

GAD - GADM

Small Office Home Office (SOHO) and Small Medium Enterprise (SME) customers are for Broadband Service Providers a very important market segment that sustains their profitable growth. Service Providers must deploy innovative and valuable services in order to attract and retain such users by leveraging on new Ethernet in the Last Mile technologies which make broadband services affordable to more customers therefore increasing ARPU (Average Revenue Per User).

Telsey's Integrated Access Devices GAD and GADM fit both IP-based broadband service providers' and SOHO/SME customers' needs. They are a low cost, flexible and cutting edge solutions that support multiple integrated IP-based valuable services.

KEY FEATURES

- » Ethernet 10/100 BaseTX Ethernet uplink interface
- » 4 simultaneous calls for GAD model, 6 simultaneous calls for GADM
- » Full choice of VoIP signalling protocols and codec
- » Multiple FXS and ISDN BRI interfaces where analog telephones or PBX can be connected
- » 4 Ethernet Ports for user's LAN, with excellent layer 3 routing and firewalling features
- » IP VPN support
- » QoS management
- » Remote Management and Upgrade system through Telnet, SNMP, TFTP

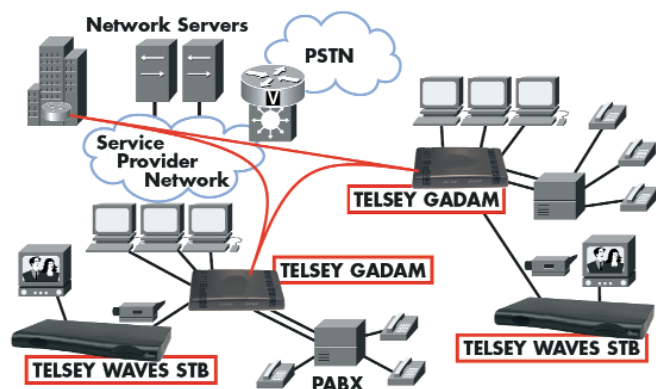
BENEFITS

- » Service Providers can easily connect customers to their MAN through ETTH networks up to 100Mbps
- » Customers can benefit from Class 5 Supplementary Services, FAX and modem services over IP
- » Maximum flexibility for quick integration with operators' network infrastructure
- » Preserve users' current telephones and PBX equipment without adding external VoIP adapters
- » Service providers can efficiently deliver data services within the SOHO/Sme environment
- » Allow secure remote Internet connections between main and branch or home offices
- » Provides excellent Quality of Services in a bundled voice, data and video services environment
- » Make mass deployment easy and quick

TYPICAL APPLICATIONS

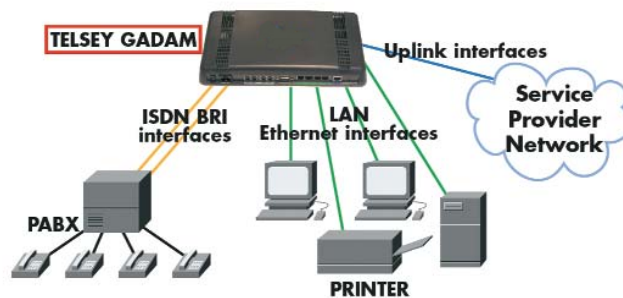
Remote office connection

Using GAD or GADM, service providers can deliver IP VPN services to increase security on remote data connection. This ensures customer that their data are premise to premise encrypted. This guarantees higher security level in comparison to on IP-VPN network based approach, where data are ciphered only inside the network.



Voice services

GADM can connect an ISDN PBX, a FAX machine and an analog telephone to the service provider's VoIP network. End users end user can benefit from Class 5 Supplementary services.



GAD - GADM

MODELS	FXS RJ-II PORTS	ISDN BRI RJ-45 PORTS	SIMULTANEOUS VOICE CALLS
GAD	4	-	4
GADM	2	2	6

TECHNICAL CHARACTERISTICS

BROADBAND INTERFACE

- > Ethernet 10/100 Base T half/full duplex autonegotiating
- > RJ-45 connector

VOICE

FXS Interfaces for GAD and GADM models	<ul style="list-style-type: none"> > Dial mode supported: DTMF > Tones: customizable > Ringing voltage: 35 Vrms, Sine wave > Ringing frequency: 25 Hz default (frequency and cadence programmable for each FXS interface) > REN: 5 per FXS port 	<ul style="list-style-type: none"> > On-Hook voltage: 48 V nominal > Off-hook current: 22 mA nominal (other values programmable) > Terminating impedance: 600 Ohm default (other impedances programmable) > Loop Signaling: Loop Start > Loop length: 200 m max
ISDN BRI Interfaces for GADM	<ul style="list-style-type: none"> > Interface BRI S/T layer 1, ETSI ETS 300 01 2 ITU-T I.430 compliant > Protocols: network interface for layer 2 data link LAPD, network interface for layer 3 call control > Euro-ISDN > Power feed 41V +/-5% (100mA max, 4W) > Bearer services 64kbps speech circuit mode 	
VoIP Protocols Properties	<ul style="list-style-type: none"> > H.323 v.4, SIP, ready for MGCP > Echo cancellation G.168 > Silence suppression/comfort noise generation 	> Modem/fax passthrough (only for FXS interfaces)
Voice Codecs	> G.711, G.729, G. 723	
Fax over IP Protocols	> T.38 - only for FXS interfaces	

CLASS 5 SERVICES

H323, SIP, ready for MGCP	<ul style="list-style-type: none"> > Generic Signaling > Call Hold > CLIP/CLIR 	<ul style="list-style-type: none"> > Call Transfer > Call Waiting
Caller I.D.	> V.23 Modem and DTMF transmitter on board	
Other	> Call Hunting	

DATA

Domestic LAN Interfaces	> 4 Ethernet 10/100 BaseT half/full duplex autonegotiating > RJ-45 connectors		
Layer 3	> NAT/PAT (RFC 1631) > Static Routing	RIPv2 BGP	OSPF
Firewalling	<ul style="list-style-type: none"> > Access Control List > Packet filtering > Application content filtering 	Stateful inspection DMZ support Defence against Denial of Service attacks	
IP VPN	<ul style="list-style-type: none"> > Encryption algorithm: DES, 3DES > Authentication algorithm: MD5, SHA-1 > Encapsulation Security Payload (ESP) 	Authentication Header (AH) Key Management: IKE, Manual, Pre-shared Keys	
Layer 2 switching	> Supports IEEE 802.1q		
QoS	<ul style="list-style-type: none"> > Supports traffic prioritization: <ul style="list-style-type: none"> 1 - Port prioritization 3 - IEEE 802.1q 	2 - DSCP/TOS 4 - Custom queueing	
Other	<ul style="list-style-type: none"> > DHCP server > TFTP client 	Syslog client	

MANAGEMENT

- > Agent SNMP v.2
- > Remote Telnet console
- > Local RS232 console
- > Integrated Web Server
- > Upgradeable via TFTP

POWER SUPPLY

- > 230 Vac, 50 Hz (110 Vac, 60 Hz provided on request)

PHYSICAL DIMENSIONS

- > Width 300 mm; Depth 158 mm; Height 46 mm; Weight 740 gr.
- > Wall mountable

ENVIRONMENTAL CONDITIONS

- > Operation temperature: 5 - 45° C
- > Storage temperature: 5 - 55° C
- > Humidity: 85% (non condensing)

Disclaimer

All statements, technical information and recommendations contained in this documentation have been carefully checked for reliability; however no responsibility is assumed for inaccuracies. The information contained in this documentation is subject to change without notice.