Toward Ubiquitous mmWave Connectivity: RIS-Aided mmWave with O-RAN RIC

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About LITEON Technology Corp.

Founded: in 1975
Headquarters: Taipei, Taiwan
A world-leading provider of network solution, opto-semiconductor, power supply management and key electronic products with global manufacturing facilities.
LITEON listed in the DJSI World Index and Emerging Market Index.

EMPLOYEES IN

30+ COUNTRIES
Headquartered in Taiwan

~40,000
EMPLOYEES

$ 5.5B
Market Cap

$ 6.00B
Annual Revenue

46
Factories

334
Worldwide Location

WINNER- LITEON and the National Yang Ming Chiao Tung University
Secure Communication Scheme
LITEON BUSINESS DOMAINS

Smart Application Solutions
Optoelectronic Product Solutions
Cloud Infrastructure Platform & Solutions
Intelligent Peripheral Solutions
Automotive Electronics Applications
Power Module Solutions
Mechanical Electronic Solutions
LEOTEK

Networking
End-to-end networking solutions and services

High Speed Solution: mmWave small cell
100+ Million of shipment
20+ years of Service Experience
Worldwide Deployment: Residential / Hospitality / Public Venue / Campus / SMB

Reliable Performance
Trusted Security
Scalable Deployment
Easy Management
Affordable Solution
LITEON mmWave & RIS Solution Brief

To solve the pain point of mmWave network deployment, LITEON's mmWave radio unit is paired with RIS, and through RIS as a node, the mmWave radio unit and RIS can be controlled by RIC, which can increase the coverage rate, achieve the demand of low latency and high transmission, and satisfy the different application scenarios.

What we offer:
- mmWave RU n257/n258
- RIS (Support E2)
- O-RAN Near-RT RIC
- DU/CU Partners

Our solution advantages:
- Energy Saving & Carbon Reduction (ESG)
- Coverage Extension (+20~30%)
- Cost Efficiency (20~30%)
- Planification Enhancement
Enhancing mmWave signal coverage with RIS control.
Establish RIS as a new node, and support data transmission method with RIC through E2 interface.
RIS can be controlled by Near RT-RIC, which enables the platform to have autonomous control capability.

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1. When 5G UE moves from location A to location B, xAPP detects UE has moved.

2. Adjusts the relative position distribution of RIS users to achieve better communication quality.
FlexFi FR2 mmWave Radio Unit Indoor Portfolio

Easy to Install and play
Feature-Rich

Key Features
- O-RAN Split 7.2A
- Band : n257
- Customized Bandwidth : Up to 400MHz
- 8x8 antenna array for 2T2R
- EIRP 46dBm for Indoor
- SCS : 120kHz
- Support IPv4, IPSec.
- Support Beam sweeping
- Support GNSS, IEEE 1588v2, Sync-E
- Power Supply : 54 Vdc
- Support O1 interface for SMO
- Dimensions (W/H/D) : 330 x 330 x 60 mm
- Weight : 4kg

Deployment
- Indoor deployment
- Dense Shopping Mall, Train Station, Campus

FR2 mmWave Indoor Radio Unit