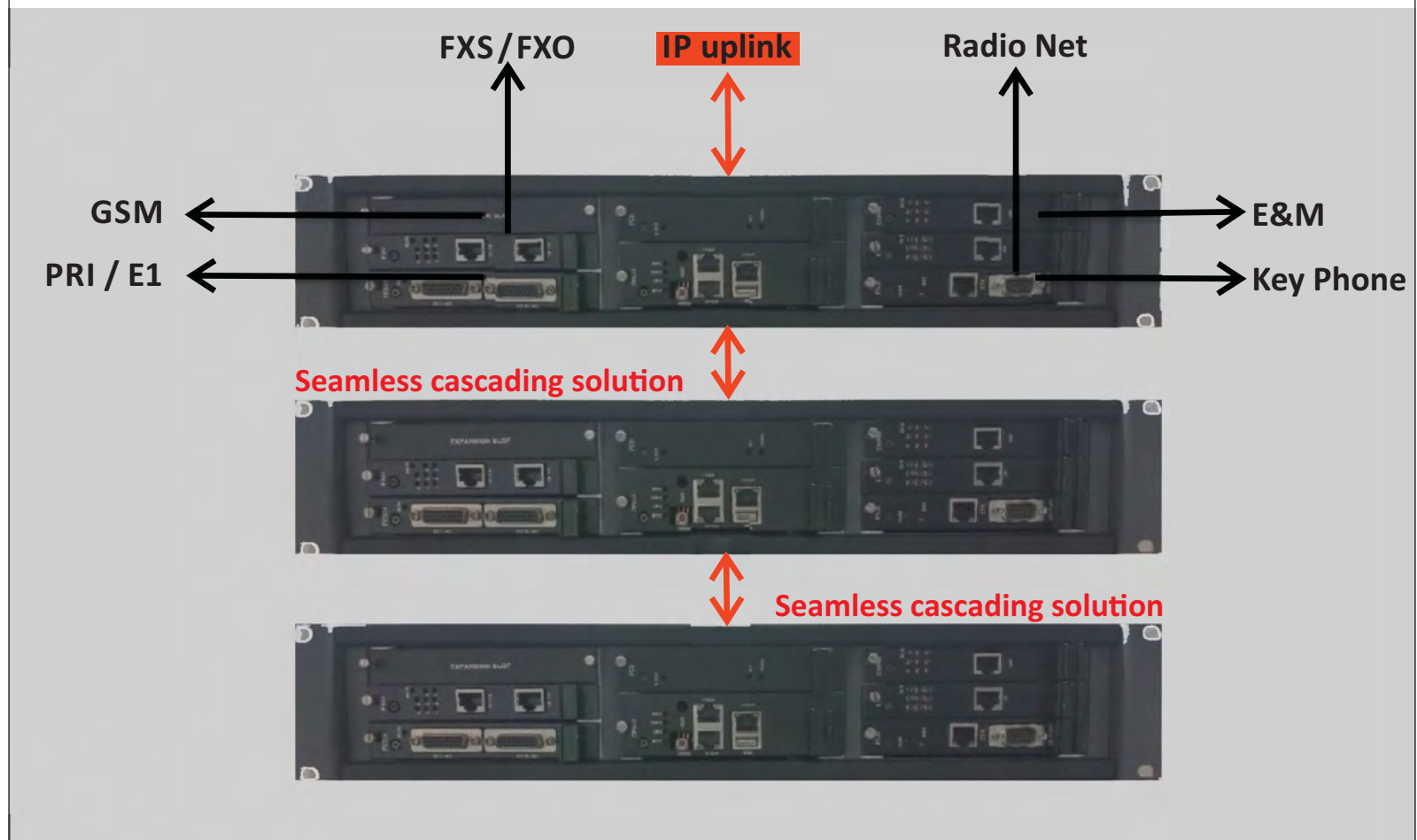# MG 3000 series - One box Tactical and Enterprise Gateway solution

MG 3000 series is an all-new concept providing a single box solution in the TDM world. This is a cost effective and scalable VoIP Media Gateway solution designed to interface between the TDM and IP world.

It is an intelligent, feature rich system which allows seamless connectivity between the IP and PSTN networks through almost all connectivity protocols in the TDM world. MG 3000 series provides local survivability in the event of external server & network failures.

In its tactical variant the MG 3000 series supports a host of tactical features. Compliant to the stringent environmental conditions and made to perfection as per global MIL standards, the MG 3000 tactical series supports redundancy in CPU and power supply level. It supports the Radio over IP functionality and Magneto and E&M connectivity over IP networks. Built to ensure 24x7 operations, the single box solution supports disaster server application in case the main server site gets completely destroyed.

MG 3000 series is a highly scalable and cascadable solution system, which provides rich features for both enterprise, and defence needs.

Single box solution for PRI/FXS/FXO/GSM/Radio net /E&M gateways application upto 512 ports	Available in Ruggedised mode as per MIL STD specifications	Key Telephones (KTS) connectivity along with FAX and analog telephones	Software defined ports for FXS / FXO / Magneto interfaces
IP telephone for inter-op between analog telephone and the radio nets	Disaster server support in case of destruction of the main server location	Local node survivability with fallback PSTN	Decentralized & cascading system architecture to provide high availability and scalability

High availability with a decentralized architecture: Each media gateway has an optional redundant Ethernet connection which can be used to connect the device to two different Ethernet switches. When two switches are used, two independent paths to backbone are available. This configuration along with dis server support make it a highly reliable Tactical Gateway

State of art and rich in features : The 3000 series of media gateways are designed using embedded LINUX operating system. The gateways support both SIP and MGCP. It offers long list of unique features along with basic features like T.38 FAX over IP, analog modem over IP, caller ID detection over FXO, flexible numbering of ports and all intercom features

Reliability : The MG 3000 series of media gateway are designed to withstand harsh environment in the field. Each system is tested against severe weather conditions. In addition to this, the design architecture supports 1+1 power supply and central processor card for high survivability.

Easy operation and maintainability : The gateways provide user friendly Graphical User Interface (GUI, allowing users to program and configure the system. It also supports various standards of remote management like auto provisioning, TELNET, SNMP, TR069 etc.
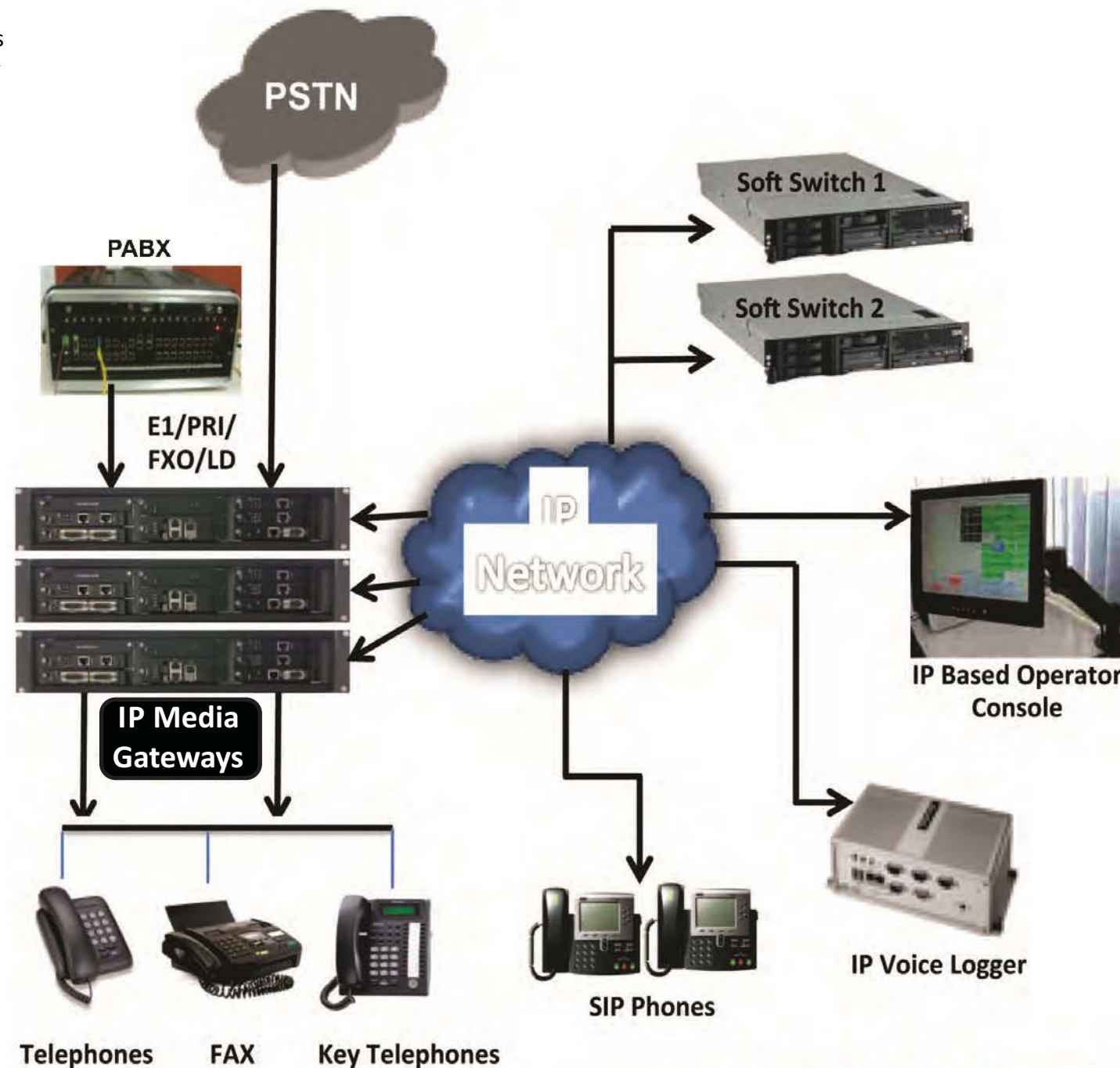
Secured Investment : In the process of deciding state of the art VoIP media gateway; cost investment, flexibility of connectivity and future expandability are the main challenges. The 3000 series of media gateways are the best suited. It delivers high performance; range starting from 32 FXS ports to 512 ports, with minimum investment and at the same time is future ready for expansion with growing needs of business.

Applications:
• Complete Enterprise segment
    Defense segment with ruggedisation
    e campuses, hotels and hospitals
    N gateway
    le network integration of analog telephones
    switch over a wide area
    er applications

Unique Features :
• Single box solution for PRI/FXS/FXO/GSM/ Radio net /E&M gateway application
• Configuration from 32 to 512 FXS ports.
• Supports multiple PRI/E1 to IP
• Supports cascading of MGW boxes
• Police and Military applications for inter operability of various Radio nets
• Disaster server support
• Local node survivability with PSTN
• Voice, FAX, POS machines and analog modem support
• Caller ID detection on FXO and generation
• Multiple CODEC support
• IPv6 compliant
• Message waiting indication
• Supports auto sensing short haul and long haul up to 9 KM
• Individual protection against high voltage spikes and lightening strikes on each port

IP Media Gateways : MG 3000 Series

1U
Up to 96 port

2U
Up to 120 ports

3U
Up to 512 port

arious additional applications available to eet customer - specific needs : In addition o voice communications, the gateways allows he integration of additional applications. A ariety of IP-based applications such as video urveillance, SIP phone integration, IP based perator consoles, IP based Voice Logger and dio sets can be seamlessly integrated with he gateways.

PSTN

PABX

Soft Switch 1

Soft Switch 2

E1/PRI/ FXO/LD

IP Network

IP Media Gateways

IP Based Operator Console

IP Voice Logger

SIP Phones

Telephones FAX Key Telephones

VoIP Media Gateway - 3000 series

Technical Specications

System and Maintenance

- Modular concept, redundancy
- Configuration back up and restore
- Built-in protection on all cards
- SNMP V1/V2/V3
- Auto provisioning
- Tr069
- WEB/TELNET
- GUI based Local management
- Firmware upgrade using WEB

PSTN

IP Network

E1/PRI/ FXO

WAN SIP Ethernet

E1/PRI/ LD/E&M

Telephones   FAX   Key Telephones   SIP Phones

Legacy PABX

IP Media Gateways : 3000 Series

Subscriber Services

Auto Call Back	Hotline
Call Forward	DNS
Call Hold/Transfer	Conferencing
Call Pick-up	Soft Phones
ISDN services	Fax over IP
Abbreviated Dilating	Radio over IP
Direct outwards Dial	Video Phones
E. 164 numbering	Call Statistics
Call Data Record	Flexi Numbering

System Configurations

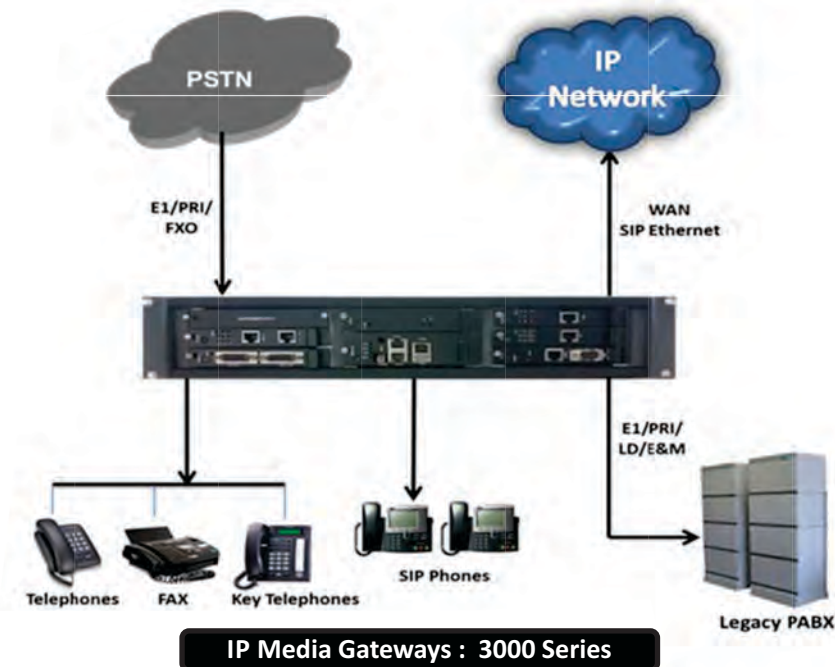|	
1U MG 3301	: max. 96 port
	3 peripheral slots
2U MG 3601	: max. 120 ports
	6 peripheral slots
3U MG 3611	: max. 512 port
	16 peripheral slots

Plug-in Cards

PSU	: DC-DC Convertor, 48 VDC input
CPU	: Main processor with 1PRI, LAN, WAN, RS232
E1/PRI	: 1 X 2MB link
FXS	: 16/32 ports per card with FSK
FXO	: 8 ports per card with DTMF/FSK
E&M	: 8 ports per card, 2/4 Wire
LD	: 4 ports per card, MFC/Pulse
GSM	: 4 ports per card
RIC	: Radio interface, 2 port per card

Power Supply

AC operation	:	140V-265 Vac
DC operation	:	48V DC
Power consumption	:	Appx.0.7W/port
	1U :	50W nominal
	2U :	100W nominal
	3U :	250W nominal

Environmental Data

Operating Temp :	-10 to +50℃
Storage Temperature :	-20 to +65℃
Relative humidity :	0 - 90 %

VoIP Interface and CODECs

SIP Protocol
FAX using T .38
Modem Using G.711
Up to 71 VoIP channels
G.711, G. 729a, G. G.726, T .38
Echo cancellation
Silence suppression/
Comfort noise generation

Protocols

E 1 CAS, E1 QSIG
ISDN PRI
SIP, MEGACO
DTMF/Pulse
FSK
MFC modified
GSM
Radio over IP, PTT signalling

Dimensions (WxHxD) and weight

1U MG 3301	: 480x45x335mm
	: 8Kg max.
2U MG 3601	: 480x90x335mm
	: 12Kg max.
3U MG 3611	: 480x135x345mm
	: 20Kg max.

Options

IP PABX
IP Logger
IP operator Console
Soft switch server
Key Telephone
WEB GUI

IP PABX (2000 ports)
Model : IP@CORE

IP based Operator
Console, Touch screen

KT12/24
Key Telephone

IP Voice Logger