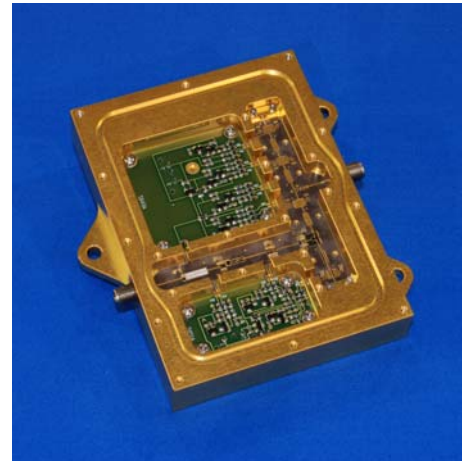
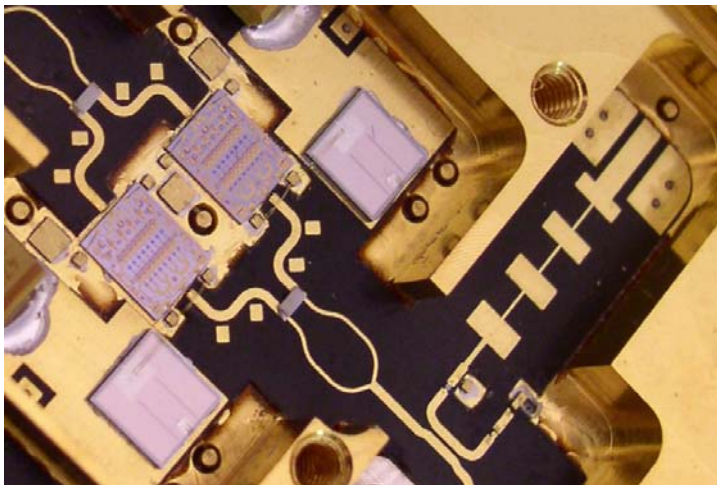


Custom Components and Subsystems

HXI supplies millimeter wave subsystems and custom-designed components to support military and commercial systems worldwide. Subsystems include transceivers for UAV and helicopter landing systems, surveillance receivers, active sensors for medical research and specialized communication links for a wide range of applications. Custom components include variations of many of our catalog products, such as LNAs, power amplifiers and power combiners, frequency multipliers, mixers, switches and isolators.



Variants of existing catalog components are quickly produced and new subassembly requirements are addressed comprehensively by the appropriate set of component hardware and system engineers to arrive at the optimum design configuration. A working knowledge of radar and communications systems allows Terabeam/HXI to understand and address the affects of complex problems and subtle component performance and interaction issues. Our broad experience allows us to assume system integration tasks where appropriate, freeing our customers' resources for other aspects of product development. The use of SolidWorks as our primary mechanical design tool provides a smooth transition when inserting our products into customers' systems.



35 GHz Integrated Transceiver

Highly integrated ground-based unit in production for UAV landing system. Features 17 individual MMW and IF circuit functions, including 3.5W Ka-Band power amplifier and SP4T switch matrix.

94 GHz Pulsed Radar Prototype

Using our vast library of standard and custom-designed products, we can quickly build a prototype front end for system performance verification. Later, we can optimize parameters and integrate the front end for production.

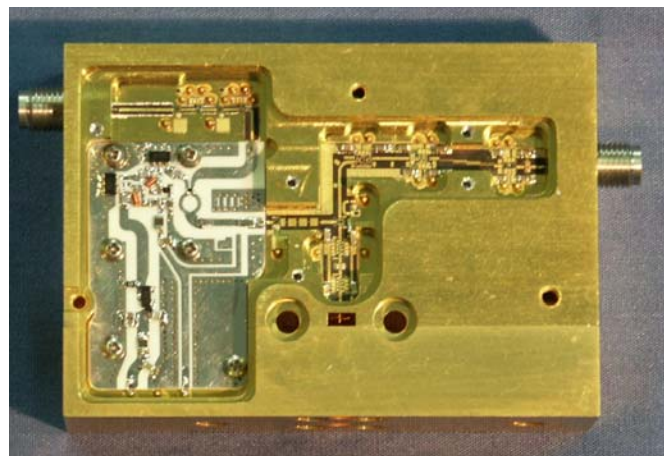


60 GHz Integrated Receiver

Used in our 60 GHz Gigabit Ethernet radio (above).

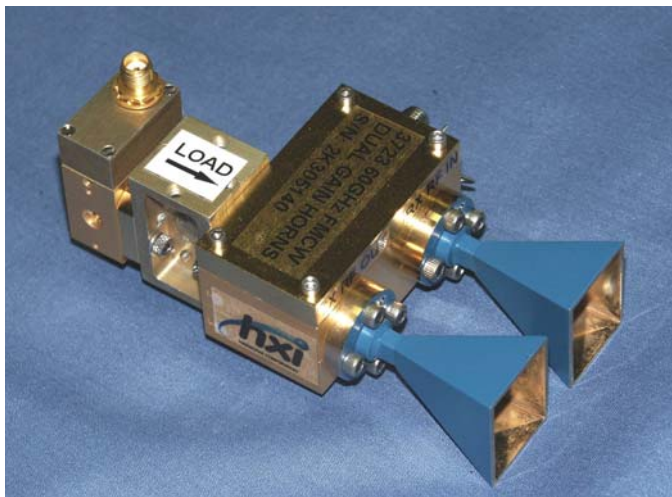
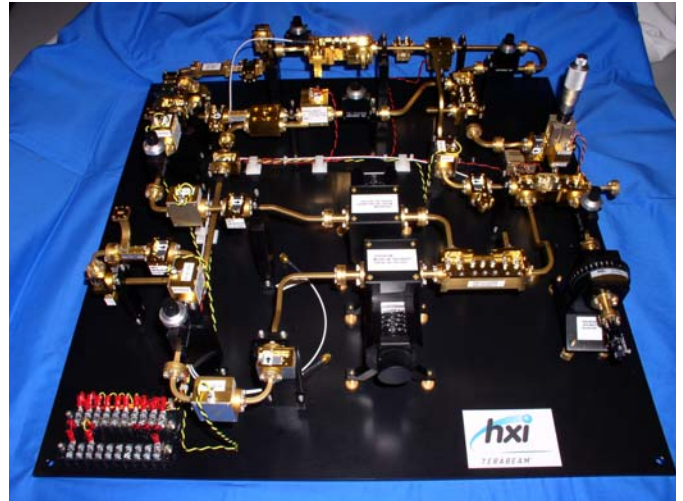
60 & 74 GHz Radio Links

We have produced a number of variants of our standard 60 GHz and 71-76 GHz (E-Band) GigaLink[®] radio links for military and other government uses. The standard links support a data rate of 1.25 Gbps.



94 GHz Subsystem for Medical Research

This custom-designed subsystem consisted of many active and passive components at 94, 60 and 35 GHz. The subsystem includes two 94 GHz LNAs and four 94 GHz power amplifiers, as well as a wideband VCO at 60 GHz with extremely fine mechanical frequency tuning. The subsystem also features interchangeable hardware to support multiple test configurations.

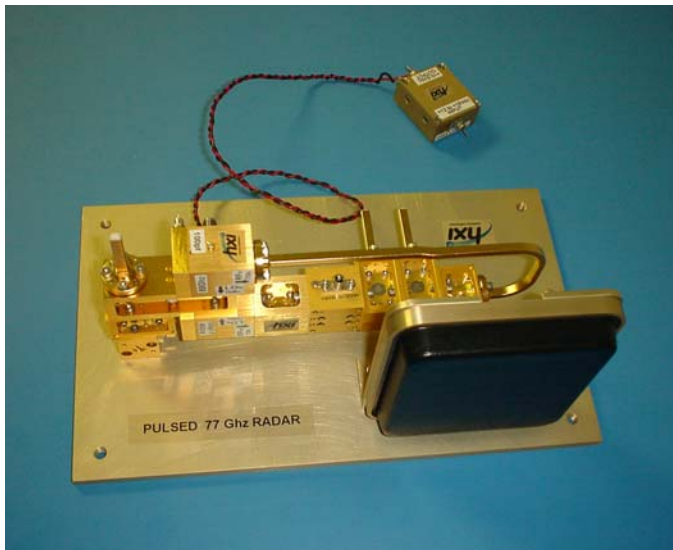
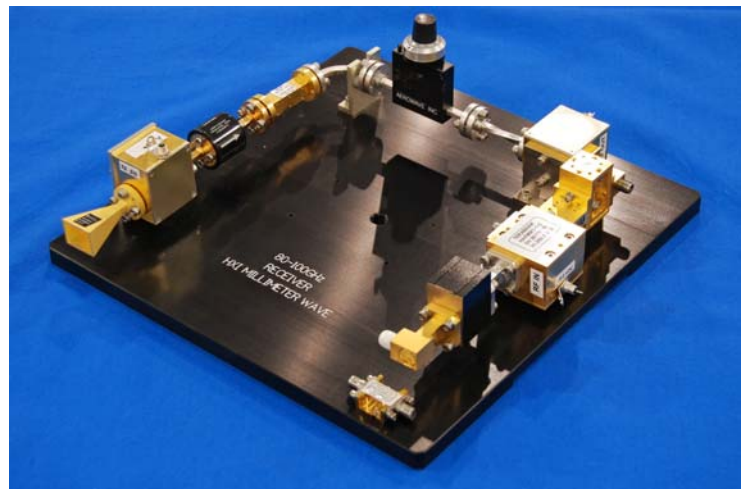


FMCW Radar Front Ends

For use in applications where accurate level or distance sensing is required.

80 to 100 GHz Receiver Prototype

This design configuration has uses as a surveillance receiver and also as a radiometer front end.



77 GHz Pulsed Radar Prototype for Intelligent Cruise Control Applications

Another example of quick prototyping using standard catalog components.