AURUSLINK RELEASE 16 SELF INSTALL INDOOR/ OUTDOOR CPE

CFW-3211 & CFW-3212

PRODUCT SUMMARY

› Discreet low profile indoor/outdoor 5G/ LTE CPE designed for self-installation by the consumer (professional installation for consumers or IoT applications also available)

› One of the smallest 3GPP Release 16 Indoor/ Outdoor CPEs in the industry

› Supporting a wide range of 3GPP Frequency Bands from 600MHz up to 4.2GHz, it is suitable for deployment in the majority of regions globally

› Includes an integrated 4x4 MIMO Low-Gain OMNI Directional Antenna

› Powered via Power Over Ethernet it allows versatile connectivity up to 100m from a power source utilising the cabling supplied or off the shelf alternative cabling provided by the user.

› PoE Injector included as standard

› Mounts externally on windows with no requirement for additional tools

› Remotely manageable (FM, CM, PM, SM) via BBF TR-069, SSH and HTTP/S

› IP65 rated design for longevity, supporting a wide operating temperature range and harsh environments whilst maintaining an aesthetically pleasing design when viewed externally or internally

› Additional consumer smartphone application available to provide efficient installation process suitable for a non-technical consumer audience

NetComm

TECHNICAL
SPECIFICATIONS

MODEL NUMBERS
› CFW-3211 (Global, excluding North America)
› CFW-3212 (North America)

3GPP RELEASE
› Release 16

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

FREQUENCY BANDS – CFW-3211
NR
› n1, n3, n5, n7, n8, n20, n28, n38, n40, n41, n75, n76, n77, n78
LTE
› B1, B3, B5, B7, B8, B20, B28, B32, B38, B40, B41, B42, B43
› Dynamic Spectrum Sharing Support on FDD bands

FREQUENCY BANDS – CFW-3212
NR
› n2, n5, n7, n12, n13, n14, n25, n26, n29, n30, n38, n41, n48, n66, n71, n77, n78
LTE
› B2, B4, B5, B7, B12, B13, B14, B17, B25, B26, B29, B30, B38, B41, B42, B43, B48, B66, B71
› Dynamic Spectrum Sharing Support on FDD bands

DEVICE CATEGORY
LTE
› **Uplink**: 2CA Single TX, 256QAM
› **Downlink**: 5CA MIMO 4x4, 256QAM
NR
› **Uplink**: MIMO 2x2 Single Carrier Up to 100MHz, 256QAM
› **Downlink**: MIMO 4x4 Dual Carrier Up to 120MHz, 256QAM

5G SUBCARRIER SPACING (SCS)
› 15kHz FDD Bands only
› 30kHz TDD Bands only

ANTENNA CHARACTERISTICS
Antenna Type
› Dual-Polarized 4x4 MIMO OMNI-Directional
Frequency Coverage
› 600 – 4200MHz
Antenna Gain
› Up to 5dBi

See the ANTENNA PERFORMANCE section for more details.

CBRS SUPPORT (CFW-3212 ONLY)
› 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**:
  › 29dBm single TX UL (n41, n77, n78)
  › 26dBm single TX UL (n38)
  › 23dBm single TX UL all other bands
  › 2x26dBm MIMO 2x2 UL (n41, n77, n78)
  › 2x23dBm MIMO 2x2 UL (n38, n40)

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

LEDS
› 3 x Multi-Colour LEDs indicating:
  › 4G/5G Connectivity
  › Signal Strength Indictor
  › Power/Ethernet Connectivity

SIM CARD READER
› Supports 4FF SIM card

OPERATING SYSTEM
› Based on Embedded Linux

TEMPERATURE
› **Operating temperature:** -40°C to +55°C

ENCLOSURE
› IP65 rated

DIMENSIONS & WEIGHT
Dimensions
› 85 mm x 138.4 mm x 25 mm (excludes mounting bracket)
Weight
› ~240 g (excludes mounting bracket)

MOUNTING OPTIONS
› Glass Window Mount – Suitable for both outdoor and indoor positioning
› Pole/Pipe/Rail/Wall mount solution available as an optional accessory
› Desk mount solution available as an optional accessory

POWER
Supply
› Power over Ethernet (Injector supplied)
Consumption
› Peak operating power: 10.7W

CELLULAR WAN NETWORKING
› Up to 6 APN Configurations
› Up to 8 Bearers & Traffic Classes
› 4G/5G PCI Lock
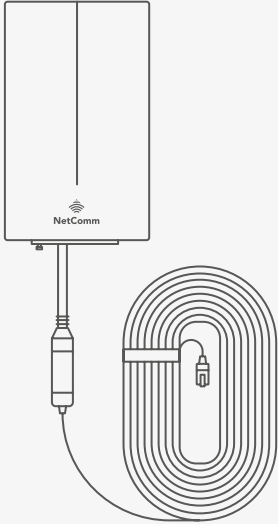› Automatic/Manual cellular band selection
› Automatic/Manual operator selection

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)
› Remote syslog
› Ping diagnostic tool
› NTP Client
› Geo Fence support
› Service Assurance Diagnostic
› Field Test screen

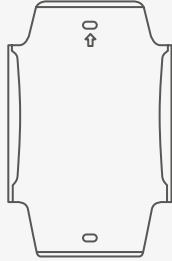### LAN NETWORK & ROUTING
› IPv4, IPv6, IPv4v6
› IP Passthrough / Handover
› VLAN support
› Static routing
› DHCP server
› Port forwarding
› IP / MAC / Port filtering
› Firewall
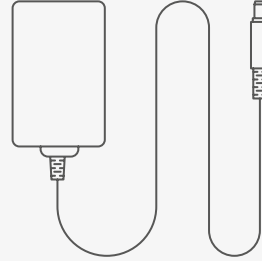› VPN Passthrough
› Policy Based Routing
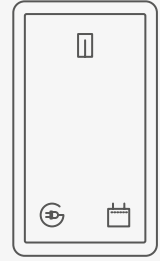
WHAT'S
IN THE BOX

1 x AurusLINK CPE +
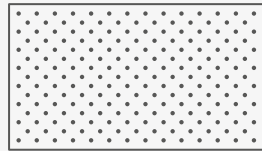Waterproof Extender +
5m Ethernet Cable
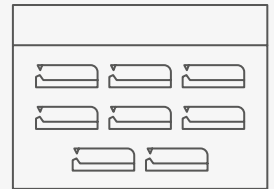
1 x Window Mount Bracket
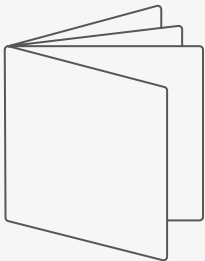
1 x Power Adapter

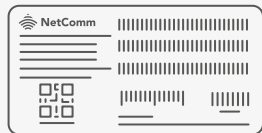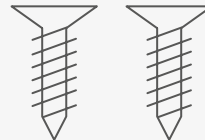1 x PoE Injector

1 x Compressed Sponge

1 x Lint-Free Cloth

8 x Cable Clips

1 x Welcome Guide

1 x Information Sticker

1 x Wood Screws

8 x Hex Key + Screwdriver

ANTENNA
PERFORMANCE

Uplink Antenna

Frequency Range (MHz)	Uplink Antenna	Uplink Antenna (MIMO Only)
600 - 960	Antenna 3	N/A
1400 - 1500	N/A	N/A
1700 - 2500	Antenna 3	Antenna 2
2500 - 2700	Antenna 2	Antenna 3
3300 - 4200	Antenna 3	Antenna 2

3GPP Low Bands (Sub 6GHz)

FREQUENCY (MHZ)	ANTENNA 2		ANTENNA 3	
	Gain (dBi)	Efficiency (%)	Gain (dBi)	Efficiency (%)
600	-2.01	25	-4.99	11
650	0.01	47	-3.03	21
700	-1.77	27	-0.81	34
760	-4.62	13	0.41	53
800	-6.56	9	0.07	48
850	-8.58	8	-0.61	37
900	-6.48	12	-3.96	18

3GPP Mid Bands (Sub 6GHz)

FREQUENCY (MHZ)	ANTENNA 1		ANTENNA 2		ANTENNA 3		ANTENNA 4	
	Gain (dBi)	Efficiency (%)	Gain (dBi)	Efficiency (%)	Gain (dBi)	Efficiency (%)	Gain (dBi)	Efficiency (%)
1430	TBA	TBA	TBA	TBA	TBA	TBA	TBA	TBA
1470	TBA	TBA	TBA	TBA	TBA	TBA	TBA	TBA
1510	TBA	TBA	TBA	TBA	TBA	TBA	TBA	TBA
1710	-0.69	21	-0.47	24	3.27	49	-3.12	15
1750	-1.69	15	-1.75	22	3.07	47	-1.68	16
1810	-3.44	11	-1.12	23	2.18	41	-0.43	25
1850	-5.84	10	0.66	44	2.23	43	-0.02	31
1910	-5.11	12	0.12	48	2.04	43	1.67	46
1950	-3.52	17	-0.30	34	2.13	44	2.15	50
2010	-2.92	21	1.99	45	1.30	39	2.59	51
2050	-2.82	16	3.04	52	-0.23	31	3.12	48
2110	0.09	28	2.98	56	-0.25	30	3.49	49
2150	-0.90	23	2.08	53	-0.92	24	2.81	43
2210	-2.67	16	1.61	49	0.84	24	1.36	42
2250	-4.22	14	1.51	49	1.20	26	2.55	47
2310	-4.73	11	1.34	45	2.39	32	1.76	40
2350	-3.36	12	1.08	46	2.92	36	1.49	42
2410	-4.68	12	1.84	53	3.36	46	0.70	38
2450	-4.45	12	1.88	56	3.48	50	0.06	37
2510	-0.36	19	1.80	57	3.85	56	0.10	37
2550	1.48	25	1.56	56	3.32	53	-0.92	33
2610	2.61	35	2.23	57	3.15	56	0.00	34
2650	2.57	39	2.43	56	2.88	56	0.20	34
2690	3.29	44	2.37	54	1.96	54	-0.05	32

ANTENNA
PERFORMANCE CONT.

3GPP High Bands (Sub 6GHz)

FREQUENCY (MHZ)	ANTENNA 1		ANTENNA 2		ANTENNA 3		ANTENNA 4	
	Gain (dBi)	Efficiency (%)	Gain (dBi)	Efficiency (%)	Gain (dBi)	Efficiency (%)	Gain (dBi)	Efficiency (%)
3300	3.14	39	2.84	42	2.92	41	2.63	49
3350	2.21	37	2.75	45	2.89	47	2.17	48
3400	1.40	37	3.08	52	2.47	51	2.17	48
3450	1.39	35	3.04	50	2.32	49	1.80	46
3500	1.75	36	2.83	47	2.26	47	1.46	46
3550	1.80	36	2.92	48	1.64	47	1.64	44
3600	1.38	34	2.92	48	1.36	45	1.93	41
3650	0.86	34	3.06	49	1.76	42	2.16	41
3700	0.52	35	2.91	47	2.12	42	2.48	40
3750	0.82	37	2.43	44	2.45	44	2.78	41
3800	1.17	36	2.41	44	2.62	45	2.95	42
3850	0.61	34	2.22	39	2.61	46	2.89	39
3900	0.68	34	2.84	37	2.83	48	3.17	39
3950	0.30	32	4.06	40	2.58	48	3.89	44
4000	-0.30	31	4.21	41	2.22	49	4.43	46
4050	-0.39	33	4.44	43	1.94	49	4.68	47
4100	-0.56	32	4.91	47	2.18	49	4.96	51
4150	-0.07	33	4.87	50	2.81	52	4.97	52
4200	-0.06	31	4.16	50	2.69	53	4.61	52

OPTIONAL
ACCESSORIES

WALL/POLE/PIPE/RAIL MOUNTING BRACKET

The multi-purpose Wall/Pole/Rail mounting bracket allows fixture to a wide range of commonly found vertical structures around the home such as rain downpipes or balconies.

By removing the rubber straps, the same mounting bracket can also be attached directly to a wall using a power tool.

DESK MOUNT

The Desk mount provides an easy installation solution for inside the home.

SMARTPHONE
INSTALLATION

The smartphone app provides guided installation steps.

AURORA SMARTPHONE INSTALLATION APPLICATION

The Android and iOS Smartphone application (freely available on appropriate APP stores) is designed to aid the consumer through the installation process.

From unboxing, through site survey measurements around the home, and the final installation, the Smartphone application provides all the guidance required to the end consumer.

Utilising easy to understand terminology and graphics, combined with non technical language and performance indicators, the application is suitable for non technical audiences, and can be translated into additional languages upon request.

AU

NETCOMM
HEAD OFFICE | SYDNEY
18-20 Orion Road Lane Cove NSW 2066
Sydney | Australia | +61 2 9424 2070
www.netcomm.com

USA

ZHONE
HEAD OFFICE | USA
5700 Tennyson Pkwy
Suite 400, Plano, TX 75024
Texas | USA | +1 877-946-6320
www.zhone.com

NetComm
a division of **zhone**