knowledge ensures we deliver a machine fully certified to the customer specification.
- Identical build production runs ensures the specification and build is identical and totally ‘locked down’ eliminating any variables for software builds to maximise efficient deployment.

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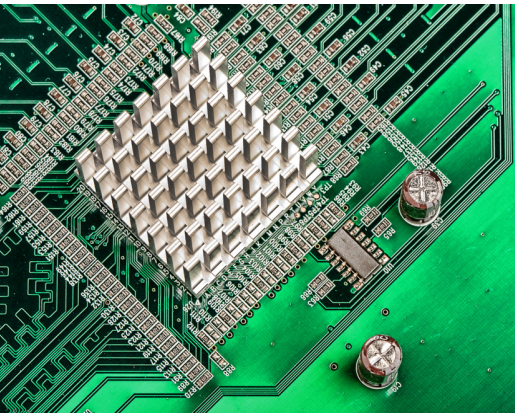
Global installation and support 365/24

User or support training courses available either on site or at our offices



Ongoing R and D ensures we can offer tried and tested solutions

Whole of Life Plan means we support you from end to end of the product life with options of upgrades and trade in's

Services

Installation - multi-disciplined installation engineers experienced in the marine environment are available to install the systems. Engineers have the appropriate security clearance to work in many dockyards or land based installations. Both new installations or vessel upgrades can be carried out around the world on request.

Global support - around the world ensures support is always close at hand.

Warranty - long standard warranty with optional policies available to give extended warranty life plan – gives peace of mind.

Extended spares programme - ensures guaranteed availability of spares and whole machines for an agreed period. Gives customers security in the knowledge that products can be operational for given time frames up to 10 years.

Training - for engineers or crew at customers premises or our offices.

Research and development - dedicated team to design, test and develop the next generation of systems whilst improving reliability and quality at every step.

Extended life support - enables deployment of systems over many years can be easily managed ensuring identical systems are installed helping keep costs of change to zero.

Trade in and recycling program* - a 'Whole of Life Plan' for life ownership enables a collection service to take products away from agreed locations in return for funding for new equipment. Full recycling of parts means environmental security from start to finish using the 'Circle 21' Plan

Purchase options** - Rent or Lease options available to spread capital expenditure cost and can include additional.

Repair programme *** - aims to extend product life with many product varients being able to be repaired. Upgrades can also be reviewed.

* equipment as supplied by Primary Networks

** not available all products

*** revalidation and testing may be required for certain repairs. Where different components are used then additional re-testing may be needed and this maybe uneconomic for small quantities. Contact the manufacturer to discuss.

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Services

- Design consultants
- Concept → design → prototype
- Manufacture, test and certification
- Shock, vibration and defence standard EMC, test and certification
- Training
- Projects - prime or sub-contractor
- Worldwide coverage

Products

- **Louvar ZX3 Series** - ruggedized, Naval certified PC's / computers
- **i-Louvar Mini Series** - ultra compact, thin client, Naval certified PC's / computers
- **Naval Ships Power Systems** - power trays and rack mounted comms trays to provide dual outputs with optimised EMC filters
- **Industrial Panel PC's** - ruggedized, certified and marinised:
  - Wide screen series, fanless, Intel quad core processor
  - Ultra slim series, fanless, Intel Atom processor
  - Heavy Duty Series, fanless, Intel Celeron processor
- **Ruggedised tablets and hand held devices**

Agents, Partners and Distributors

As part of our continued expansion programme we would be interested in speaking to Sales Agents, Partners and System Intergrators in key countries around the world who can help us achieve our aims.

A long established, professional company serving the defence sector:

- ISO 9001 quality management approved
- Investors in People certified
- ADS Group Member

We are proud to work with and supply:

ROYAL NAVY

Royal Netherlands Navy

First page quote, source: www.telegraph.co.uk › News › Politics › Conservative, 1 Oct 2014

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