

Attributes	Analog	Digital
Hardware	RF phase shifters and attenuators are analog. Analog phase are expensive and performance varies with temperature and between T/R modules	Phase shifters and attenuators are implemented by digital operations: no quantization effects enable precise phase and amplitude control
Antenna beamwidth sidelobe and gain	Fixed for specified transmit and receive modes; depends on aperture weighting	Fully re-configurable in post-processing; multiple beams could be formed
Receiver	Single receiver chain; simple and inexpensive	Multiple distributed receivers. Dynamic range Improvement: $10\log_{10}(N)$. Increased complexity and expense
Digitization of the received signals	Weighted sum of N radiating element received signal	Complete access to N antenna element signals
Calibration and data quality	Performance of RF Phase shifters and attenuators are sensitive to temperature	Linear and robust performance
Data rate	100 MB s^{-1}	4 GB s^{-1}