

0021 – 5G Outdoor CPE

Product Manual

Enrich Your MBB&FWA connections
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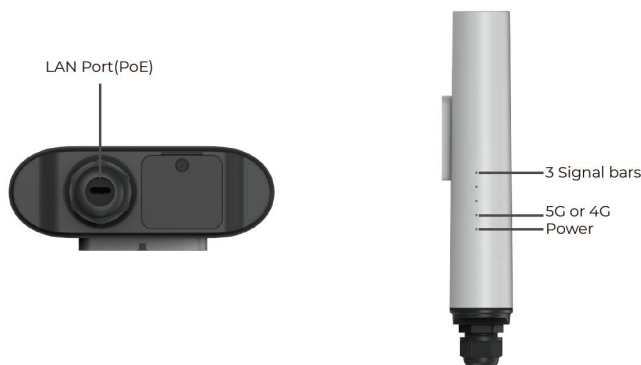
Product Overview

The Wewins O021 is a high-performance 5G outdoor CPE designed for fixed wireless access (FWA), enterprise broadband, and industrial connectivity scenarios. Engineered for outdoor installation, the O021 significantly improves 5G and 4G signal reception in suburban, rural, or signal-challenged environments.

Powered by a Qualcomm Snapdragon X65 5G modem platform and compliant with 3GPP Release 16, the O021 supports both 5G Sub-6 GHz and mmWave networks, while seamlessly falling back to 4G LTE when required. With integrated high-gain antennas, robust environmental protection, and remote management capabilities, the O021 delivers reliable, carrier-grade connectivity for residential and commercial deployments.



Key Features



Ultra-Fast 5G Sub-6 & mmWave Connectivity

Supports both 5G NR SA and NSA, enabling ultra-high-speed data transmission, low latency, and enhanced network capacity. With Sub-6 and mmWave support, the O021 adapts to diverse 5G deployment strategies across regions.



High-Gain Outdoor Antenna System

Equipped with a professional antenna configuration for outdoor environments, including 4×4 MIMO downlink and 2×2 MIMO uplink for Sub-6, plus dedicated mmWave antenna modules. This design ensures stronger signal reception, extended coverage, and improved throughput.



Carrier-Grade Hardware Platform

Built on the Qualcomm Snapdragon X65 platform and compliant with 3GPP Release 16, delivering enhanced spectral efficiency, higher carrier aggregation capability, and improved uplink performance.



2.5 Gigabit Ethernet with PoE Support

Features a 2.5GE LAN port supporting IEEE 802.3AT PoE, simplifying outdoor installation by delivering power and data through a single cable.



Rugged Outdoor Design for Harsh Environments

Designed for long-term outdoor deployment with IP65-rated dust and water resistance, 6KV lightning protection, and a wide operating temperature range. An integrated pre-heating mechanism ensures stable operation in cold climates.



Flexible Installation Options

Supports wall-mounted and pole-mounted installation, with adjustable horizontal tilt for optimal signal alignment—ideal for residential buildings, enterprises, and industrial sites.



Remote Management & OTA Updates

Supports TR069, LWM2M, and FOTA, enabling operators and system integrators to remotely monitor device status, manage configurations, and deploy firmware updates efficiently.



Enterprise-Grade Security Architecture

Implements secure boot and network security mechanisms to ensure only authorized firmware is executed, protecting the device from unauthorized access or malicious modifications.

Technical Specifications

Hardware

Item	Description
Cellular Standard	3GPP Release 16
Chipset	Qualcomm Snapdragon X65
Bluetooth	BLE 5
Memory	8 Gbits RAM + 8 Gbits ROM
Ethernet Interface	1 × 2.5GE LAN (PoE IEEE 802.3AT)
SIM Interface	1 × Micro SIM (4FF), optional embedded SIM
USB Port	USB 3.0 Type-C (debug)
Reset Button	Hardware reset
LED Indicators	Signal strength (3 bars), Network status, Power
Antennas	Omni-directional & directional high-gain antennas for Sub-6 and mmWave
Power Supply	Passive PoE: DC 48V / 0.5A
Power Consumption	< 20 W
Dimensions	225 × 130 × 45 mm

Cellular Capabilities

Frequency bands can be customized based on customer requirements

Technology	Band Support
5G NR Sub-6 (EU)	N1 / N3 / N5 / N7 / N8 / N20 / N28 / N38 / N40 / N41 / N75 / N76 / N77 / N78
5G NR mmWave	n257 / n258 / n260 / n261
4G LTE	B1 / B3 / B7 / B8 / B20 / B28 / B32 / B38 / B40 / B41 / B42 / B43
MIMO	Sub-6: 4×4 DL / 2×2 UL mmWave: 2×2 DL / 2×2 UL
Carrier Aggregation	LTE/Sub-6: up to 2CC mmWave: up to 4CC

Software Specifications

Category	Description
Network Management	Automatic / manual network search and connection
Network Mode	5G/4G Auto, 5G Only
APN Management	Auto & manual APN configuration
SIM Management	PIN enable/disable, PIN change, PUK reset
Traffic Statistics	Weekly and monthly data usage
Routing Mode	NAT mode, Bridge mode
Firewall & Security	IP / Port / URL filtering, DMZ, UPnP
Device Management	Web UI, FOTA, local firmware upgrade
Remote Management	TR069, LWM2M
Security Features	Secure Boot, SIM Lock, PCI Lock
Power Supply	Passive PoE: DC 48V / 0.5A
Power Consumption	< 20 W
Dimensions	225 × 130 × 45 mm

Application Scenarios

- 5G Fixed Wireless Access (FWA) for Homes
- Enterprise Broadband Connectivity
- Industrial IoT & Smart Infrastructure
- Rural & Suburban Broadband Coverage
- Temporary or Rapid Network Deployment

Packing List

Item	Quantity
Outdoor CPE Device	1
PoE Adapter	1
PoE Power Cable	1
Ethernet Cable	1
Mounting Kit	1
Quick Start Guide	1 (Optional)
Warranty Card	1 (Optional)

Certifications

- CE Certification
- Additional regional certifications available upon request




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Product Details

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