

# KMEDIA SBC 6400

LOW-DENSITY MULTIPROTOCOL MEDIA GATEWAY



## Main Characteristics

- 16 to 64 E1/T1 and 512 to 2048 VoIP channels
- Up to 2300 SBC sections and 2300 SIP SBC sections with transcoding
- Increase by upgrade of software every 16 E1/T1
- Redundant source
- SIP, SIGTRAN, SS7 ISUP, ISDN PRI, E1/T1 CAS R2, T1 CAS R1, H.248
- Default dimensioning 1U for 19" rack

## Typical Applications

- NGN Technology
- Gateway and routing between TDM and SIP interfaces.
- Easy integration between dialer and operator in call center environments.
- Full integration with operators using SS7 signaling.
- Fax Solution
- OAMP + T

## Overview

Kmedia is a media gateway carrier grade, for converging applications in digital communication platforms (E1/T1, STM-1 or SIP), replacing several signaling and connectivity devices by a single item of equipment.

With hardware designed to work in heavy traffic environments, the Kmedia has the main protocols for NGN 's (Next Generation Networks) and universal codecs for all the channels, besides high performance and processing capacity of calls per second.

The Kmedia-6400 is expandable up to 64 links E1/T1, dispensing with the use of servers for signaling management and processing. Each E1/T1 link can be managed for maximum use of its capacity by means of the traffic distribution system, which can comply with criteria pre- established by the user, as prioritizing routes of lower cost and re-route (configuration of the waiting time in the response of the operator ahead), etc. Furthermore, the Kmedia allows the partitioning of calls in all the routes determined by the user, simultaneously.

Offering the highest density of ports and processing of the sector and the lowest operating cost for a media gateway, the Kmedia presents an average energy consumption two thirds lower than other products of similar capacity, besides occupying less space in the Data Center, aiding to reduce rental costs and contributing to reducing the environmental impact.

The Kmedia is revolutionary in the gateways market, bringing a new reality in availability, reliability, flexibility of growth and management, and also reduced physical size.

## Characteristics and Benefits:

### Voice Processing Capacity

- 1 SIP channel for each TDM channel, using universal codecs and echo canceling in all the channels.

### Voice Decodification

- Universal codecs: G.711, G.723.1, G.726, G.729ab, T.38, clear mode (RFC 4040)
- Additional codecs: G.722.2 (AMR-WB), G.728, G.729eg, iLBC, AMR, EVRC, GSM FR/EFR, QCELP

### TDM (PSTN) Interfaces

- 16 to 64 E1/T1 (software upgrade every 1 E1/T1)
- Independent configuration by port
- Connectors SCSI for patch panel of RJ45

### Interfaces VoIP

- 5 port 100/1000 Base-T with redundancy
- Connectors RJ45

### Fax / Modem / Data

- T.38 relay of fax (V.17 and V.34)
- Automatic fallback for G.711
- Modem and data pass-through

### DTMF relay

- RFC 2833, SIP INFO Method, In-band

### Echo Canceling

- Canceling of echo standardized by ITU-T G.168
- Canceling of echo of up to 128 ms in all the channels simultaneously

### Voice Processing

- Dynamic and programmable Jitter Buffer (20 to 200 ms)
- Voice Activity Detection (VAD)
- Comfort Noise Generation (GNC)

### Management Interfaces

- 100/1000 Base-T for operation, administration, maintenance and provisioning (OAMP)
- Serial port
- Virtual IP Support

### Control

- 230 CAPS (Calls Attempts Per Second)
- Standalone call control
- Any-to-any call routes (TDM for VoIP, TDM for TDM, VoIP for VoIP with transcoding)
- Routing based on: E1 groups, source / destination, ASR (answer-seizure ratio) address nature, time of day, loads, costs, request Uniform Resource Identifier (Request URI), number redirection, and other parameters
- Routing (tables with more than 100,000 routes, uploaded by CSV files)
- Route-Retry: attempts on other routes based on the response time (Alert - Call Accept), because of route disconnection and prioritization
- Call Transfer
- H.248 (MEGACO) call control:
  - ITU-T H.248 versions 1 and 2
  - Transportation by UDP, SCTP, IPsec
  - DTMF (Dual-Tone Multi-Frequency) and Fax Detection
  - Generating DTMF tones
  - Alerts of quality and inactivity of calls
- Session management and pricing:
  - SIP client availability monitoring
  - Real-time Transport Protocol (RTP)
  - Generation of Call Detail Record - CDRs (RADIUS or text file)

### OAMP + T

#### Operation and Administration

- Web interface for operation
- SNMP v2 GET, TRAPS and alarms
- Dynamic configuration exchange

#### Monitoring

- Graphic channel occupation
- Status of up and down of links and protocols
- Viewing of status of SS7 by layers
- TDM channel alignment status (Time Division Multiplex)
- Quantity of calls made per period

#### Maintenance

- Web interface for maintenance
- Automated upgrade system
- Recovery and copy of configurations (Backup)

## Support for the Following Signalings:

### SIP

- Handles the following RFCs: 2327, 2833, 2976, 3204, 3261, 3262, 3263, 3264, 3311, 3323, 3325, 3326, 3372, 3389, 3398, 3515, 3551, 3555, 3578, 3581, 3665, 3666, 3764, 3891, 4028, 4694, 5806
- SIP-I / SIP-T
- Manipulating SIP headers

### SIGTRAN

- M2PA, M2UA, M3UA (IPSP, ASP, SG), IUA
- SCTP (raw IP and UDP)
- Supports SS7 termination and forwarding
- Up to 64 links M2UA / M2PA links
- Supports up to 64 M3UA peers

### SS7

- Up to 64 x links MTP2
- Multiple redundancy of links MTP2
- Up to 64 MTP3 point codes of sources and targets
- ISUP variants: ITU 92, ITU 97, ANSI 88, ANSI 92, ANSI 95, Q.767, Telcordia 97, ETSIv2, ETSIv3, China, Singapore, UK, SPIROU, Japan NTT, Russia

### ISDN PRI

- Q.931 ISDN PRI: NI-2, 4ESS, 5ESS, DMS-100, DMS-250, Euro ISDN, ETSI NET5 (France, Germany, United Kingdom, China, Hong Kong, Korea), NTT (Japan), Australia

### CAS

- MF R2 (including ITU standards, Brazil, Mexico, Venezuela)
- Customizable protocol script that allows you to implement any other variation of the protocol

### Provisioning

- Web interface for configuration
- Dynamic activation of configuration

### Problem Solution

- Tracking per call (historical or real-time)
- Signal capture tools
- SSH

## Physical Characteristics

### Energy input

- 90 to 260 VAC, 47 to 63 Hz (source AC)
- -40 to -60 VDC (source DC)
- Maximum consumption of 170W

### Dimensioning

- Default dimensioning 1U for 19" rack
- Measures: 44,5 x 429 x 406 mm
- Weight: 6,6 kg

## Regulatory compliances

### Environmental Conditions

Operating temperature: 0 to +55 °C, 95% relative humidity, not condensing  
Inventory temperature: -10 a +75 °C, 95% relative humidity, not condensing

### Guarantees and Certifications

- Factory warranty 1 year
- Anatel (Brazilian National Telecommunications Agency) Certification
- ISO 9001 industry certified

## Other Product Images



Rear view