NFW-2452

AurusPRO

Release 17 Ultra High Gain
Outdoor CPE

Product Summary

+ Ultra High Gain Outdoor 5G/LTE CPE designed for professional installations (Consumer, Enterprise & IoT Markets)

+ Supports a wide range of 3GPP Frequency Bands from 1700MHz up to 4.2GHz, suitable for deployment in North America

+ Includes an integrated 2x2 MIMO Ultra High-Gain Directional Antenna for long distance connectivity plus a MIMO Boost feature for 4x4 connectivity at shorter distances

+ Powered via standards compliant Power Over Ethernet (802.3af), it is compatible with third party standards compliant PoE Sources and Consumer/Enterprise Gateways, PoE Injector included as standard

+ Integrated Power Over Ethernet K.21 compliant lightning surge protection in the CPE, K.21 compliant Power Over Ethernet injector available as an option, provides protection without the expensive installation of electrical ground cabling

+ Remotely manageable (FM, CM, PM, SM) via BBF TR-069, OMA LwM2M, SNMP, SSH and HTTP/S

+ Robust IP67 design for longevity supporting a wide operating temperature range and harsh environments

+ Additional Installation Tools and Smartphone Applications available to provide efficient installation processes

Technical Specifications

Model Number
+ NFW-2452 (North America)

3GPP Release
+ Release 17

Technologies Supported
+ LTE, 5G NSA (EN-DC), 5G SA
+ 3GPP CN Options 1, 3x, 2
+ **NSA Mode**: PDCP UL & DL

Frequency Bands – NFW-2452

NR
+ n2, n7, n12, n25, n30, n38, n41, n48, n66, n70, n77, n78

LTE
+ B2, B4, B7, B25, B30, B38, B41, B42, B43, B48, B66
+ Dynamic Spectrum Sharing Support on FDD bands

Device Category

LTE
+ **Uplink**: 2CA Single TX, 256QAM
+ **Downlink**: 7CA MIMO 4x4, 256QAM

NR
+ **Uplink**: MIMO 2x2 Single Carrier, or SISO Dual Carrier up to 140MHz"
+ **Downlink**: MIMO 4x4 3CA Up to 200MHz

5G Subcarrier Spacing (SCS)
+ 15kHz FDD Bands only
+ 30kHz TDD Bands only

Antenna Characteristics

Antenna Type
+ Dual Polarized 2x2 MIMO Ultra High Gain Directional plus MIMO Boost for 4x4 MIMO at shorter distances

Frequency Coverage
+ 1700 - 4200MHz

Antenna Gain
+ Ultra High Gain Directional Antenna
+ 1700 - 2200MHz - 2x2 (12dBi to 15dBi)
+ 2200 - 2700MHz - 2x2 (15dBi to 16dBi)
+ 3300 - 4200MHz - 2x2 (17dbi to 18dBi)

Additional MIMO Boost Antenna
+ 1700 - 4200MHz - 2x2 (8dBi)

See the ANTENNA PERFORMANCE section for more details.

CBRS Support (NFW-2452)
+ CBRS End User Device (EUD)
+ Max 23dBm/10MHz EIRP

Conducted RF Output Power
(Pre-Antenna)

LTE
+ 23dBm single TX UL
+ 26dBm single TX UL (B41, B42, B43 Only)

NR
+ **NSA**:
  + 23dBm single TX UL
+ **SA**:
  + 26dBm Single TX 2CA UL (n41, n77, n78)
  + 2x26dBm MIMO 2x2 UL no CA (n41, n77,n78)

Interfaces
+ 1 x 2.5Gbit Base-T Ethernet RJ45 port
+ BLE (Bluetooth Low Energy) for connection to installation app

GPS
+ Embedded GPS/GLONASS/Galileo/Beidou

SIM Card Reader
+ Supports 2FF and 4FF SIM cards

Operating System
+ Based on Embedded Linux

Temperature
+ -40ºC to +55ºC

Enclosure
+ IP67 rated
+ Wind speeds in excess of Tornado EF1 levels and partial EF2 levels (130mph / 209kph)

Safety
+ Surge and lightning protection (K.21 compliant) Ethernet Port on the CPE
+ K.21 compliant PoE Injector

Dimensions & Weight

Dimensions
+ TBD

Weight
+ TBD (excluding mounting bracket)
+ TBD (including mounting bracket)

Mounting Options
+ Elevation adjustable mount Adjustable +/- 24°
+ Suitable for 25-60 mm circular poles

Power

Supply
+ Power over Ethernet per IEEE 802.3af Mode A and B

Consumption
+ **Peak operating power**: TBD

Cellular WAN Networking
+ Up to 6 APN Configurations
+ Up to 8 Bearers & Traffic Classes
+ 4G/5G PCI Lock
+ Automatic/Manual cellular band selection
+ Automatic/Manual operator selection

Device Management
+ HTTP/S Web-based User Interface (Local & Remote Support)
+ TR-069/TR-143/TR-181 Support for CM, PM, FM, SM
+ OMA LwM2M
+ Firmware upgrade remotely Over-The-Air (TR-069)
+ Installation Support via Smartphone App
+ Diagnostics & Metrics
+ Secure Shell (SSH)
+ SNMP v2/v3
+ Remote syslog
+ Ping diagnostic tool
+ NTP Client
+ Geo Fence support
+ Service Assurance Diagnostic
+ Field Test screen

LAN Network & Routing
+ IPv4, IPv6, IPv4v6
+ IP Passthrough / Handover
+ VLAN support
+ Static routing
+ DHCP server
+ Port forwarding
+ IP / MAC / Port filtering
+ Firewall
+ VPN Passthrough
+ Policy Based Routing

Included Accessories

Power Over Ethernet Injector

An 802.3af compliant 15.4W Power over Ethernet Injector is included for providing data and power connectivity from indoors to the outdoor CPE.

+ 100-240VAC
  Universal Input/Full Range
+ Low power devices receive only the power they need
+ Plug and play installation

Technical Specifications

Ethernet Ports
+ 1 x 10/100/1000/2500 Base-T Residential Gateway Port
+ 1 x 10/100/1000/2500 Base-T PoE PSE

Ac Input Power
+ AC Powered: 100-240VAC / 50-60Hz
+ 1 x Three pin plug (IEC C6) socket

PoE Standard
+ 802.3af 56Vdc 15.4W
+ Pin-out 3/6(+), 1/2(-)

Led Indicator
+ 1 x LED indicator for power, data and PoE faults

Operating Environment
+ **Operating temperature range**: -20ºC - +50ºC
+ **Relative humidity**: 10% - 90%

MTBF
+ 100K Hours

Weight
+ 123g

Dimensions
+ 114.8 mm (L) x 53 mm (W) x 35 mm (H)

Safety Certifications
+ UL, CL, CB, CE

Antenna Performance

Antenna Performance tables to be added after OTA testing

Optional Accessories

The following accessories can assist in the installation and alignment of the Outdoor CPE

CTL-2000 Smart Install Tool

The **CTL-2000** integrates a Wi-Fi 802.11b/g/n access point operating on the 2.4GHz band, to connect to a smartphone enabling the installer to get detailed signal readings. The smartphone app provides a clear diagnostic and troubleshooting for an interactive and reliable configuration of the Outdoor Unit, finding the best location at the premises.

The **CTL-2000** connects directly to the Outdoor Unit via Ethernet.

Delivering power over Ethernet thanks to its removeable rechargeable battery, the Smart Installation Tool offers the needed portability for an efficient site survey.

AuroraPRO Smartphone Installation Application

This advanced business process support application for Google devices is designed to aid professional installation.

It provides guidance and measurements during site survey to meet predefined service goals.

It supports the installer through to final installation including post installation service measurements and creates automated final installation reports which can be used to provide remote support and maintenance over the device's life span.

Contact DZS today

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