



Plextek RFI

Plextek RFI Ltd. is a UK based design house specialising in the design and development of RFICs, MMICs and microwave/mmWave modules.

Projects range from feasibility studies to the design and development of microwave ICs, components and sub-systems.



The Plextek Building near Cambridge in the UK



Plextek RFI's mmWave Clean Room

Technology areas

Our skills cover RF, microwave and mmWave components and sub-system development including: custom IC design (GaAs, GaN and Si), high frequency SMT based PCBs, chip and wire assemblies, MCMs, LTCC, thin-film and custom IC package design. We have designed over 100 ICs at frequencies ranging from baseband to 100GHz and are a third party design house for Cree (Wolfspeed), GCS, Qorvo and WIN.

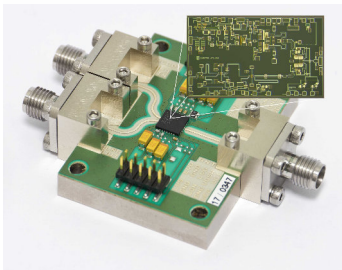
Our clients

Our clients range from start-ups to major multi-nationals. Companies that have used Plextek RFI's services include Aeroflex, Analog Devices, BAE Systems, Huawei, Inmarsat, National Semiconductor, QinetiQ, Qorvo, Samsung, Selex, Sony Semiconductor, TDK and Thales.

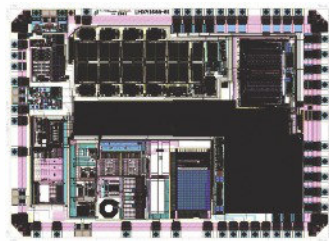
Company information

Plextek RFI's offices and labs are located near Cambridge in the UK. It was formed from the RF Integration team of Plextek Ltd.

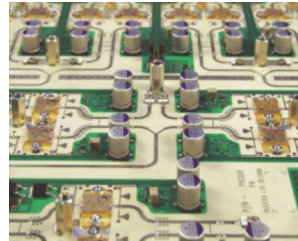
Project Examples:



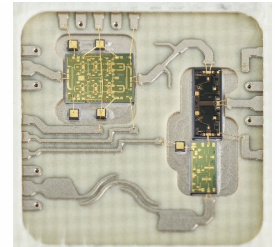
GaAs/GaN MMIC



Si IC



Microwave/mmWave



SMT Packaging

Our experience includes front-end ICs for mmWave 5G, broadband MMICs for ESM, receiver, transmitter and PA ICs for point to point microwave links and GaN PAs for both commercial and defence applications. We use industry leading CAD software for our designs and have our own in-house test lab for evaluation of both bare-die (RFOV) and packaged MMICs.

Plextek RFI's design services are used by industry leading IC vendors. National Semiconductor used our design services to help create an innovative world class transceiver design that has sold in excess of 1 billion units. Plextek RFI has also worked on the design and packaging of mmWave ICs for 5G applications using bulk CMOS.

Example projects include: GaN PA modules from L-band to X-band at power levels to 200W, the design and supply of an 8 to 18GHz, fast switching, low noise synthesiser; a fast switching (<10ns) 200W X-band solid-state PA for a marine radar application, high power amplifiers and signal sources for space applications, and a dual-channel 2 to 18GHz receiver for ESM.

We have extensive experience of SMT packaging to mmWave frequencies. This includes the use of standard plastic-overmould packages with custom designed lead-frames, the use of COTS ceramic and open-moulded plastic packages and the design of full custom laminate and ceramic packages. We have developed SMT compatible multi-chip-modules (MCMs) and Antenna in Package (AiP) solutions.