



## FEATURE COMPARISON

	PHY/MAC RAT selection	Dynamic deployment of intelligent control	Hierarchical orchestration	Hybrid SDR/SDN
26GHz mmWave	✓	✓	✓	
Low latency	✓	✓		
E2E network slicing	✓	✓	✓	✓
Multi-RAT	✓		✓	

### mmWAVE BACKBONE FOR VIDEO INSPECTION IN THE ORCA FACTORY

A camera is installed on a mobile robot for live inspection of the factory, it leverages on mmWave uplink with moderate throughput, a low-latency and reliable transmission at the downlink for the beam control, providing the capability of dynamic control on the physical layer (PHY).

### MULTI-CHANNEL GATEWAY AND RADAR-COMMUNICATION SYSTEM TO CONTROL ROBOTIC ARMS ON THE ORCA ASSEMBLY LINE

Robots on the assembly line are simultaneously controlled via an SDR based multi-channel IoT gateway offering user-controlled service on each channel, while a Doppler radar senses the environment (e.g., speed of moving parts in nearby machines) to provide context-awareness.

### DISTRIBUTED END-TO-END NETWORK SLICING AND ORCHESTRATION IN A NUTSHELL

Industrial applications with diverging service requirement can coexist on top of a shared infrastructure, leveraging end-to-end network slicing, enabled through a distributed orchestration of resources across multiple network segments.

### AGV NAVIGATION IN A MULTI-RAT ENABLED ORCA FACTORY WAREHOUSE

AGVs in the ORCA warehouse rely on multiple radio access technologies and a centralized control in the cloud to transfer parts between the assembly and the storage. The joint usage of 5G, LTE and WIFI provides high reliability and reduced latency links for remote control.