

## A-Core Container

# Can a hybrid energy 700m base station be upgraded to 5G



## Overview

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Does a hybrid network consume more energy than a full-digital network?

The energy consumption of the network gets increases as the density of small cells rises. Certain findings as indicated above suggests that hybrid architectures in massive MIMO systems have much higher achievable EE, although their SE is lower than full-digital architectures.

Does a hybrid approach improve EE and SE performance in small cells?

For small cells in UDN, a hybrid approach optimizing both EE and SE is required with the constraints of high data rate and interference thresholds. It was observed that, with a slight decline in SE performance, the EE may be greatly enhanced.

Why do we need 5G cellular network?

The use of such technology is motivated by the prospect of higher data rates and improved performance over the existing networks [2, 3]. 5G cellular network operates on a millimetre wave spectrum i.e., between 28GHz-60GHz along with LTE.

Are hybrid MIMO systems better than full-digital architectures?

Certain findings as indicated above suggests that hybrid architectures in massive MIMO systems have much higher achievable EE, although their SE is lower than full-digital architectures. There should be an optimal value of Signal-to-noise ratio (SNR) and no. of antennas as mentioned in .

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