



Military Product Short-Form

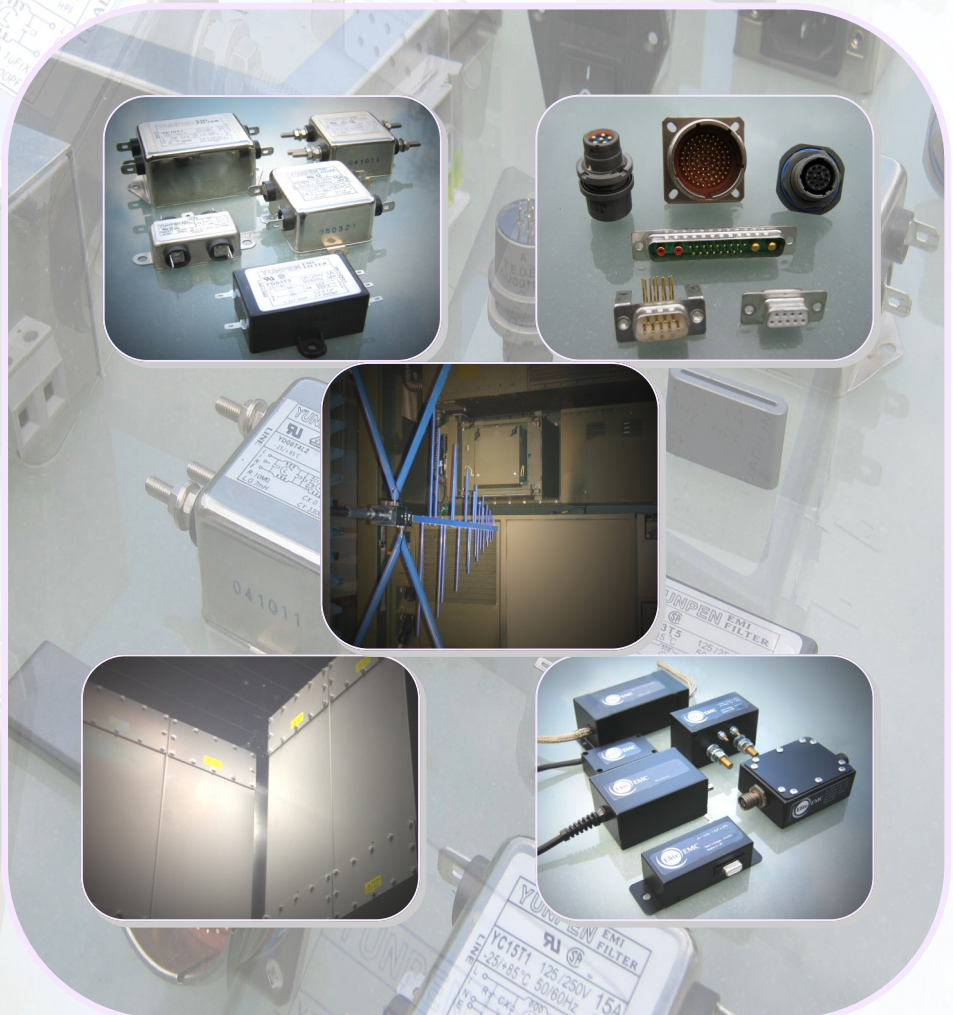




Elite EMC Overview

In today's modern world of complex engineering and electronic systems, EMC has never been so important. Here at Elite EMC, experience and knowledge are at the forefront of the service we provide.

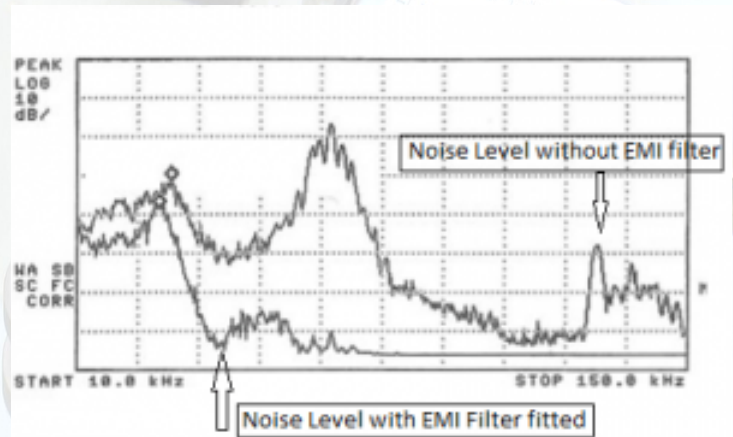
Elite EMC Ltd is a leading UK based manufacturer and supplier of EMI/RFI Filters, Filtered Power Supplies, Filtered Connectors and EMI Suppression Components and Systems. Supplying some of the major OEM, defence & aerospace contractors with both standard and custom filters and components tailored to their specific requirement. Staff with over 25 years' experience in providing EMC solutions enables us to design and supply products and solutions to your exact requirements.





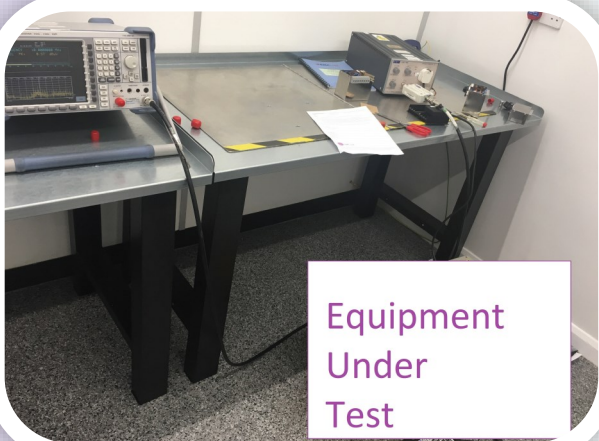
EMC Project Related Services

Engaging with Elite EMC early in your design phase can minimise EMC related delays and costly redesigns. We can advise on system design, architecture, cabling and connectors, PCB layout and test plans for best EMC practise. Working with your design engineers we offer advice at all stages of the manufacturing process from concept, prototyping, pre-compliance, manufacture, approvals and certification and finally obsolescence issues. Working within the customers budget and required specification we insure all components and systems meet even the harshest of requirements and standards.



Pre-Compliance and Evaluation

Elite EMC offers pre-compliance testing for Industrial and Military systems. Testing includes radiated and conducted emissions and immunity, electrical safety, environmental and system to system compatibility (CE + CE does not always equal CE). Upon completion of our testing we provide a detailed report of any issues and how to solve them as well as offering solutions from our custom filter range if required. Adequate Pre-Compliance testing and evaluation greatly improves the chances of gaining EMC certification first time.



Equipment
Under
Test



Military Vehicle Application Examples

COTS to MOTS (vehicle upgrade)

Standard Vehicles that have been selected for Military or government service are upgraded and equipped with high technology and sensitive sub-systems such as Radars, jammers and advanced radio equipment. The new systems are all susceptible to the vehicles standard operating systems such as indicators, HVAC blower motors, wiper motors, engine management system and so on. Elite EMC's filters are designed to provide protection from radiated and conducted signal and power lines and allow both the new and old systems to work harmoniously together which is critical during operations. Elite EMC have existing filters designed for all the above mentioned vehicle systems which can be customised to fit any required space envelope.



5V to 28V Vehicle Power Systems

When a commercial vehicle is converted for use within the Military or Government arena most of the newly installed systems require a separate power source. Elite EMC offer DC-DC Filtered Power Supplies specially designed for vehicle systems. Our DC-DC power supply units are completely customisable plug and play solutions. The integrated EMI filtering has been tested and approved to pass DEF-STAN 59-411 land class A EMI levels and MIL-STD-1275E as well as DEF-STAN 61-5 P6 Iss. 6





A comprehensive range of standard and custom EMI/RFI filtering solutions. For use in the harsh environments of Aerospace, Naval, Military and Defence applications. All ranges include standard off the shelf parts but with the option to customise the housing, filtering or I/O terminations.

High Reliability / Military & Aero EMI/RFI Solutions

Custom Filter Solutions



Custom Specific Filter Solutions designed to meet Military and Aerospace EMC approval.

Filtered Power Supplies



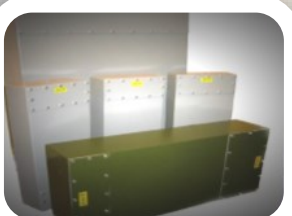
Standard and customisable Filtered Power Supplies (AC-DC and DC-DC) includes built-in EMI filtering and transient suppression.

R.F. / Microwave Filters



Custom Specific assemblies offering Multiple filtering options upto 50Ghz. Rapid prototyping available.

Single & Three Phase Power Filters



Standard and custom specific Power filters, up to 250A. Options include low earth leakage, transient and EMP suppression and I/O terminations

Feed-Through Capacitor Assemblies



Custom Assemblies offering EMI protection and a means of connecting to existing systems.

Connectors & Harnessing



EMI Filtered Connectors utilizing built-in ceramic capacitors to offer superior filtering performance.



Custom Filter Solutions

Custom as standard

In today's world of complex interacting systems and technologies, finding an "off the shelf" filter is not always possible. Custom solutions are thought of as costly not readily available. At Elite EMC we offer completely customer specific solutions as standard. Over many years we have designed and built filters for almost every market and application. We can then either tailor an existing filter to meet your requirements or start from scratch. Prototypes for EMC evaluation can be provided within a number of days and come with extremely competitive pricing.



Designed to pass

If you have failed EMC testing it can be a daunting experience especially if delays in the project could be the difference between a successful product launch or a missed deadline. At Elite EMC we can help ease the pain. In-house testing equipment allows us to design a custom filter based on your failure report to target the problem frequencies allowing us to offer a quick solution to meet your requirements and provide a rapid prototype for proof of concept.

Custom options:

- ◆ Tailored Filter Circuits
- ◆ Enclosure (Size, Material, Colour, Finish etc)
- ◆ Fuses / Circuit breakers
- ◆ Terminations or Cables and Harnesses
- ◆ Transient Protection
- ◆ Thermal management

Markets / approvals catered for:

- ◆ Military (59-411 Land Class A, B)
- ◆ Naval (Above and Below Deck)
- ◆ High Current / Power
- ◆ Aero (DO-160)
- ◆ MIL-STD-461
- ◆ AECTP-500



Plug and Play Filtered Power Supplies

Clean Power

Elite EMC Provide a range of customisable Filtered Power Supplies (AC-DC & DC-DC). We use existing parts and building blocks reducing lead-time and costs that allow us to offer completely customisable solutions that are designed to meet a range of Military and Defence standards. Test Data available.



Designed to Meet

- ♦ DO-160
- ♦ MIL-STD-461
- ♦ MIL-STD-1275
- ♦ DEF STAN 59-411
- ♦ DEF STAN 61-5 Part 6 Issue 6
- ♦ STANAG-4370

Features

- ♦ Wide input voltage range
- ♦ Single, Dual, triple outputs
- ♦ 3.3V, 5V, 12V, 15V, 18V, 28V as standard, others on request
- ♦ Integrated EMI Filtering
- ♦ Completely customisable
- ♦ Optional cables and accessories
- ♦ Various pricing scales / options
- ♦ Rapid Prototypes



R.F. / Microwave Filters

Tailored Solutions

If we are unable to solve your RFI issues with one of our COTS RF and Microwave filters we can tailor a filter to match your exact requirements. Using sophisticated design and simulation software, all new designs are “right first time” allowing the design to move from the computer to the machine shop without causing unnecessary delays to product approval.



Filter types:

- ♦ Bandpass
- ♦ Bandstop
- ♦ Lowpass
- ♦ Highpass
- ♦ Multiple-Function



We supply specialist, non-standard items to the Defence, Aerospace, Marine, Satellite Communications, Commercial and High Power segments of the Markets.

Our expertise covers ‘Build to Print’ from customers drawings through Design, Manufacture & Test up to 50 GHz.

Our Designs are appropriate to the clients individual specification.

Production is in a tightly controlled environment, utilising the latest CNC Milling and Turning machines, Bending, Brazing and Assembly.

No MOQ's for custom assemblies.

Re-tuning of existing parts allow us to offer semi-custom options for rapid prototyping.



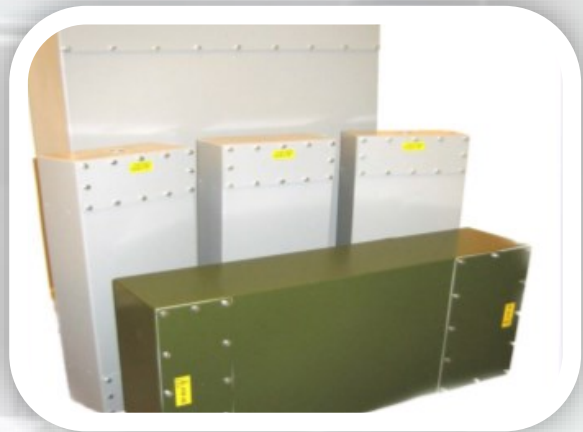
Single and Three Phase Power Filters

Elite EMC's Range of high performance EMP screened room filters have been specifically designed for use on shielded room and military shelter applications. Available in single, three phase, four line and DC formats with current ranges from 6A to 250A.

An enhanced range allows for low earth leakage, transient protection and EMP protection to be accommodated within the design of your specified filter package.

Our filters are designed using high performance current compensating inductors or coupled chokes, allowing full insertion loss performance without causing saturation of the inductor and a tail off in performance. Used in conjunction with self healing capacitors throughout, our filters provide a quality high performance filtering solution to screened room and shelter requirements.

EMP filters meeting the requirements of DEF STAN 59-411 and MIL STD 461 G. All lines have individual input inductors to offer superior transient handling performance and also coupled inductors to offer superior continuous wave EMC performance. All lines are fitted with high-energy varistor transient and gas discharge tube suppressors.





Feed-Through Capacitor Assemblies

A Custom Filter Plate

Our Feed-through assemblies offer excellent EMI suppression via the caps along with a defined bulkhead for mounting and RF isolation proving a clean gateway for signal and powerlines combined with a connection method for ancillary systems to mate with. Designed specifically to meet your required specification we can tailor almost any combination of high or low power lines with signal lines even including Ethernet or USB ports.



Pre or Post Production

Feed-through assemblies can be designed either pre or post production of the end application. Almost any space, shape and size requirements can be met as long as there is space for the filtering. Terminations can include cables and connectors or simple mounting studs. The fully sealed or potted units are ideal for harsh environments including high shock and vibration applications.

Custom options:

- ♦ Selective Line Filtering
- ♦ Mix Power and Signal lines
- ♦ AC and / Or DC line options
- ♦ Terminations or Cables and Harnesses
- ♦ Enclosure (Size, Material, Colour, Finish etc)

Applications

- ♦ Rail
- ♦ Naval
- ♦ Instrumentation
- ♦ Military Vehicles
- ♦ Power Supplies (AC/DC)



Connectors and Harnessing Solutions

Cables & Harnessing

A whole system can fail EMC testing due to the connectors or harnessing providing cross talk paths for noise. At Elite EMC we can offer a complete service from concept design through to manufacture and supply. Designs to meet the harshest environments and applications can be provided from an early design stage or to improve a current system to meet Military Standards.



Filtered Connectors

Utilizing built-in Ceramic Capacitors, Filtered Connectors offer excellent EMI protection and meet all the same electrical, mechanical and environmental standards as unfiltered Mil-DTL connectors. An ideal post design solution without the need to re-spin PCB's or when space within an enclosure is an issue. Built-in transient protection also available.



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|-----------------|----------------|
| ♦ MIL-DTL-38999 | ♦ CIRCULAR |
| ♦ MIL-DTL-5015 | ♦ ARINC |
| ♦ MIL-DTL-26482 | ♦ D-SUB |
| ♦ MIL-DTL-55116 | ♦ CUSTOM SHELL |
| ♦ MIL-DTL83513 | ♦ Composite |



Products

- EMI Filter Solutions
- Custom Specific Filters
- Powerline Filters (upto 250A)
- RF / Microwave Filters
- Connectors and Harness solutions
- Feed-Through Capacitor Assemblies

Application examples

- Military Vehicles
- Naval Vessels
- Military Aircraft
- Commercial Aircraft
- Radio Frequency Applications
- I.T. systems and base stations

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