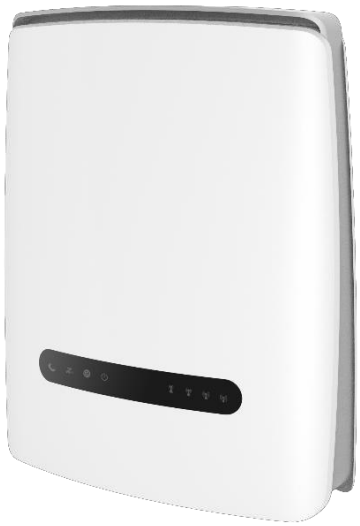
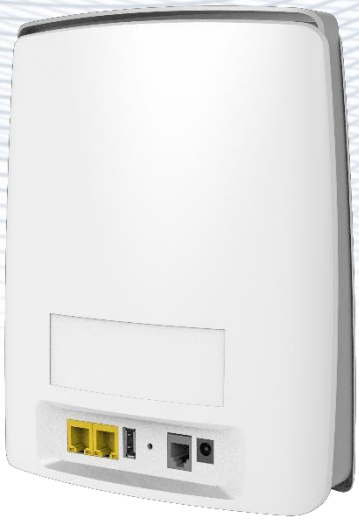




CP660
LTE Indoor CPE

3GPP Release 10/11
CAT6
ALL LTE Bands
802.11b/g/n/ac
VoIP or VoLTE

CP660 is a highly advanced LTE indoor multi-service product solution specifically designed to meet integrated data, and 802.11b/g/n/ac dual bands Wi-Fi access needs for residential, business and enterprise users. The product supports advanced Gigabit networking and dual bands Wi-Fi AP functionalities. It enables wide service coverage and provides high data throughput and networking features to customers who needs easy broadband access, hot-spot Wi-Fi connectivity.

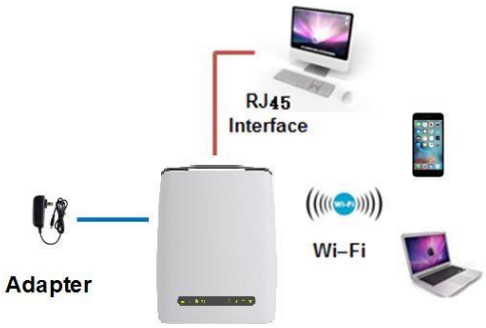
Hardware Specifications	
Chip set	GCT GDM7243QT MT 7621A
LTE standard	3GPP Release 10/11 CAT6
Flash	GCT7243QT - 2Gb MT7621A – 1Gb
RAM	GCT7243QT - 1Gb MT7621A – 1Gb
Ethernet LAN Port	2 * Gigabit RJ45 LAN Port 10/100/1000 auto-sensing, auto-MDI/MDIX
Voice POTS Port	1* RJ11
LED	8 LED Indicators (PWR, Wi-Fi, WPS, MODE, RF Signal*4)
SIM	1 USIM/SIM (3FF)
Reset/Reboot Button	Tact Switch(3)
Antenna	4Built-in
Dimensions	215mm x 160 mm x 95mm
Weight	< 500g
Power Consumption	< 12W
Power Supply	AC 100~240V DC 12V 2A

Environment Specifications	
Operating Temperature	-10 C--55 C
Storage Temperature	-40 C--85 C
Operating humidity	90% Maxton-condensing
Storage humidity	90% Maxton-condensing

RF Specifications		
Support Bands		FDD 1/2/3/4/5/7/8/20/28 TDD 38/40/41/42/43/48
CA		Inter/Intra 2CA
MIMO		DL 2*2， DL 4*4
Tx		1 Tx
Output Power@25℃		23±2 dBm
LTE Antenna		4Built-in
LTE Antenna Gain (1)	700M~1G	3dBi
	1.5G~2.7G	5dBi
	3.4G~3.8G	6dBi
Wi-Fi Frequency		2.4GHz/5GHz
Wi-Fi Antenna		Build-in high gain Wi-Fi antenna, 2.4GHz, 5GHz separate
Wi-Fi Output Power		18dBm/2.4G 20dBm/5GHz
Wi-Fi Channel BW		20 MHz & 40 MHz
Wi-Fi Antenna Gain		3dBi

(1) If the LTE antenna supports all frequency, the antenna gain will be lower than the value in table

Topology



Software Specifications	
Language Settings: Simple Chinese, English (1)	
Support NAT/Bridge/Router mode	
Support the http or https web server	
Support two users (admin user and normal user) and different limitation and display	
Peak Throughput	TDD DL 220Mbps UL50Mbps
	FDD DL 300Mbps UL75Mbps
LAN	1000Mbit/s
	MDI/MDIX auto-sensing
	IEEE802.3/802.3u/802.3ab is compatible
PIN Management, SIM card Authentication	
Encryption backup current settings and restore the backup settings	
Export current diagnosis results and operation logs	
Statistics	Link Status (LAN)
	Transmit / receive traffic in packets
	Up Time
Support multi-APN	
Support VPN	
IPv6/IPv4 dual stack	
Status(2)	Signal strength
	Network type
	Network connection status
	SIM card status
	Operator name, system mode
Support full band or preferred band and frequency	
Support PCI lock (Cell lock)	
Only carrier SIM shall work in the CPE	
Support BIP	

Device Management	
Integrity Check	Image One Version
	Image One Checksum
	Image Two Version
	Image Two Checksum
Version Rollback	Auto Rollback to previous version when upgrade fail
Software Upgrade HTTP/FTP Auto Upgrade	Full image upgrade
	Firmware upgrade manually
	Enable / Disable Upgrade Firmware
	Upgrade URL
	Version file
	Check new firmware every (hr.: 1~744)
	Start Time
	Random Time
TR069	Supports upload / download the ACS specified file
	Support download CPE configuration file
	Support configure & queries Parameters (1)
	Support remote upgrade
	Support CPE version update
	Supports debugging operations
	Support cycle monitor
Port mirror	Can enable or disable the port mirror function
syslog	Support the syslog function can send the log to the PC via LAN.
Diagnostics	Support the Ping and trace route

Bridge Mode	
Data traffic forward	Forward the data traffic between the LTE network and PCs.
Maximum 4 PCs support	Each PC connect to the LTE public network via one APN
Module can be managed	One APN can be allocation for the module and the module can be managed via TR069 such remote update version
Public IP allocation	PC get the public IP dynamic from the DHCP server in the CPE. The IP is public CPE get from LTE network.
Multiple APN	Up to 4 APNs support, and can set the static router for each APN

Router Mode	
LAN	Can be set 2 IP addresses on the LAN and for 2 different Network
WAN	WAN IP can be set dynamic
Router protocol	Static Route
DNS	Can be set
Multiple APN	Up to 4 APNs support, and can set the static router for each APN

NAT Mode	
NAT	Support NAT function
Firewall	Can enable or disable the firewall
Multiple APN	Up to 4 APNs support, and can set the static router for each APN
DMZ	The DMZ can be set.
DHCP server	Support the DHCP server
DNS	Support the auto DNS or manual DNS configuration

WIFI Features
Users can turn on/off WLAN function through two ways, one is touch the WLAN button, the second is Web UI.
Support configuration WLAN functions through Web UI, include: SSID, SSID broadcasting turn on/off, AP Isolate function, Channel, rate and mode
Support encryption: Un-encrypted, WEP-OPEN, WEP-SHARED, WPA-PSK (TKIP), WPA-PSK (AES), WPA2-PSK (TKIP), WPA2-PSK (AES)
Support WPS: Support PBC mode
WiFi protocol support: IEEE 802.11 b/g/n (2.401 – 2.483 GHz) IEEE 802.11 ac
WiFi support max. users: 32
Support SSID broadcasting
Support multi SSID
Support WiFi channel self-adapt and select
Support guest network

Firewall Features	
Firewall Configuration	Allow Ping from WAN
	Allow HTTPs login from WAN
	HTTPs Login Port from WAN
	DMZ IP Address
	Redirect ICMP to the Host
Support the IP filter	
Support the MAC Filter	
Support the URL Filter	
Support UPnP	
Support the Port forwarding	

VoIP	
(Note: VoIP or VoLTE but can't support at the same time.)	
Call Features	Call Waiting
	Call Hold /Resume Call Forward
	On busy
	No condition No answer Call Transfer Blind transfer
	Attended transfer Early attended transfer 3-Way
	conferencing Digit Map / Dial plan
	Caller ID display/blocking RTP monitor
	RTP Redundancy
	SBC (session border control) Redundancy
	Session Timer (INVITE/UPDATE)
Codec	G.711 A/Mu Law Appendex I Appendex II
	G.726(16,24,32,40 Kbps) G.729AB
	G.723.1(6.3Kbps / 5.3Kbps) AMR-NB
	AMR-WB
	G.722
Echo Canceller	G.167 AEC (Acoustic Echo Cancellation)
	G.168 Line EchoCanceller
Voice Enhancement	Adaptive Jitter Buffer/Fixed Jitter Buffer
	VAD/CNG/SID
	PLC (Packet Lost Concealment) LGC (Linear Gain Control)
	Gain calibration
	Mixer
Caller ID	DTMF CID Generation
	Bellcore CID Type I/II
	Generation/Detection ETSI CID Type I/II
	Generation/Detection CID CAS/DTAS/SAS Tones
DTMF	Generation
	Out-of-band DTMF Relay (RFC2833)
	In-band DTMF relay
	Detection

CPT	Generation Detection
FAX/Modem	G3/SG3 Fax pass-through T.38 fax relay V.22/V.32 modem pass-through

VoLTE	
(Note: VoIP or VoLTE but can't support at the same time.)	
Registration	Registration event package
	Network-initiated de-registration
	IMS Communication Service Identifier (ICSI)
	Public user identity in the first (or only) record in the Elementary File in the ISIM
	Temporary public user identity derived from the IMSI
Authentication	IMS Authentication and Key Agreement (IMS-AKA), Sec-Agree and IPSec
	ISIM based authentication
	USIM based authentication
	Authentication at the Ut reference point
Address	SIP URIs (alphanumeric) and Mobile Subscriber ISDN Number (MSISDN) based IMPU.
	"Phone-context" parameter
	P-Called-Party-ID header field
Basic Call	AMR-NB
	AMR-WB
	Caller ID Name and Number displayed
Supplementary Call Features	Originating/ Terminating Identification Presentation
	Originating/ Terminating Identification Restriction
	Communication Forwarding unconditional/ on not Logged/ on Busy/ on not Reachable/ on No Reply
	Barring of All Incoming/Outgoing Calls
	Barring of Outgoing International Calls – ex Home Country
	Barring of Incoming Calls – When Roaming
	Communication Hold
	Message Waiting Indication
	Communication Waiting
	Ad-Hoc 3-Party Conference
	Three Way Session creation
	Communication Diversion/Forward (CDIV)
IMS-SIP	Session Initiated Protocol (SIP) registration procedures
	SIP preconditions framework
	Session Description Protocol (SDP) offer/answer for voice media
	Real Time Protocol (RTP) profile

	RTP over UDP
	RTP Control Protocol (RTCP)
	DTMF
	Guaranteed Bit Rate (GBR) bearer
	IETF RFC 4575
	PDN type: IPv4v6
P-CSCF Discovery	3GPP TS 24.229
	3GPP TS 31.103
DSP Processing	3GPP TS 26.114
	Adaptive Multi-Rate speech codec (AMR)
	AMR wideband codec
	Narrowband 8KHz and Wideband 16KHz Frameworks
	DTMF Tone Generation and Detection
	Call Progress Tone Generation
	Dual-mode Dynamic Adaptive/ Fixed Jitter Buffer
	Ad-Hoc 3-Party Conference(server mode)
	G.711-AlawVoice Compression
	G.711-MuLaw Voice Compression
	Silence Compression
	G.168 16ms tail Line Echo Cancellation
	Packet Loss Compensation and Voice Activity Detection
	Caller ID Generation (FXS)
	10ms, 20ms, 30ms, and 40ms packet size supports
	FAX Modem Tone Detection
	FAX Pass-Through over G.711

Appendix-Delivers
1*Assembled product
1*Ethernet cable, 1M
1*12V/2A
1*Manual

(1) Detail Delivers need to be defined by customer agreement