



LEAX/CoreNOC/BSCT Group

LCE121 CAT12 LTE Indoor CPE



LCE121 is an advanced LTE indoor multi service product specifically designed to meet integrated data, and 802.11b/g/n/ac dual band Wi Fi access needs for residential, business and enterprise users. The product supports advanced Gigabit networking and dual band WiFi AP functionalities. It enables wide service coverage and provides high data throughput and networking features to customers who need easy broadband access, hot spot WiFi connectivity.

LCE121 Datasheet

HARDWARE SPECIFICATIONS

SPEC	DESCRIPTION
CHIP SET	GCT GDM7243A MT 7621A
LTE STANDARD	3GPP RELEASE 11 CAT12
FLASH	1GB
RAM	1GB
ETHERNET LAN PORT	2 * GIGABIT RJ45 LAN PORT 10/100/1000 AUTO-SENSING, AUTO-MDI/MDIX
LED	8 LED INDICATORS (PWR, WI-FI, TEL, MODE, RF SIGNAL*4)
SIM	1 USIM/SIM (3FF)
RESET/REBOOT BUTTON	TACT SWITCH ⁽³⁾
ANTENNA	4 BUILT-IN
DIMENSIONS	215MM X 160 MM X 95MM
WEIGHT	< 500G
POWER CONSUMPTION	< 12W
POWER SUPPLY	AC 90~240V DC 12V 2A

(1)Four Bars

(2)Touch reset functions within 1s completed; long press over 10s to restore the factory settings

ENVIRONMENT SPECIFICATIONS

FEATURE	CAPABILITY
OPERATING TEMPERATURE	-10°C -- 55°C
STORAGE TEMPERATURE	40°C 85°C
OPERATING HUMIDITY	90%
STORAGE HUMIDITY	90%

TOPOLOGY



RF SPECIFICATIONS

FEATURE	CAPABILITY	
SUPPORTED BANDS	FDD TDD	B1/2/3/4/5/7/8/12/17/ 20/28A/28B B38/41/B42/43/48
CA	INTRA/INTER-BAND CA DL 2CA 4X4 MIMO DL 4CA 2X2 MIMO, UL 2CA	
MIMO	DL 2X2 (4CA 256QAM) DL 4X4 (2CA 64QAM) UL 2X2 64QAM	
TX	1TX, 2TX	
TRANSMISSION MODE	TM1/2/3/4/5/6/7/8/9	
OUTPUT POWER@25°C	23±2 DBM	
RECEIVING SENSITIVITY	FDD TDD	-100DBM/10MHZ@QPSK -97DBM/20MHZ@QPSK
LTE ANTENNA	0.7~1G	4BUILT-IN OMNI ANTENNA
LTE ANTENNA GAIN	0.7~1G 1.7~2.7G 3.4~3.8G	3DBI 5DBI 6DBI
WI-FI FREQUENCY	2.4GHZ/5GHZ	
WI-FI ANTENNA	BUILT-IN HIGH GAIN, SEPARATE FOR 2.4GHZ,5GHZ	
OUTPUT POWER	18DBM/2.4G; 20DBM/5GHZ	
WI-FI CHANNEL BW	20 MHZ & 40 MHZ	

SOFTWARE SPECIFICATIONS

LANGUAGE SETTINGS: SIMPLIFIED CHINESE, ENGLISH ⁽¹⁾	
SUPPORT NAT/BRIDGE/ROUTER MODE	
SUPPORT HTTP OR HTTPS WEB SERVER	
SUPPORT TWO USERS (ADMIN USER AND NORMAL USER) AND DIFFERENT LIMITATION AND DISPLAY	
PEAK THROUGHPUT	FDD DL 800MBPS (4CC 256QAM); UL 150MBPS (CONFIGURATION 2:7); TDD DL 560MBPS (4CC 256QAM); UL 30MBPS (CONFIGURATION 2:7);
LAN	1000MBIT/S MDI/MDIX AUTO-SENSING IEEE802.3/3U/3ABCOMPATIBLE
PIN MANAGEMENT, SIM CARD AUTHENTICATION	
ENCRYPTION BACKUP OF CURRENT SETTINGS AND RESTORE OF THE BACKUP SETTINGS	
DIAGNOSIS RESULTS AND OPERATION LOGS EXPORT	
STATISTICS	LINK STATUS (LAN) TRANSMITTED/RECEIVED PACKETS UP TIME
SUPPORT MULTI-APN	
VPN	L2TP V2/V3 PPTP GRE L2/L3 GRE OVER IPSEC L2TP OVER IPSEC IPSEC
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	

(1) Multiple languages can be customized

(2) Can be customized

DEVICE MANAGEMENT

INTEGRITY CHECK	IMAGE ONE VERSION IMAGE ONE CHECKSUM IMAGE TWO VERSION IMAGE TWO CHECKSUM
VERSION ROLLBACK	AUTOMATIC ROLLBACK TO PREVIOUS VERSION WHEN UPGRADE FAILS
SOFTWARE UPGRADE HTTP/FTP AUTO UPGRADE	FULL IMAGE UPGRADE MANUAL FIRMWARE UPGRADE UPGRADE FIRMWARE ENABLE / DISABLE UPGRADE URL VERSION FILE PERIODICAL NEW FIRMWARE CHECK (HR.: 1~744) START TIME RANDOM TIME
TR069	SUPPORTS UPLOAD/DOWNLOAD OF THE ACS SPECIFIED FILE SUPPORT DOWNLOAD OF CPE CONFIGURATION FILE SUPPORT PARAMETER CONFIGURATION & QUERY (1) SUPPORT REMOTE UPGRADE SUPPORT CPE VERSION UPDATE SUPPORTS DEBUGGING OPERATIONS SUPPORT CYCLE MONITOR
PORT MIRROR	ENABLE AND DISABLE OPERATION SUPPORTED
SYSLOG	SYSTEM LOG FUNCTION SUPPORTED AND CAN BE SENT TO THE PC VIA LAN
DIAGNOSTICS	SUPPORT THE PING AND TRACE ROUTE

(1) Can be customized

LCE121 Datasheet

BRIDGE MODE

DATA TRAFFIC FORWARD	FORWARD THE DATA TRAFFIC BETWEEN THE LTE NETWORK AND PCS.
P C SUPPORT	MAXIMUM , E ACH PC CONNECT TO THE LTE PUBLIC NETWORK VIA ONE APN
TR 069	ONE APN CAN BE ALLOCATED FOR THE MODULE AND THE MODULE CAN BE MANAGED VIA TR-069 OR UPDATE VERSION REMOTELY
PUBLIC IP ALLOCATION	PC GET S THE PUBLIC IP FROM THE DHCP SERVER IN THE CPE. THIS IS THE PUBLIC IP THAT CPE GETS FROM LTE NETWORK
MULTIPLE APN	UP TO 4 APNS, STATIC ROUTE CAN BE SET FOR EACH APN

ROUTER MODE

LAN	2 IP ADDRESSES ON THE LAN AND FOR 2 DIFFERENT NETWORKS CAN BE SET
WAN	WAN IP CAN BE SET DYNAMICALLY OR STATICALLY
ROUTER PROTOCOL	CURRENTLY NOT SUPPORTED
DNS	CAN BE SET
MULTIPLE APN	UP TO 4 APNS, STATIC ROUTE CAN BE SET FOR EACH APN

NAT MODE

NAT	SUPPORT NAT FUNCTION
FIREWALL	CAN BE ENABLE D OR DISABLED
MULTIPLE APN	UP TO 4 APNS SUPPORT, AND CAN SET THE STATIC ROUTER FOR EACH APN
DMZ	THE DMZ CAN BE SET.
DHCP	SUPPORT THE DHCP SERVER
DNS	SUPPORT THE AUTO DNS OR MANUAL DNS CONFIGURATION

WIFI FEATURES

USERS CAN TURN ON/OFF WLAN FUNCTION BY TOUCHING THE WLAN BUTTON OR THROUGH WEB UI.
SUPPORT CONFIGURING WLAN FUNCTIONS THROUGH WEB UI, INCLUDE: SSID, SSID BROADCASTING TURN ON/OFF, AP ISOLATION, 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
WI-FI PROTOCOL SUPPORT: IEEE 802.11 B/G/N/AC
WI-FI SUPPORT MAX. USERS: 32
SUPPORT SSID BROADCASTING
SUPPORT MULTI SSID
SUPPORT WI-FI CHANNEL SELF-ADAPT AND SELECT
SUPPORT WDS

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

(VoIP or VoLTE but can't be supported 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 APPENDIX I APPENDIX 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	167.AEC (ACOUSTIC ECHO CANCELLATION) 168. LINE ECHO CANCELLER
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 GENERATION
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

(VoIP or VoLTE but can't be supported 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
SUPPLEMENTAR Y CALL FEATURES	ORIGINATING/TERMINATING IDENTIFICATION RESTRICTION COMMUNICATION FORWARDING UNCONDITIONAL/ON NOT LOGGED/ON BUSY/ON NOT REACHABLE/ON NO

	<p>REPLY</p> <p>BARRING OF ALL INCOMING OUTGOING CALLS</p> <p>BARRING OF OUTGOING INTERNATIONAL CALLS EX HOME COUNTRY</p> <p>BARRING OF INCOMING CALLS WHEN ROAMING</p> <p>COMMUNICATION HOLD</p> <p>MESSAGE WAITING INDICATION</p> <p>COMMUNICATION WAITING</p> <p>AD HOC 3 PARTY CONFERENCE</p> <p>THREE WAY SESSION CREATION</p> <p>COMMUNICATION DIVERSION/ FORWARD (CDIV)</p>
IMS SIP	<p>SESSION INITIATED PROTOCOL (SIP) REGISTRATION PROCEDURES</p> <p>SIP PRECONDITIONS FRAMEWORK</p> <p>SESSION DESCRIPTION PROTOCOL (SDP) OFFER/ANSWER FOR VOICE MEDIA</p> <p>REAL TIME PROTOCOL (RTP) PROFILE</p> <p>RTP OVER UDP</p> <p>RTP CONTROL PROTOCOL (RTCP)</p> <p>DTMF</p> <p>GUARANTEED BIT RATE (GBR) BEARER</p> <p>IETF RFC 4575</p> <p>PDN TYPE: IPV4V6</p>
P-CSCF DISCOVERY	<p>3GPP TS 24.229</p> <p>3GPP TS 31.103</p>
DSP PROCESSING	<p>3GPP TS 26.114</p> <p>ADAPTIVE MULTI RATE SPEECH CODEC (AMR)</p> <p>AMR WIDEBAND CODEC</p> <p>NARROWBAND 8KHZ AND WIDEBAND 16KHZ FRAMEWORKS</p> <p>DTMF TONE GENERATION AND DETECTION</p> <p>CALL PROGRESS TONE GENERATION</p> <p>DUAL MODE DYNAMIC ADAPTIVE/ FIXED JITTER BUFFER</p> <p>AD HOC 3 PARTY CONFERENCE (SERVER MODE)</p>

	<p>G 711 ALAW VOICE COMPRESSION</p> <p>G.711 MULAW VOICE COMPRESSION</p> <p>SILENCE COMPRESSION</p> <p>G.168 16MS TAIL LINE ECHO CANCELLATION</p> <p>PACKET LOSS COMPENSATION AND VOICE ACTIVITY DETECTION</p> <p>CALLER ID GENERATION (FXS)</p> <p>10MS, 20MS, 30MS, AND 40MS PACKET SIZE SUPPORTS</p> <p>FAX MODEM TONE DETECTION</p> <p>FAX PASS THROUGH OVER G.711</p>
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APPENDIX - DELIVERS

1*ASSEMBLED PRODUCT

1*ETHERNET CABLE, 1M

1*12V/2.0A

1*MANUAL

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

INDOOR CPE

2.4GHZ/5GHZ WIFI, 2GE PORT, VOIP/VOLTE



PRODUCT SPECS

- Module Chip: GDM7243A
- Bands Support: Band 41/42/43/48 (CBRS support)
- Down Link: 4CA 2x2 256QAM or 2CA 4x4 MIMO or 8x4
- Up Link: CA, UL SU-MIMO
- Antenna: Built-in 4 LTE high gain
- Standard: 802.11 b/g/n/ac
- Ports: 2GE LAN/RJ11/USB

BSCT GROUP

One step ahead

Info@BSCTGroup.com

