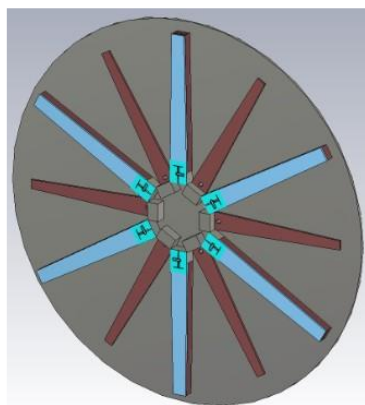


Multi-sector antenna using dielectric image lines

The antennas enable cellular operators
to achieve high quality area deployment

#Productivity Improvement



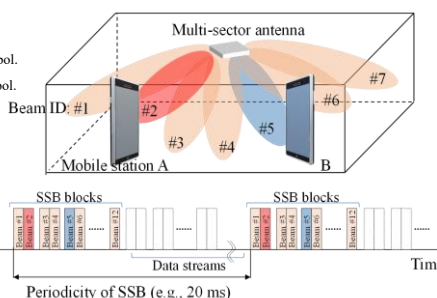
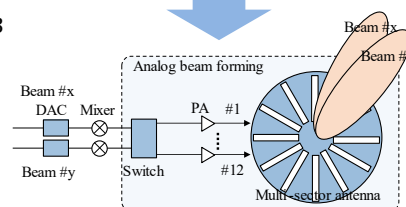
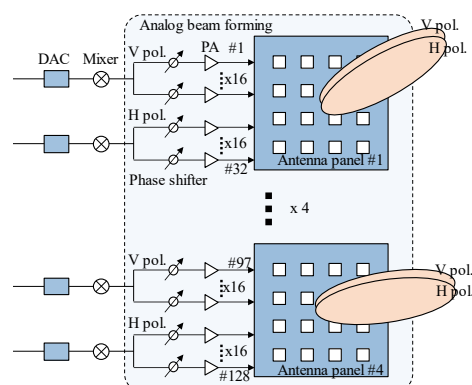
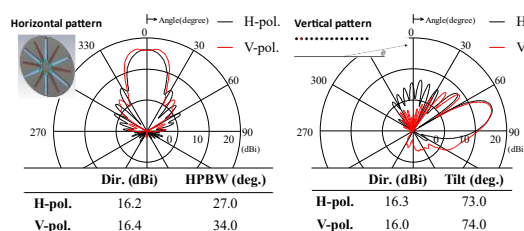
Return loss $|S_{nn}| < -10$ dB, $|S_{mn}| < -35$ dB

Antenna gain 16 dBi

Thickness $< 0.35\lambda$

Max. vertical direction 73° (TE), 74° (TM)

Diameter 170 mm



///Technical Issue

In the millimeter wave band, it is difficult to deliver radio waves in all azimuth directions in 360 degrees because it is necessary to focus radio waves with an antenna.

---Technology

Multi-sector antenna technology with switching high-gain antennas arranged in 12 directions and dielectric image lines enables 360° horizontal omni-directional communication and a compact, lightweight design.

---Applicable Business

It can be used to build a high-capacity, high-speed communication environment for IOWN by expanding the indoor millimeter wave for information and communication industry (Scheduled commercial introduction: around 2026).

///Research Goal

This antenna reduces power consumption to 1/10 compared to conventional base station equipment.

---Novelty

Exhibition of low-profile antenna for indoor area using millimeter-wave bands (world's first antenna). This antenna reduces power consumption to 1/10 compared to conventional base station equipment.