4.5G Small Cell

SFE3061
Model Name: SmallCell A1 EGI

Dual-mode UMTS/LTE upgradeable to LTE/LTE with Carrier Aggregation

The Askey SmallCell is the ideal solution for boosting indoor cellular coverage for Enterprise or Enterprise customers.

For a Mobile Operator, this SmallCell improves coverage, especially indoors, and capacity. Coverage is improved because SmallCells can fill in the gaps and eliminate loss of signal through buildings. Capacity is improved by a reduction in the number of phones attempting to use the macro network cells and by the off-load of traffic through the user's network (via the internet) to the Operator's infrastructure.

Consumers and small businesses benefit from greatly improved coverage and signal strength since they have a de facto base station inside their premises. As a result of being relatively close to the SmallCell, the mobile phone uses significantly less power for communication with it, thus increasing battery life. Voice quality is also improved.

Hardware	
• LTE-CA FDD B1/B3 CA	• 1 WAN Giga Ethernet Ports with 802.3at POE+
• Dual-mode WCDMA B1 /LTE B3 Support	• 1 LAN Giga Ethernet Ports
• 5/10/15/20MHz Bandwidth Support	• Power consumption < 24W
• B1/B3/B7/B8/B20 Networking listening	Dimensions
• Synchronization – NL/NTP/PTP; GPS(Opt)	• 220 L x 203 W x 38 H mm
• 2T x 2R MIMO Integrated Omni Antenna	Environmental
• Intra-Band Network Listening	
	• Operating Temperature 0º C – 40º C
• 21 dBm Tx Output Power Per Port	• Operating Humidity 90% maximum, non-condensing

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UMTS/LTE VOICE/VIDEO CALLS

UMTS Circuit switched	Audio/Video calls – AMR, WB-AMR, Emergency calls
CSFB	Circuit switched fallback to UMTS
VoLTE, ViLTE	Voice over LTE, Video over LTE

UMTS/LTE DATA SERVICES

Short Messages	MT/MO on UMTS and LTE
UMTS Packet Data	Release 99 to 384 kbps, HSPA+ 21M / 5.7 M
LTE Active Users	32/64 for Enterprise
LTE Data Rates	150 Mbps/50Mbps
Bandwidth	UMTS 5MHz, LTE 3, 5, 10, 15, 20MHz

MOBILITY

Femto to Macro	Intra-RAT LTE and UMTS handout, Inter-RAT hand-out from UMTS and LTE to GSM, UMTS
Femto to Femto	Intra-LTE handover, Intra-UMTS handover
Macro to Femto	LTE and UMTS hand-in

FEATURE SUPPORT

NITZ	Homezone information with Unicode support
CMAS	Commercial Mobile Alert System
PWS	Public Warning System
Access Control	Open, Prioritized or Closed Access. Closed Subscriber Group (CSG).
Synchronization	LTE, UMTS, GSM and NTP/PTP/GPS
Location locking	Radio Environment Measurement of LTE, UMTS and GSM cell IDs, IP address available for location lock.
Manufacturing	Assistance to enter volume production

HARDWARE

Bands	B1/B7 and B1/7 available. Software supports all bands.
Chipset	Qualcomm FSM 9955
Cell radius	Free space radius up to 500m

OPERATIONS AND MAINTENANCE

EMS	Enterprise Management System
TR-069	Embedded client
TR-196v2	Full data model support including:
	Automatic parameter selection
	Performance metrics, Error reporting
	Complete dual-bank software update

INTERFACES

Network	UMTS – Iuh or Iuh-flex
	LTE - S1 or S1-Flex, X2 for Enterprise/Outdoor (per IOT)
Air	UMTS and LTE Uu Air Interface

QOS

Uplink	DSCP marking, traffic shaping
Downlink	Scheduling by traffic priority, Dynamic RAB management

UMTS SON/RRM

SON	Automatic parameter selection
	Radio parameter auto-configuration
	Power control
RRM	Congestion control and recovery, directed re-try
	Channel-type switching to FACH and PCH
	Dynamic RAB- and code-management
	Admission control with service pre-emption
	Uplink and downlink interference mitigation

LTE SON/RRM

SON	S1 automatic discovery and configuration
	Automatic Neighbour Relations
	Automatic PCI selection
	Automatic power settings configuration
	Mobility Robustness Optimization
	Frequent Handover Mitigation
	Mobility Load Balancing
RRM	Dynamic bearer admission, rejection, redirection and reallocation
	Delay-, QOS- and interference-aware packet scheduler
	Reactive Inter-cell Interference Coordination (ICIC)

SECURITY

IPSEC security	Hardware acceleration, IKE v2 key management, AES, certificate-based security
Uu interface	Ciphering, Signaling integrity checking
Secure boot	Trusted platform secure start-up

Features and Specifications are subject to change.