

White Paper – SATCOM Ground Station Routing

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Switch Matrices in Satellite Communications

Fan-In and Fan-Out systems are required in SATCOM ground stations for the transmit and receive segments. Fan-In matrices receive signals from the satellite and route to a select number of users or ground stations. Fan-Out matrices route to the number of users or ground stations to which a satellite can simultaneously transmit signals.

Antenna design, frequency band and modulation influence the Fan-In and Fan-Out system design. The frequency bands of interest for SATCOM solutions are shown to the right.

MPG offers a variety of products and solutions to support the market's demanding requirements with industry leading RF performance.

As demand for satellite services grows, managing interference, expanding coverage to remote areas, and supporting high-throughput payloads will drive the ground stations to have greater flexibility and efficiency. MPG offers broadband Fan-In and Fan-Out solutions essential for optimizing the performance and capacity of satellite communications systems.

As technology continues to evolve, SATCOM will remain a vital component of global connectivity.

