

Full Year Results

for Financial Year to 31st May 2023

Richard Gibbs, CEO Michael Tyerman, CFO



filtronic.com





- 1. Executive Overview
- 2. Financial Review
- 3. Operational Review
- 4. Strategy & Growth Update
- 5. Summary







Executive Overview

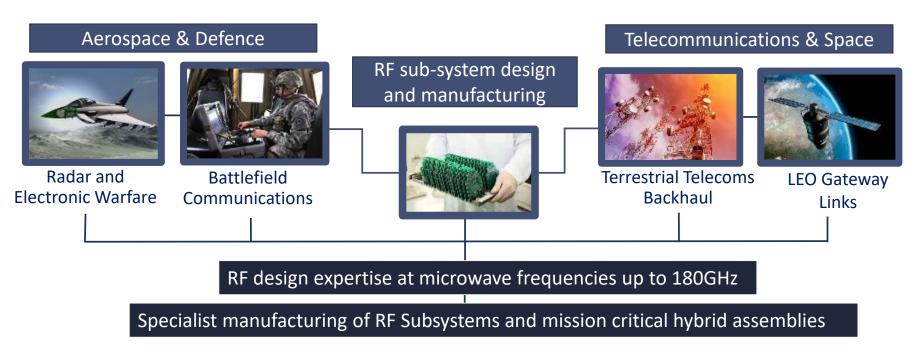




Overview



Filtronic plc is a **designer** and **manufacturer** of advanced RF communications products serving four strategic markets:



- Flexible UK / USA manufacturing resources allowing OEMs to quickly scale to volume
- Accredited manufacturing facilities with robust security, proven processes and full traceability
- Order fulfilment options include turn-key design and manufacture, OSAT (outsourced assembly & test)

-√/////

Full Year Highlights



£16.3m (-5%)

Adjusted EBITDA*



Adjusted operating profit**

£0.2m



Cash at bank

£2.6m



Net cash (net of all lease obligations except right of use property lease)

£1.6m



- Adjusted EBITDA is earnings before interest, taxation, depreciation, amortisation and exceptional items.
- ** Adjusted operating profit is operating profit/(loss)

- Revenue impacted by global semiconductor component shortages. Strong order intake from our lead telecommunications infrastructure customer to ramp up supply ready for India deployment.
- First contract win with market leading LEO provider for £2.3m and a post yearend contract win with the European Space Agency for £3.2m.
- Morpheus X2 product released which doubles the transmission range; production order secured for £0.9m from lead customer.
- Two new DSTL contracts secured in the year along with a series of other contract wins totalling over £2.0m.
- Achieved IASME Governance Gold.
- Continuing to develop our R&D and sales and marketing organisations to drive top line growth.
- ESG strategy formalised and published on the Filtronic website.

filtronic.com -



Financial Summary





filtronic.com

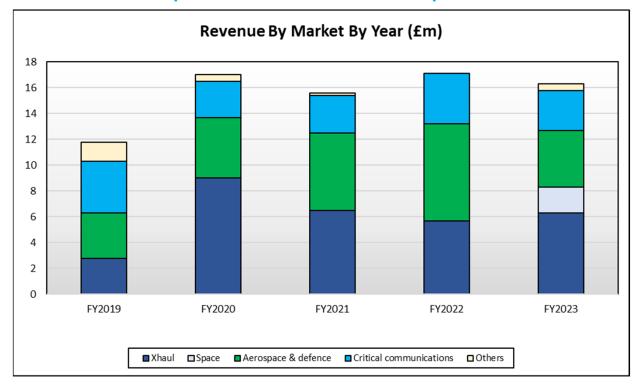
Revenue: Reduction of 5% against FY2022



Added maiden Low Earth Orbit client which reduces customer concentration

Key strategic objective:

Continue to develop customer base outside of top three customers



Group revenue £16.3m (2022: £17.1m)

- 5G rollouts generating strong demand despite component shortages impacting revenue in the year.
 Other Xhaul sales lower than FY2022 but more than offset by space market growth.
- Aerospace & defence project hiatus but good prospects for other projects.
- Critical communications impacted by our lead customer having component issues in their systemlevel product. Good success with the TTA and demand recovery already underway.

5% reduction against FY2022

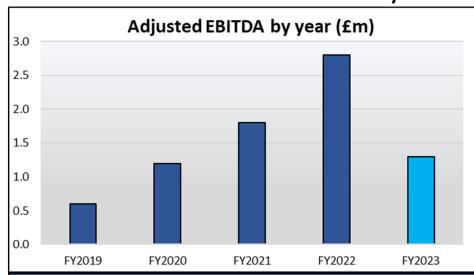
- Xhaul including Space: Increased 40% vs FY2022 with 5G rollouts and inventory stocking gathering pace.
- Defence: Decrease of 41% vs FY2022.
- Critical comms: 20% revenue decline vs FY2022.

 \sqrt{M}

Continued Profitability and EBITDA Generation



Profitability also impacted by supply chain issues



Full year results (£m)				
	FY2023	FY2022	Change	
Revenue	16.3	17.1	(5%)	
COGS	(6.0)	(5.6)	(6%)	
Operating costs	(10.0)	(9.4)	(6%)	
Exceptional items	0.0	0.4	100%	
Operating profit (Adjusted)	0.2	1.6	(85%)	
EBITDA (Adjusted)	1.3	2.8	(55%)	

- Weaker sales mix with a higher concentration of 5G backhaul product - COGS 6% higher despite revenue decrease of 5%.
- Investment in sales channels and engineering 'bench strength' increased the overhead cost base by 6% to £10.0m to support top line growth.
- Adjusted EBITDA fell by 55% to £1.3m impacted by lower revenue from component supply chain issues.
- EBITDA margin was 8% reflecting lower revenue, sales mix and investment in revenue growth.
 - Cost base can support higher levels of turnover as we scale which will improve profitability as revenues increase. Core objective to grow EBITDA margin.

Balance sheet



	May-23	May-22
	£m	£m
Goodwill and intangible assets	1.8	1.5
Right of use assets	2.9	2.3
Property, plant and equipment	1.4	0.7
Deferred tax	1.3	0.8
Non-current assets	7.4	5.3
Inventory	2.8	2.6
Trade and other receivables	5.3	4.5
Cash and cash equivalents	2.6	4.0
Current Assets	10.7	11.1
Trade creditors and other payables	3.7	3.0
Provisions	0.4	0.3
Deferred income	0.2	0.3
Lease liabilities	2.3	1.8
Total liabilities	6.6	5.4
Net assets	11.5	11.0
Share capital and reserves	11.5	11.0

Capital expenditure

• Large capex spend in Q4 FY2023 for plastic encapsulation equipment and key engineering test equipment to support aerospace and defence work and space applications.

Right of use assets

 Increase relates to the property leases that were entered into during the period in Salisbury, Yeadon and Manchester.
 Offset seen through increase in lease liabilities.

Capitalised development costs

- Execution of the strategic plan and technology roadmap have led to capitalisation of development costs in line with IAS38.
 - W-band chipset development
 - Space market product development

Inventory

Inventory has grown to support core product offerings in Q1

Debtors and creditors

• All within terms and in-line with industry standard.

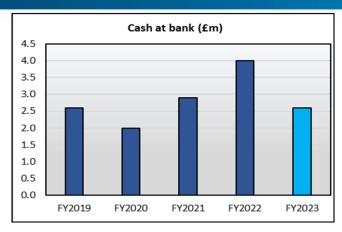
Cash



	May-23	May-22
	£m	£m
Net cash generated from operating activities	1.0	2.3
Net cash used in investing activities	(1.5)	(0.2)
Net cash used in financing activities	(0.9)	(1.0)
Movement in cash and cash equivalents	(1.4)	1.1
Currency exchange movement	0.0	0.0
Opening cash and cash equivalents	4.0	2.9
Closing cash and cash equivalents	2.6	4.0



- The Group generated £1.0m in operating activities: EBITDA generation offset by working capital movement with increased inventory holding.
- Investments in product development, capital expenditure and repayment of lease liabilities saw outflow of £2.4m.
- £1.4m total cash outflow in FY2024.



Cash position healthy to maintain investment in growth

- £2.6m cash at bank at 31 May 2023 (2022: £4.0m).
- A healthy cash position to maintain investment in growth.
- Undrawn invoice discounting debt facilities available - £3.0m Barclays and \$4.0m Wells Fargo.

-√////

Revenue and EBITDA – outlook



- Number of aerospace & defence opportunities at key strategic targets.
 - Looking to grow opportunities outside of our lead customer.
 - Number of smaller contract wins in period.
- LEO space market momentum building:
 - Key players and well-funded disruptors generating a healthy pipeline of opportunity.
 - Contract win with a market leading LEO company for £2.3m.
 - Recent contract win with the European Space Agency for £3.2m.
- Telecommunications infrastructure good momentum in FY2023
 - Quality of earnings is not as strong as other markets.
 - Key market to drive the technology roadmap.
 - Prominent telecoms OEMs issue profit warnings in July and concerns regarding credit worthiness of Indian operators.
- Critical communications seeing demand recovery in FY2024.
 - Good traction with the TTA products having built relationships with project teams.
- Continued investment in R&D activities and the sales channels will increase the overhead cost base further but will drive top level growth.

-√/////







Operational Summary

Recent Business Highlights



- Delivered (£2.3m) Tarsus E-band SSPA modules to a global provider of low earth orbit ("LEO") satellites for E-band right-of-use trials
- ESA ARTES contract (€3.7m) for the development of multifrequency transceiver technology for satellite payload feeder links
- DTEP (Defence Technology Exploitation Program) funding £175k to support delivery of plastic encapsulated QFN devices for aerospace applications including next generation radar
- Won production orders (>£1.0m) from two new Private Telecommunication customers
- Third DSTL contract award for phase 1 of tuneable filters the development programme
- Continued to build close relationships with MoD / DSTL / UK Space / ESA and other agencies
- Launched 12 new products including 3 filter platforms, Cerus SSPA family and Morpheus X2
- Achieved IASME Governance Gold accreditation improving ability to win sensitive defence work
- Managed through component supply chain issues which show signs of improvement in FY2024



Building Momentum – Aerospace & Defence





Future Electronic Warfare (EW) platforms will incorporate multiple RF comms and sensing solutions



Hybrid TRM Modules
filtronic.com

Filters and Switch Filter Banks



Battlefield Comms Solutions

The Aerospace & Defence landscape has a wide variety of RF sensor and RF communication applications and a need for sovereign capability

UK **Aerospace** primes making strategic decisions regarding technology and manufacturing partners

- Visibility of repeat export orders for existing Typhoon radar platforms
- Funding released for the UK Typhoon fleet radar upgrade programme
- Next generation air/shipborne radar platforms in advanced design phase
- Filtronic involved in sovereign semiconductor supply chain discussions
- Investment in plastic encapsulation technology for aerospace hybrids
- Building strategic customer relationships with UK primes and UK MoD
- Target Applications: Radar, electronic warfare (EW) and missile guidance

UK **Defence** primes lack critical RF design resources and the ability to scale manufacturing

- Ukraine conflict driving focus on resilience of battlefield communications
- DSTL development programme a good platform for IP development
- Primes actively developing strategic partnerships with UK SMEs
- High level of support to create UK sovereign supply chains and capability
- Building strong relationships with UK defence primes and MoD / DSTL
- Target applications: Battlefield comms and electronic warfare (EW)



Building Momentum – Telecom & Space





Cerus SSPA platform

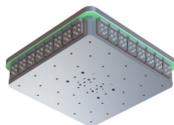


Cerus 8 telecom (SSPA) Solid State Amplifier

filtronic.com



Cerus 16 Gateway SSPA + control board



Cerus 32 (concept) Gateway SSPA

5G terrestrial telecom infrastructure build and commercial LEO space investment build opportunity for Filtronic technology:

Global 5G deployment continues – but slowed by economic headwinds

- Consumer demand drives a migration to higher frequency bands in telecom backhaul links
- Countries with underdeveloped infrastructure create demand for RF backhaul solutions
- India 5G deployment slowed due to financial pressures at licence holders
- Opportunities for differentiation with higher performance transceivers
- Private telecom network providers drive customised transceiver solutions

Convergence of terrestrial telecoms and LEO space communications

- LEO satellite constellation investment accelerating with robust business models being developed
- Network capacity is driving the licencing of higher frequency bands for gateway connectivity
- LEO space applications can use modified commercial telecoms technology
- · Sovereign security in space creating high level of government investment
- Global technology companies are driving innovation and cost reduction
- Filtronic power combining IP allows rapid development of custom SSPAs
- Agile development and manufacturing is a key differentiator for Filtronic











Market Dynamics













	Telecommunications Infrastructure (<i>X-haul</i>)	
Primary Applications	 E-band backhaul transceivers for 5G telecoms infrastructure Private telecom solutions 	
Market Growth Rate	 5G V/E-band Backhaul growth: 20% p/a CY2023-28* 2023/24 outlook less optimistic 	
Market Drivers	 Global 5G telecoms rollout Release of E-band licences High density urban networks Low installed fibre in backhaul 	
Filtronic USP	Partnership with market leaderQuality /reputation / brand	,

LEO Space

(Gateway Links)

LEO Gateway communication

>60,000 LEO satellites by 2029*

OneWeb (EU) + Private Network

constellations (US) set the pace

Ubiquitous broadband access

Release of Q/V E-band licences

Economic network coverage

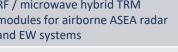
Future operating revenues

links – payload and ground

station

•	RF / microwave hybrid TRM modules for airborne ASEA radar and EW systems	
	and Evv systems	
	C750	

(Radar and EW)



- £750m EW defence budget* • £16.5bn increase in UK Defence Spending CY2020-24*
- Outsourced RF design capability
- Sovereign OSAT hybrid facility
- UK Defence Strategy / Exports

Defence (EW Cyber and ECM)

- Battlefield communications
- EW and Cyber applications • Electronic Counter Measures
- £850m defence Comms budget
- £6.6b DSTL 5-year S&T budget*
- Outsourced RF design & build
- Sovereign OSAT hybrid facility
- UK Defence Strategy
- Introduction of LTE solutions
- Integration LTE LMR solutions

- Proven IP / Performance
- History of volume delivery

*Dell'Oro Backhaul 5-Year Forecast (July 2023)

- Partnership with market leader • Tx /Rx Power SSPA performance
- Telecoms reputation / cost
- Volume manufacture + ramp-up

* Ref: Research and Markets (Mar 2022)

- Partnership with market leaders
- Accredited UK RF hybrid facility
- Strong RF design / DFM support
- Manufacturing processes
- Cyber security accreditation * Ref: Defence Budge (April 2023)
- Partnership with DSTL / DASA
- Accredited UK hybrid facility
- RF design / DFM support
- Manufacturing processes
- Cyber security accreditation • Ref: DSTL Spending Review (Nov 2022)

Critical Communications

(LMR Networks)

- Subsystems for LMR secure public safety / first responder communications networks
- LMR market growth: 7% p/a CY2022-26*
- Reliability of P25 LMR solutions
- Upgrade + MRO installed base
- Partnership with market leader
- Quality /reputation / brand
- US manufacturing facility



Key Investments in FY2024



Business Activity	Investments and Progress Against Objectives
Sales and marketing	 Additional BD hire planned in H1 FY2024 targeting aerospace & defence and space market opportunities. Expanding the trade exhibition coverage. Further investment in the CRM tool. New reps planned in Europe and the rest of the world expanding our indirect channels. Raise brand awareness.
Engineering (R&D)	 Plans to recruit additional engineers. Augment the team with more graduates and commence an apprenticeship programme. Continue development of W-band MMIC chipsets and space related products for ground stations and payload. Manufacturing process for plastic encapsulation will be developed. Number of grant funding channels identified to support the technology roadmap with several already secured. Capex for test capability to further support Ka, Q and V-band engineering developments.
Operations and business processes	 Gap analysis of ISO27001 as we look to further augment our cyber credentials. AS9100 standard under review. Penetration testing demonstrated we have a robust system but will increase the cadence. MRP system due for implementation in Q2 FY2024.

filtronic.com



Summary





Summary



Filtronic continues to build momentum

- Focused on four strategic verticals terrestrial telecoms, aerospace & defence and LEO space
 - Well positioned in markets where we can differentiate, add value and command sustainable margins
 - Strengthening sales and engineering to open the aperture on new business opportunities
 - Delivering our technology roadmap, creating IP and developing innovative products
 - Building relationships with agencies and funding bodies to access strategic programs
 - Driving our plan to development facilities, people and business processes
 - New customers offsetting the declining demand for legacy products
- Good alignment with the UK Government investment priorities UK defence sovereign supply chains space
- Strategic vertical markets remain generally robust despite geopolitical pressures and economic uncertainty
- Resources in place to deliver a strategic plan designed for revenue growth and shareholder value
- Strong orderbook and opportunity pipeline heading into FY2024
- Positive trading outlook for the medium term



Enabling the future of RF Microwave and mmWave communications

Creating value for our stakeholders through technology leadership

filtranic com



Appendices

Income statement



FY2023		FY2022
	£000	£000
Revenue from goods and services	15,362	16,580
Revenue from non-recurring engineering (NRE)	906	472
Revenue	16,268	17,052
Material costs of goods sold	5,992	5,645
Staff costs	6,859	6,416
Depreciation, amortisation and impairment	1,033	1,223
Other operating income	(187)	(329)
Other expenses	2,334	2,122
Total operating costs	10,039	9,432
Operating profit	237	1,975
Exceptional items	0	(391)
Adjusted operating profit	237	1,584
Depreciation, amortisation and impairment	1,033	1,223
Adjusted EBITDA	1,270	2,807
att i tenima		4.00/

Adjusted EBITDA margin	8%	16%
------------------------	----	-----

Telecoms Infrastructure





- Strong demand for 5G performance over the next 5 years and high frequency E-band backhaul will be a key enabler for true 5G network deployment
- Filtronic has a long history in the design and manufacturing of Xhaul communications equipment at Q/V and E-band frequencies
- Owning the core mmIC chip-sets allows us to differentiate product offerings and offer enhanced product performance
- New customer driven E-band products launched in FY2023 higher power, lower latency and flexible form factors 2x transmit power / 12km transmission distance
- Future telecom infrastructure will integrate HAPS and LEO satellites with terrestrial networks E-band is a logical frequency to enable backhaul convergence

 mmic development in progress to deliver higher performance PA's more and open up extended telecom frequency bands at W-band and D-band



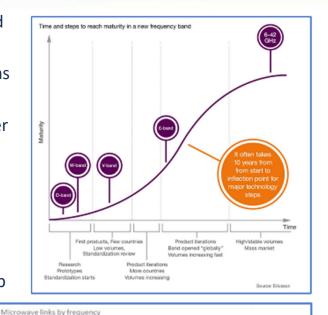
Morpheus II - XHaul Module - Dec 2022

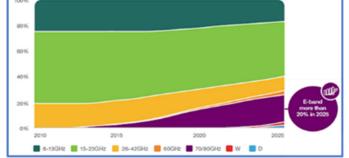


Hades - Active Diplexer - June 2022



Hercules II - Xhaul Module in development







Aerospace & Defence





- UK Gov defence spending 2.5% of GDP £32b p/a (EW operational spend = £629m p/a)
- The MoD has announced £2.4b funding to develop the next generation ECRS radar system for upgrade of the current UK Typhoon fleet
- The UK fully committed to Tempest a next generation fast jet platform that will incorporate leading edge electronic warfare solutions
- DSTL programs offer entry level funding for products that ultimately form part of future defence spending requirements ... 5-year budget for S&T £6.6b
- Filtronic secure facilities have a unique combination of filter design, MMIC design, RF sub-system design and hybrid assembly & test for EW applications
- Established security accreditations and robust manufacturing processes allow Filtronic to work on UK classified defence programs



Switch Filterbanks for Radar and Comms filtronic.com

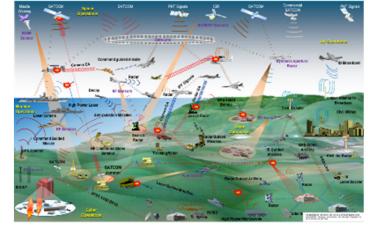


RF Communication Test Systems



Plastic encapsulation and SiP Modules

Radar Hybrid and SiP Modules





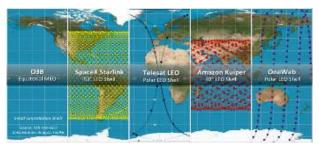


HAPS and LEO Space





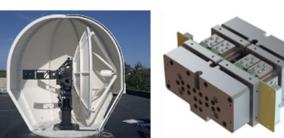
- Tech billionaires driving the rapid convergence of satellite and terrestrial telecom networks to provide global ubiquitous network coverage
- The global race to build infrastructure and secure capacity is accelerating UK and EU investment strategy in LEO communications
- Filtronic successfully developed and deployed two separate E-band HAPS solutions for West Coast technology companies ... proved our ability to develop and scale technology
- The configurable Cerus solid state amplifier (SSPA) the ideal platform for ground-based base station antenna applications ... Cerus32 module family currently in development
- High levels of IP reuse possible across different LEO satellite platforms and constellations with core IP developed for terrestrial telecoms
- Satellite payload communication systems require a level of space qualification ... the ESA ARTES project will accelerate this design and certification



Good engagement with major HAPS and LEO consortiums

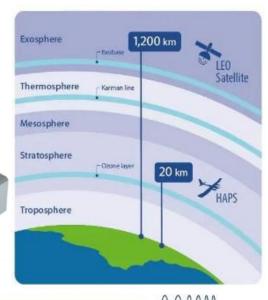


First E-band Ground Station links licenced in North America



Cerus16 Power Module with control board





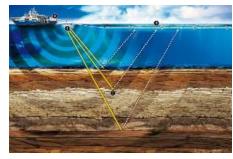


Adjacent Market Applications





- Filtronic investment in core semiconductor technology coupled with a hybrid manufacturing capability for Aerospace and Defence, Telecom and Critical Communications enables access to adjacent high reliability markets
- Selectively pursuing adjacent markets helps to diversify customer base, justify capital investment and fill available manufacturing capacity
- Opportunities assessed on available capacity, engineering resource, competitive overlap, opportunity to develop process IP and potential to deliver volume
- Turn-key hybrid manufacturing (OSAT) utilising Filtronic design rules enable control of the supply chain and retention of Filtronic manufacturing IP and know-how
- Exploring to opportunities to form strategic engineering partnership agreements with target telecom and defence primes who need to secure on shore capability
- Private network opportunities in Track to Train, High Frequency Trading, Last Mile Connectivity, Security & Border Control and Industrial Controls



Seismic Sensor Hybrids for Oil & Gas prospecting



Customised and scalable SSPA solutions



Quantum Computing Cryogenic Filters



RF Design + OSAT Services



Strategy & Growth – markets / applications update



Vertical Market & Appl	lication
------------------------	----------

Progress in 1st year

Target mid term

Current Update

Next Steps



AerospaceRadar and EW

- TRM + filter development contracts for MKII upgrade.
- TRM + filter research and for next gen radar - Tempest
- Consolidate business model for hybrid manufacturing
- Tx Rx Module + filter prototype for MKII upgrade.
- TRM + filter research and for next gen radar - Tempest
- Portfolio of OEM customers for CMS and OSAT services
- module for MkII upgrade
 8 separate filter projects delivered to defence primes

Investments made in QFN

- Completed Tx module prototype for next gen radar
- Qualification of prototypes for MKII radar upgrade.
- TRM + filter qualification for next gen radar - Tempest
- Turnkey OSAT* offering for UK Defence OEMs



UK DefenceBattlefield
Comms

- Achieve full security accreditation for Leeds site
- Filtering process for UK DSTL SME programmes
- Complete battlefield comms project design and initial build
- Support development of emerging 900MHz product
- Win TTA orders with Tier 1 LMR providers in US/ Europe
- Establish flexible 3rd party filter design relationship
- First DSTL program qualified for MoD procurement list
- Two new DSTL program wins for prototype development
- First choice filter design house for three UK primes
- Develop portfolio of DSTL / MoD products for Wireless Battlefield Communications
- Secure radar subsystem design contracts currently under consideration



TelecomsTerrestrial 5G
Infrastructure

- Promote superior Morpheus power performance to tier 1's
- Secure funding for mmWave development program
- Start mmic design for W-band in accordance with roadmap
- Develop E-band active SiP/ active diplexer solution
- Develop Track to Train solution based on UK trials
- Move test equipment development to production
- Launched Hades diplexer
- Orders for Morpheus X2
- First pass at W-band chipset design – promising results
- Multiple design wins for private telecom solutions
- Develop W-band transceiver and active diplexer for lead customer.
- Develop D-band project plan in conjunction with lead customer(s)



LEO SpaceGateway links

- Look for fast turn OSAT business opportunities that can provide space heritage
- Promote IP developed as part of initial HAP's engagements to LEO constellation OEMs
- Align Filtronic with low Earth Orbit OEMs for development of gen 2
- Development of 10w PA for volume manufacturing
- Play active role in HAPS
 Alliance to promote E har
- Alliance to promote E-band
- Success in consortium bids for commercial LEO programs
- Launched scalable Cerus SSPA product platform
- E-band proven as viable frequency for LEO backhaul
- Build on relationships with LEO primes and agencies
- Develop qualified payload solutions at E / V band
- Win LEO backhaul programs with standard product set



Strategy & Growth – operations / capability update



			_		
R	ııcır	less	-111	act.	ınn
_	usii	ICSS	ıuı	ILL	IUII

Progress in 1st year

Target near term

Current Update > Target long term



Sales & Marketing

- Build the roster of sales reps in North America
- Develop direct sales network in Europe / Israel
- Relaunch the Filtronic brand and build online presence
- Expand UK defence sales and business development team
- Build CRM tool capability and develop sales methodology
- Engage in selected technical associations + industry groups
- Full BD team driving strong opportunity pipeline >£80m
- Good engagement in UK agencies ESA / DSTL / DTEP
- Complete representative network in US and EU
- Bring Channel Management skills into the company
- Develop technical proposal/ grant application writing team



Engineering

- Build stronger programme management organisation so we can scale design programs
- Strengthen inhouse SIP design and engineering capability
- Build OEM engineering links
- Build alignment with key UK universities specialising in RF subsystem design
- Engage engineering staff in technical associations + industry groups
- Secured the ESA ARTES partnership program €3.7m
- Established links with UK universities specialising in RF
- Graduate / apprentice program initiated
- Significantly increased engineering capacity
- £2-3m of external funding p/a
- Multi-year graduate/ apprentice programme in place



Operations & Facilities

- Maximise efficiencies from hybrid manufacturing line
- Build accredited UK defence "box-build" capability.
- Consolidate USA Critical Comms build / test facility
- Manufacturing process for plastic encapsulation.
- Develop assembly process for Compound Semi materials.
- Improve prototype
 development Eng. capability
- Plastic QFN line installed
 Auto words bonding adds
- Auto wedge bonding added
- Manchester development lab established and equipped
- W-band test & measurement equipment added
- Space level cleanroom manufacturing facilities
- Expansion of in -house qualification + DPA capability



People & Processes

- Improve materials planning and inventory management systems for turnkey OSAT*
- Explore Filtronic Leadership Academy – Management Development Training
- Gain Cyber Security IASME accreditation
- Develop ESCC level assembly process flows ESCC9000.
- Achieved IASME Gold cybersecurity accreditation
- Develop ESCC level assembly process flows ESCC9000
- Filtronic Leadership Academy programme initiated
- Gain Cyber Security ISO27001 accreditation
- AS9100 accreditation
- Qualified space level assembly process flow

filtronic.com







NETPark Plexus 1, Thomas Wright Way, Sedgefield, County Durham, TS21 3FD

T: +44 1740 618 800 E: sales@filtronic.com

USA Office

700 Marvel Road, Salisbury, Maryland, 21801 USA

T: +1 410 202 8811 E: sales@filtronic.com



filtronic.com