PEGATRON Private 5G Ran

Integrated and Rapid deployable Private 5G RAN

Pegatron private 5G RAN contains 5G-SA O-RAN based gNodeB plus option 5G core system. Pegatron's 5G solutions are cloud-native platforms running on Intel® FlexRANTM technology to provide the maximum computing power in a highly reliable mobile private network system. Deploying Network Function Virtualization Infrastructure (NFVI) in O-RAN based cloud provides enhanced high availability and further provides flexible, fast, and customizable services. The backhaul external network can be connected to leased lines by ISPs or orbital satellites for internet connection so it's quick and easily to setup a 5G private network to provide on demand broadband network anywhere, based on your use case for 5G applications. Applications can cover digital transformation for smart factories, public transportation, public safety, mission critical IT systems, corporate data security, etc.

Features in Pegatron Private 5G RAN

Pegatron's private 5G RAN is designed for private network use cases and compliant with 3GPP and O-RAN standards by using Intel® x86 based servers. Designed to work at or near the edge where data is acquired. Lightweight and built for easy portability from one campus to the next. Built-in Pegatron RAN software and OAM (Operations, Administration and Maintenance) system for management with GUI interfaces. Offering customized services to provide API for edge compute application integration.

Features

Feature	Description
Band Support	FR1: n77, n78, n79, N48 [2023Q1]
Modulation	256 QAM (DL), 64 QAM (UL)
Ant. MIMO	4T4R, DL 4 Layers, UL 2 Layers
Profile	■ DL Centric 7:3, 4:1 ■ UL Centric 2:3
GPS Grand Master	■ 1588v2 PTP protocol support ■ PTP to sync-E and sync-E to PTP conversion
OAM	1. System Configuration 2. UE management with list usage & QoS profile 3. Network slicing management 4. Northbound interface for higher level management
5G Core	Microsoft AP5GC

Radio Unit (RU):
   HW: PR1400 Series 4T4R RU, Intel® Arria® 10 platform

gNodeB Unit (DU, CU):
   HW: PG5100 Series computing platform with Intel® Xeon Scalable Gold processor, ACC100 FEC acceleration card
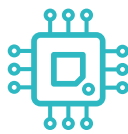   SW: Pegatron 5G RAN w/ Pegatron RAN portal Intel® FlexRANTM architecture.

5G Core:
   HW: PG5100 Series computing platform with Intel® Xeon® Scalable Gold processor, same hardware unit with gNodeB.
   SW: Microsoft AP5GC.

Benefits of Pegatron Private 5G RAN

Flexible
- Deploying Network Function Virtualization Infrastructure (NFVI) in O-RAN based cloud
- Enhances high availability and further provide flexible, fast, and customizable services for various 5G applications.

Integrated
- Integrated 5G RAN and 5G Core into an All-in-One Intel x86 Server to deliver high-speed throughput and low latency communications for rapid deployment of advanced 5G applications which reduces deployment costs.
- Provides northbound interface and customized API service for higher level system integration with customer's management system and 5G application solutions.

Easy Setup
- Contains Pegatron RAN Portal webGUI management for system operations, administration, and maintenance.
- Provide configurable profile to adjust uplink and downlink throughput for different 5G application deployment cases.

Portable
- 19" lightweight luggage suitcase that is easy to transport and deploy anywhere.