

MARITIME SECURITY SOLUTIONS

PeaceofMind

A C O M P L E X L U X U R Y

Lifestyle and owner experience have always been central to Super Yacht design. However, in today's uncertain world, protecting that experience means that marine security has shifted from being an afterthought to an essential part of the design. *Peace of mind is the ultimate luxury.*

That's where MAST can help. We are one of the world's leading maritime security companies specialising in the design of security systems for Super Yachts and Commercial Shipping. Ours is not an off-the-shelf product; it is a bespoke. *Your vessel is unique - we build unique solutions.*

Imagine a Perfect Solution

Imagine a perfectly secure environment for owners, guests and crew. Complying with the ISPS code requirements would be a given. As an owner representative, you would also be seeking a solution that was:

All-embracing – a highly integrated solution including 'intelligent' CCTV, sophisticated passerelle access control, perimeter detection, electronic locking systems, emergency lock-down and intrusion detection.

Easy to use - sharing common displays and controls that are intuitive, consistent, easy to understand and operate. A solution designed for the real world of minimum manning and no dedicated security personnel.

Integration – for refits, you would expect integration with existing access control, fire alarm systems, messaging and communication services. Reliability and low maintenance from a single source.

MAST- the world's leading security provider for yachts

Owners, their representatives, *captains* and *shipyards* value the contribution MAST makes to Super Yacht security. As a supplier, we provide peace of mind by designing highly innovative solutions that are all-embracing, easy to use, fully integrated and reliable - all from a single source. More than that, we also add value through consultancy, whether we are the chosen hardware supplier or not. Our experts work with owner representatives and their project team all along the way, from concept - defining that perfect *'look and feel'* - through technical audits, build and acceptance testing to training and full ISPS accreditation. Total security that looks a million dollars.

All a very long way from traditional security integration that relies on off-the-shelf, standard kit. At MAST, we provide a complete security design and installation service. We own the problem. That's why we develop, design and manufacture our own smart technology, our own electronic circuitry.

PerimeterProtection

AUTOMATIC THREAT DETECTION, OBJECT TRACKING AND REPORTING, AT SEA AND ON LAND



The key to effective protection is to extend your security perimeter beyond the guardrail, possibly up to one hundred metres away. *An ideal system would include pre-set perimeters for ease of use: underway, at anchor and alongside.* The secret is to achieve minimal human involvement, without compromising security.

Objects entering the protection zone should be identified and tracked automatically, ideally with an option for audible alert messages using the vessel's UHF or DECT systems. Our own perimeter protection solution also uses unique tracking algorithms based on military technology, together with elements of artificial intelligence.

A truly smart system would provide reliable tracking of objects on water, using algorithms for video compensation when rocking and swelling. That would eliminate the need for expensive gyroscope-stabilized cameras. Clearly, it makes sense to use existing bridge displays and any additional smart displays used by CCTV. A visual map of the perimeter, displaying detected and tracked objects is a must.



PERIMETER PROTECTION - SECURITY ON LAND & SEA



When in port, intelligent electronic vigilance at the passerelle to detect and report unusual activity, becomes paramount. Access control systems at the gangway, supported by CCTV, should be designed to alert on attempts at unauthorised entry, ensuring that crew members and guests feel secure but not impeded.

Meanwhile, today's invisible electronic perimeter protection technology can detect individuals, groups of people and objects that may pose a security threat, alerting the on-watch crew's UHF or DECT devices. Outdated pressure sensors are no longer an option.

A modern system should adjust the area of surveillance automatically to compensate for tidal or other movement.

Most CCTV security systems are simply not designed for the special environment of a Super Yacht. The secret with CCTV is to provide full 360 degree coverage at distances from around five metres up to two hundred metres from the vessel. Cameras should be manufactured to full marine environmental specification. They need to be installed in all key locations throughout the vessel and should certainly incorporate low light capability, down to near complete darkness.

We would always recommend, in addition to traditional cameras, a security perimeter system that features bespoke camera blocks that use Pan Tilt Zoom, fixed day and night infra red cameras, together with linked infra red illuminators. Typically, these would be integrated sympathetically into the mast superstructure and the bridge wings.

An ideal configuration for displays would include two large screens integrated into the bridge console; one displaying camera locations and camera control, the other showing streamed video. The crew would also have screens in their mess and in the engine control room.



DoorAccess

ELECTRONIC LOCKS DESIGNED TO MARINE SPECIFICATION



The key to security has always been... the lock. Today, electronic locking systems offer so many advantages over mechanical devices, providing controllable access to cabins and compartments.

Electronic systems make selective access possible, depending on each person's security profile - whether crew or guest. They can monitor access for later scrutiny, with a full audit trail. Each lock can store thousands of audit events and access can be extended or restricted centrally.

A single electronic fob is more convenient than a bunch of keys - and contactless operation between key and lock is so much more in keeping with modern Super Yacht design. At MAST we recognise the importance of aesthetics, always selecting electronic locks that complement the exclusive interior design concepts of today's Super Yacht designers.



EmergencyLockDown

MOST REASSURING ELEMENT OF SUPER YACHT SECURITY



Emergency lock-down is perhaps the most reassuring element of Super Yacht security. In an emergency, it should be possible to lock all external doors from the bridge, all at the touch of a button. That should include existing sliding doors and water-tight doors. Modern systems make it possible to lock and unlock individual access, complete with real-time monitoring of the whole vessel. All this using intuitive on-screen graphics that show which doors are ajar, which closed but not locked, which are closed and locked - plus any doors that have failed to lock.

The whole process, of course, should incorporate the most advanced deck sensors for control. Our own sensors use innovative Digital Signal Processing technology, which means they need never be adjusted over the lifetime of the yacht. Again, reducing maintenance and increasing the crew's confidence in the system. Clearly, any such solution needs to be integrated with the vessel's fire and safety systems to allow safe exit and door override in case of fire emergency.

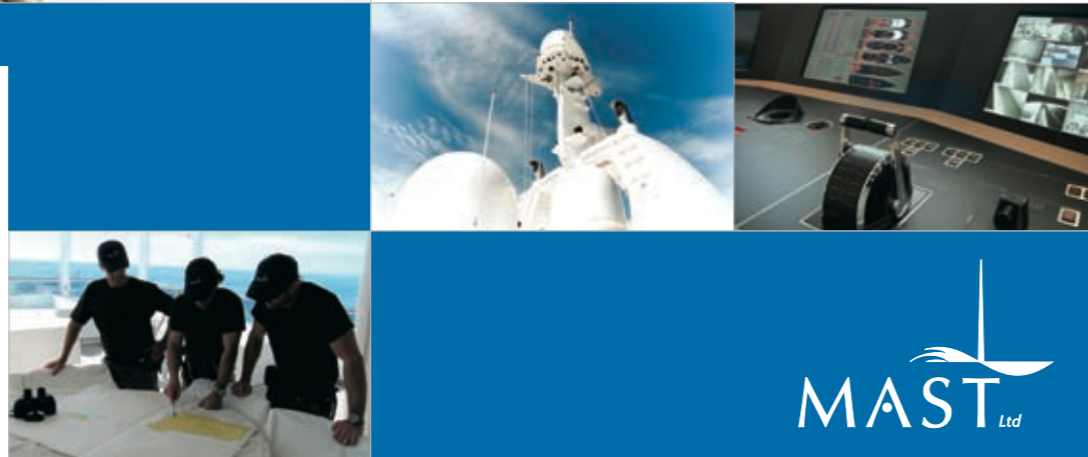




We are a leading maritime security company with a strong international presence and offices in the UK, Malta, Djibouti, Oman, Sri Lanka and South Africa.

MAST Technology is a company dedicated to the design and installation of bespoke security solutions for Super Yachts and commercial vessels and providing value through security consultancy, whether we are the chosen hardware supplier or not. Our experts have developed some of the world's most advanced technology solutions for marine security. That is why we have become first choice for so many large new build and yacht refit projects across Europe.

Your vessel is unique - we build unique solutions.



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