# NIRAL Private 5G

### Manage your enterprise 5G & Edge with a click of couple buttons



**NIRAL NETWORKS**

## Oil & Gas



Niral 5G Core

Niral Edge Cloud
3rd Party Edge Apps –
AI/ML, Drone, IOT

## Ports



Niral 5G Core

Niral Edge Cloud
3rd Party Edge Apps –
Video, Drone, Robotics

### Centralized Niral
### 5G & Edge Controller

Niral Edge Cloud
3rd Party Edge Apps –
AR/VR, Video, Robotics

Niral 5G Core

Niral Edge Cloud
3rd Party Edge Apps –
Robotics, Drone, AGV

Niral 5G Core



## Warehouse
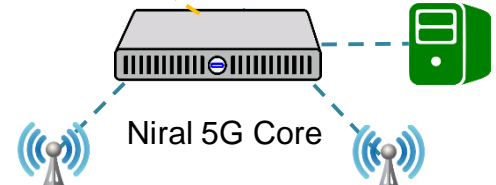


## Mining

# NIRAL Private 5G

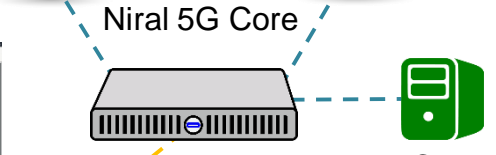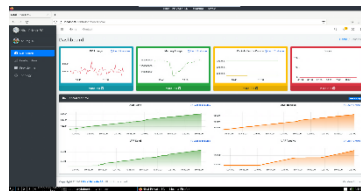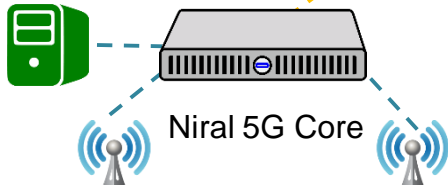Manage your enterprise 5G & Edge with a click of couple buttons

## NIralOS Introduction

Niral Networks provide a comprehensive cloud-native 5G Core and Edge infrastructure platform for Enterprises using its open and disaggregated Network Operating System called NiralOS that can be easily integrated with COTS hardware and 5G Radio to optimize Edge applications (IOT, AR/VR, AGV, Drone, AI) and managed from a centralized dashboard without the need of any specialized IT staff.

Niral Networks is targeting the USD 517 Billion private 5G and Edge market that will shape the future of Enterprise Connectivity for emerging, high bandwidth, low latency applications with mobility, thereby redefining the way people live and work.

## NiralOS Network Operating System

- **Private 5G Core** – Cloud-Native Private 5G core software for Mobility, Authentication, security, Session and Policy Management. It contains the 5G Network Functions - AMF, SMF, AUSF, DM, NRF, UPF. Niral 5G core also has a compact User Plane Function (UPF) to provide local breakout within Enterprise when integrated with TSP's centralized 5G Core.
- **Mobile Edge Cloud Platform** – Kubernetes and virtualized edge cloud infrastructure to create a mobile Edge Cloud (MEC) within Enterprise with open APIs to host 3rd party application like AR/VR, Robotics, Drones, AI/ML, Video analytics for low latency and privacy
- **Controller** – Provides centralized management, orchestration, zero touch provisioning and monitoring of multiple Private 5G networks and Mobile Edge Cloud at various sites. The controller can be hosted in the public cloud to centrally manage and monitor multiple private 5G networks.

## NIralOS Specification

- Release-16 compliant 5G Core for Private 5G Deployment
- 5G Network Functions - UPF, AMF, SMF, AUSF, UDM, NRF
- Kubernetes based Cloud-Native Network Function
- DPDK + VPP based User Plane Acceleration
- Support of N1, N2, N3, N4 and Service Based Interfaces for 5G SBA
- 5G Core deployed on COTS HW of various form factor and integrated with 5G Radio
- Kubernetes and virtualized, cloud agnostic edge platform to host 3rd party applications
- Open APIs for integration of 3rd party application to Niral 5G Core and Edge platform
- Web based dashboard for Subscriber Provisioning, Configuration and Management
- Multi-tenanted Controller for 5G Core and Edge Infrastructure Management

## Use cases

Manufacturing, Oil & Gas, Mining, Port, Shipyard, Power Grid, Warehouse, Disaster Management, that needs indoor/outdoor mobility over a large area with ultra reliable, low latency and high bandwidth connectivity for AR/VR, video, drone, robotics application.

## Recognitions

Niral Networks was the winner of the prestigious Aegis Graham Bell Award in the 5G Innovation Category for 2021-22. Niral Networks has been mentioned by LightCounting and GigaOm in their ICT research for Global Network Operating Systems. Niral Networks has also been recognized by DOT, NASSCOM, TIP, DSCI for their Network Operating Systems.