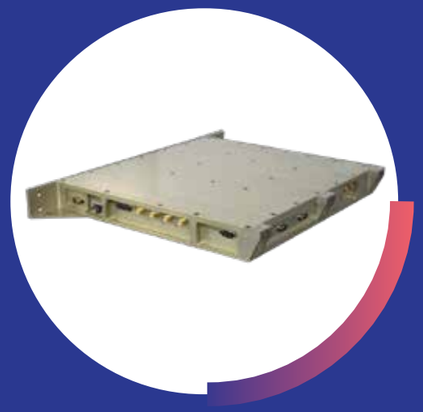
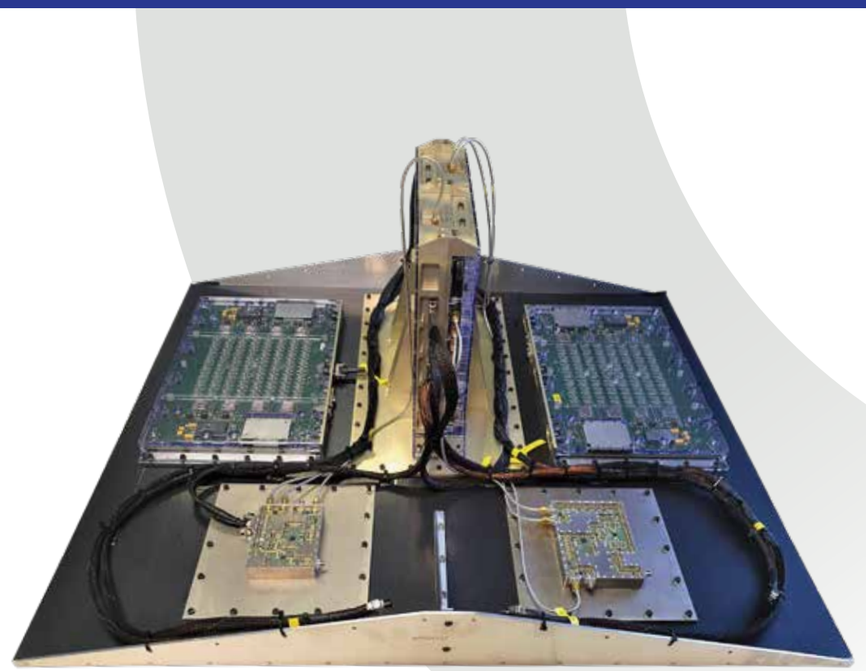
The On-Board Processor (OBP)

+ Software Defined
+ Fully Regenerative
+ Transparent –Channelised or Beamformed Mode
+ Embedded Controller (DSP/CPU)
+ 2.5GHz per port
+ Direct sampling -UHF through Ka Band
+ Standard Bus Interfaces (CanBUS/SpW)
+ Ethernet Interfaces and Packet Switching
+ Mass/Weight -<2kg per module
+ Power –80-180W per module





www.satixfy.com info@satixfy.com

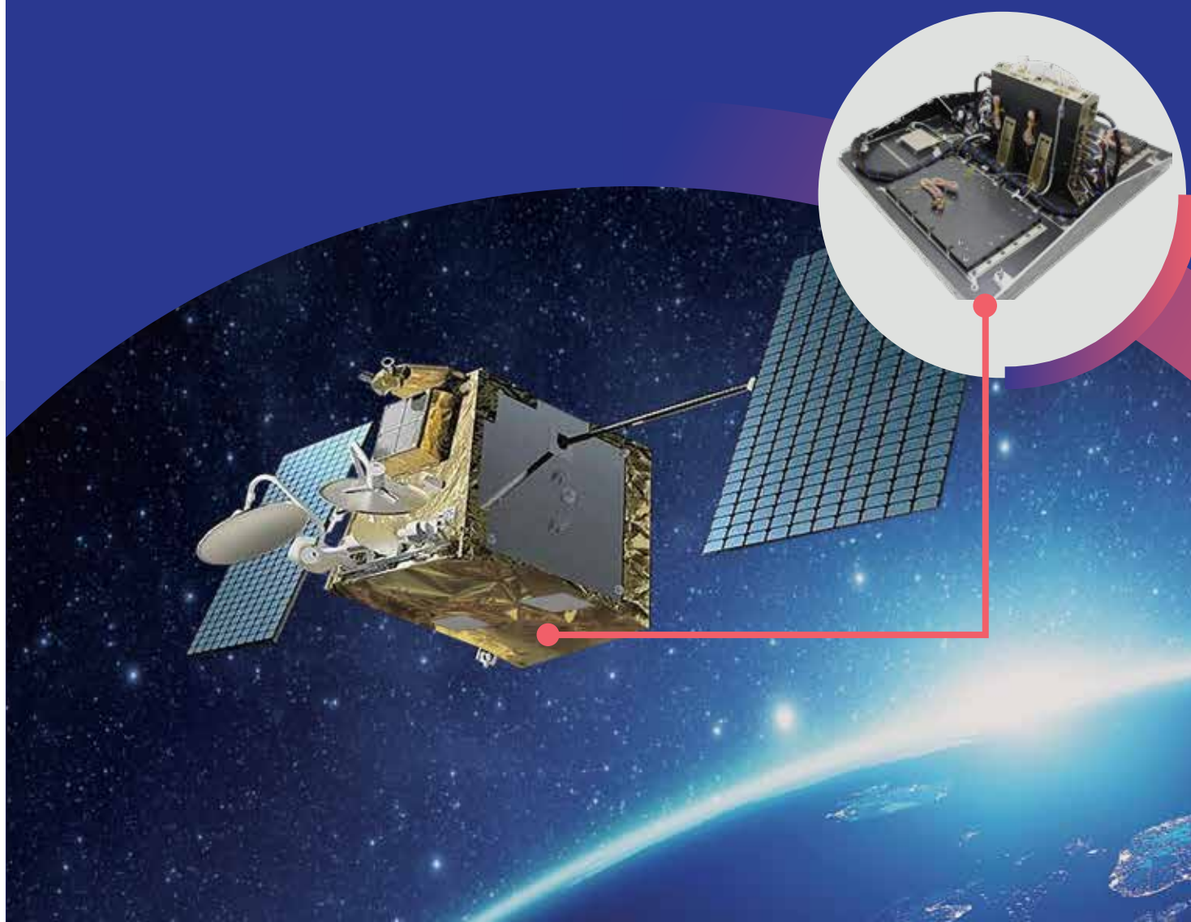
Flexible Digital Payload for LEO

SatixFy

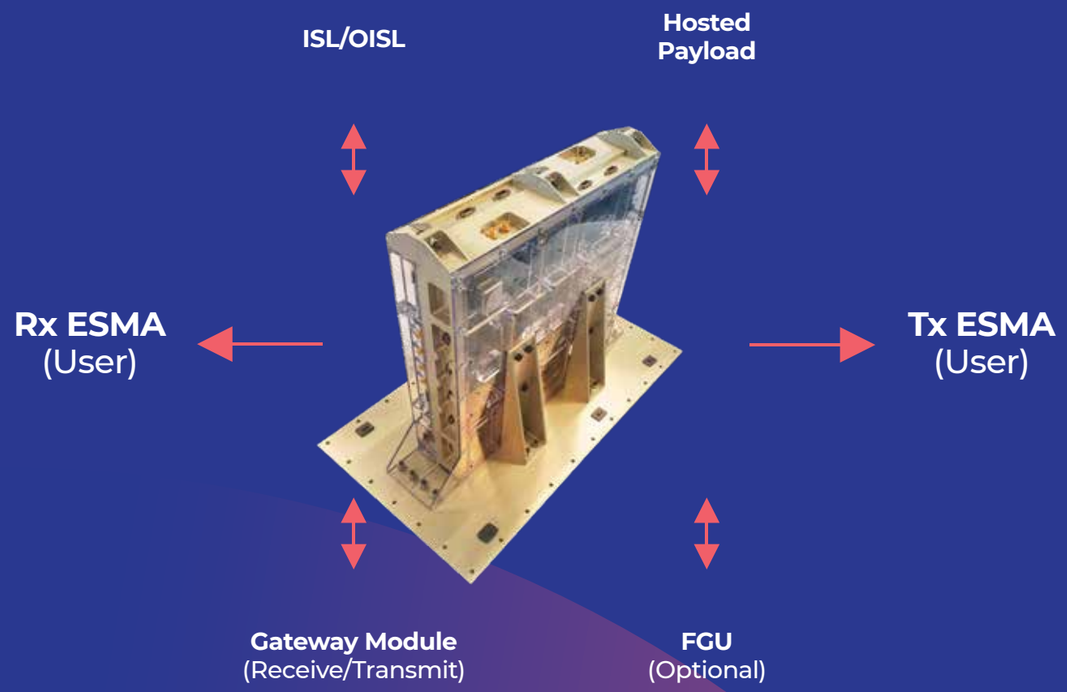
The satellite industry is going through a digital revolution, with the introduction of multiple LEO, MEO constellations as well as new flexible GEO systems.

A software defined approach to payload architectures is a must! Highly integrated (ICs) based solutions enable true scalability and functionality with long term economically viable benefits that supports the endless chasing of cost per bit reductions.

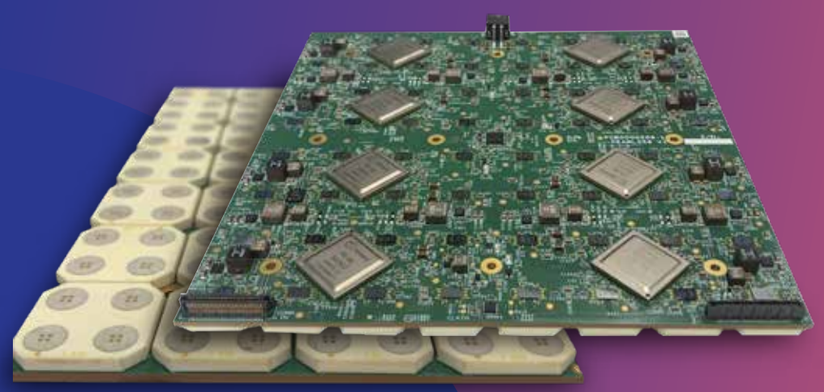
SatixFy leads this revolution with the introduction of a suite of solutions including, onboard digital processors and electronically steerable arrays harnessing our modem and digital beamformer ASICs which are the building blocks for any modern communications payload.



PAYLOAD BUILDING BLOCKS



ELECTRONICALLY STEERED MULTIBEAM ANTENNA



KEY FEATURES

+ **Standard and Software Defined Radio (SDR)**
  - Beamforming
  - Beamhopping
  - Wide Bandwith Operation
  - DVB-S2X and RCS2
  - VLSNR
+ **Decoupled Processing**
  - Gateway, User and Intersatellite links optimised individually
  - Ground infrastructure optimisation
  - High Speed packet switching
+ **Regenerative, Beamformed and Transparent modes supported and configurable on-orbit**

TYPICAL SPECIFICATIONS

+ Ku and Ka Band Solutions
+ Backhaul, Aero-Connectivity, etc.
+ EIRP 47-50 dBW per polarisation
+ G/T >8 dB/K (1024 Elements)
+ 8GHz of capacity per polarisation (single or dual support)
+ DVB-S2X and REC2 fully supported
+ Packet Switching
  - Interface to optical satellite links
  - Ethernet and label-switched networking
  - On-board quality of service
+ Software Defined Radio (SDR) and Software Defined Networking (SDN)
  - Custom waveforms
  - Custom packet formats, QoS algorithms etc
  - Embedded CPUs and DSPs
+ Scanning Range +/-45O
+ ISL/OISL connectivity
+ True-Time delay beamforming
+ Compatibility with a radio stack using 5G for upper layers and core network
+ Multi-orbit solutions
+ Bus interfaces –CanBUS, Spacewire
+ Power <1.5kW
+ Mass/Weight ~50kg per polarisation
+ Typical throughput 30Gbps