



5G Outdoor FWA CPE (mmWave + Sub6 GHz) FCP-5300-011A



INTRODUCTION

The HFCL 5G outdoor FWA-CPE is a path breaking home and enterprise solution that offers high speed 5G wireless internet at the last mile. It is based on 5G SA architecture and supports both mmWave (n258) and Sub6Ghz (n78) frequencies which is best suited for NRDC use cases. It is of light weight and slim form factor. Having support of 800 MHz Carrier bandwidth and throughput of 4.8 Gbps make it a preferred choice for Mobile Operators and end users. It is a Plug and Play device having fully automated Configuration and managed via TR069. With lower TCO and expedited time to market, it is a perfect product for CSPs and ISPs to unlock plethora of revenue streams.

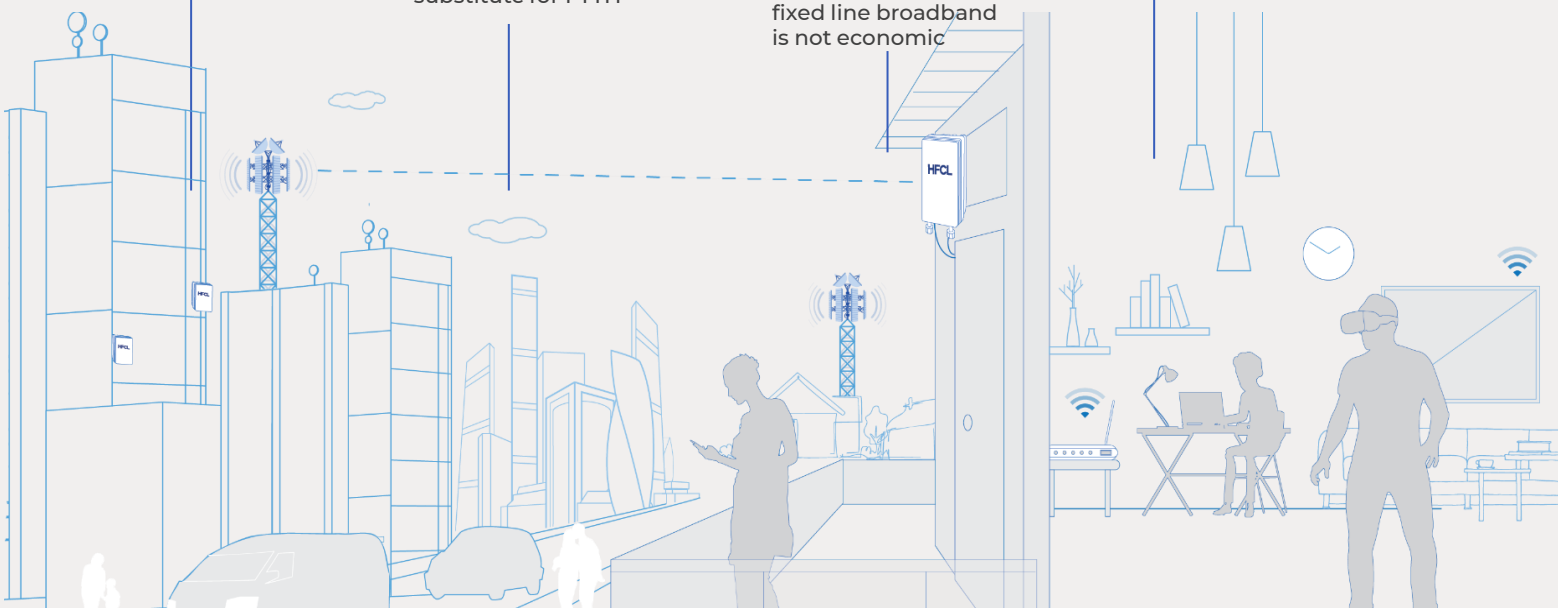
APPLICATIONS

Broadband for Enterprises, SOHO, Campus especially in dense urban areas

Temporary connectivity in emergency-stricken areas and back up substitute for FTTH

Last mile connectivity in rural areas where fixed line broadband is not economic

Residential broadband in urban and suburban areas as MDU Broadband CPE



Provides fibre like throughput in Gbps



Support NRDC (FR2 and FR1)



Supports CA up to 8 carriers in FR2 and 2 carriers in FR1



Power over Ethernet (PoE++) supported



Lightweight, compact size with minimum power consumption



Mobile app for self-installation that shows best location with strong signal reception

FUNCTIONAL SPECIFICATIONS

Technology	5G NR - TDD
Mode	SA
Operating Frequency band - NR FR2	n257, n258, n260, n261
Channel Bandwidth - NR FR2	100 MHz
Sub Carrier Spacing - NR FR2	120 KHz
Operating Frequency Bands - NR FR1	Band n78
Channel Bandwidth - NR FR1 (MHz)	10 , 15, 20, 30, 40, 50, 60, 70, 80, 90, 100
Sub Carrier Spacing - NR FR1	30 KHz
Carrier Aggregation – FR2	Downlink: Up-to 8CC (Max aggregated BW - 800MHz) Uplink: Up-to 4CC (Max aggregated BW - 400MHz)
Carrier Aggregation - FR1	Downlink: Up-to 2CC (Max aggregated BW – 200 MHz)
Dual Connectivity	NRDC
CPE Power class	Power Class 1 (NR FR2)
	Power Class 2/1.5 (NR FR1)
Transmit Power	28 dBm (NR FR2)
	26 dBm / 29 dBm (NR FR1)
EIRP	43 dBm (NR FR2)
	35 dBm (NR FR1)
Modulation	NR FR2 DL - 256 QAM
	NR FR2 UL - 64QAM
	NR FR1 DL - 256 QAM
	NR FR1 UL - 256 QAM
Max Throughput NR FR2	DL: 4.8 Gbps UL: 620 Mbps
Max Throughput NR FR1	DL: 1.8 Gbps UL: 250 Mbps

ELECTRICAL SPECIFICATIONS

Power Input	PoE++
Power Consumption	40 Watt

ANTENNA SPECIFICATIONS

5G FR2 ANTENNA	
Antenna Type	Integrated directional antenna
MIMO	2T2R (32 Antenna Elements)
Antenna Array Gain	15 dBi
Polarization	Dual polarized
Beamforming	Yes
5G FR1 ANTENNA	
Antenna Type	Integrated directional antenna
MIMO	2T4R
Antenna array Gain	9 dBi
Polarization	Dual Polarization

INTERFACES

SIM	Nano SIM Card interface / eSIM
LAN Port	1 x 10/100/1G/10G Base-T Ethernet RJ45 (PoE++)
USB Port	1 x USB C
Status Display	LED Indicators
Button and Switch	Reset hole

MECHANICAL SPECIFICATIONS

Weight	< 2.2 kg
Volume	< 4.0 L
Product Dimension	268x220x69 mm ³
Ingress Protection	IP67
Mounting options	Pole and Wall

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature	-20°C to + 55°C
Storage Temperature	-40°C to + 65°C
Operating Humidity	5%-95%
Storage Humidity (Packed)	0% to 100%
Cooling	Passive cooled/ Convection cooling (no fan)

DATA NETWORKING AND OTHER FEATURES

NAT, PAT
DMZ
ICMP
IP Filter
UPnP
VPN Pass-through Support (PPTP, L2TP & IPsec)
IPv4 / IPv6 / IPv4v6, SLAAC, cLAT
IPv6-464XLAT
Filters/Firewall
mDNS
DHCP Server/Client
VoIP
Auto/Manual Network Search
Traffic Statistics
SMS (Via WebUI)
Enterprise features (EoGRE, IPsec)
Network Slicing, DNN, URSP

STANDARDS AND COMPLIANCES

3GPP compliance	3GPP Release 15, 16
Regulatory Compliance	IEC (Safety IS 13252), RoHS, ETSI, CFR, UL, FCC/GCF/PTCRB, CE/ISED/MIC/RCM-ACMA, WEEE, REACH

DEVICE MANAGEMENT

WebUI
TR069
Online and local software upgrade
Syslog monitoring
SSH
CLI, Telnet, HTTP and HTTPS
FTP and HTTP OTA Firmware Upgrade
Device Factory Default Setting

SECURITY

Secure boot, Secure file system, and Secure execution environment
Built-in firewall with adjustable settings and rules
Defence of DoS/ARP attacks/Port scan
Port filtering, port forwarding, MAC filtering
Security hardened web interface
Password hash
Session timeout
Incorrect password lockout
IP pass-through

INCLUDED ACCESSORIES

1 x Gigabit PoE++ injector
1 x Network cable (CAT 6/6A)
1 x Mounting kit