MICROMEDIA INTERNATIONAL

ALERT

Available Media
Compatible Modems

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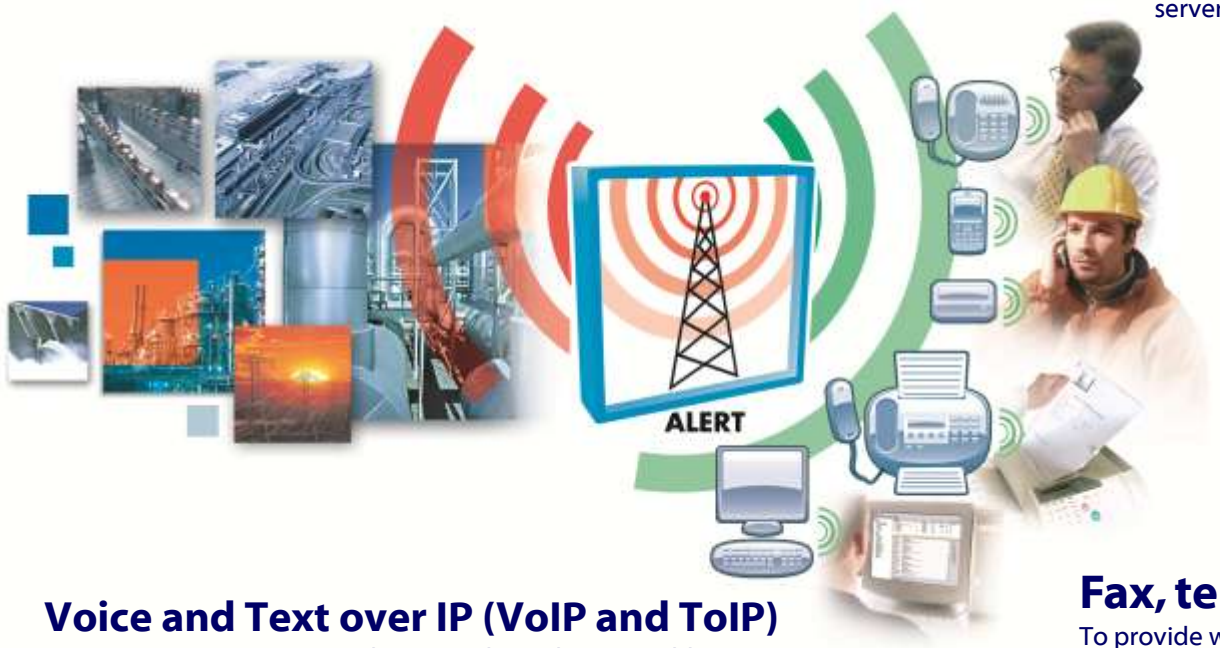
INTERNATIONAL
www.micromedia-int.com

Alert is able to send messages to all your different media

Telephone (fixed or mobile)

Operators called by telephone can listen to alarms and acknowledge them, through the integrated vocal server.



Short messages (SMS), public paging systems

To alert operators working off site on their mobile phone or pager.

On-site paging systems

To quickly alert maintenance operators working on site.

Voice and Text over IP (VoIP and ToIP)

To transmit messages to IP Phones or through compatible PABX (***sip*** compatible). A modem is not needed anymore.

Fax, tele-printer

To provide written reports on alarms detected and their context.

Email

To provide written reports on alarms detected and their context.

Alert Mobile

To visualize and acknowledge the alarms with SMS or with a 3G or Wifi connexion

android BlackBerry iPhone Windows phone Windows Mobile

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For each modem, its usable media

Modems	Advantages/Drawbacks	Media
Digital/ISDN	Reliable and long-lasting product	Vocal Alarms, Mini-messages, Fax, public pager, Data for remote monitoring center (TRSII protocol)[1]
Analog/PSTN	Unreliable and short-lasting product, vocal feature abandoned by constructors	*Vocal Alarms*[2], Fax, Data for public pagers Data for private pagers, Data for remote monitoring center (TRSII protocol)
GSM[3]	Reliable and long-lasting product, constant evolutions brought by the constructors	Vocal Alarms[4] and SMS only

Beware:

- Digital/ISDN modems can only be used on digital/ISDN phone lines
- Analog modems can only be used on analog/PSTN phone lines

1 - Be sure that the remote monitoring center accepts connections from ISDN modems

2 - The use of an analog modem to emit vocal calls is NOT recommended

3 - The sim card and the telecom service provider subscription are not provided by Micromedia International

4 - Vocal alarms are only available on specific GSM modems, provided on demand, since Dec. 2011.

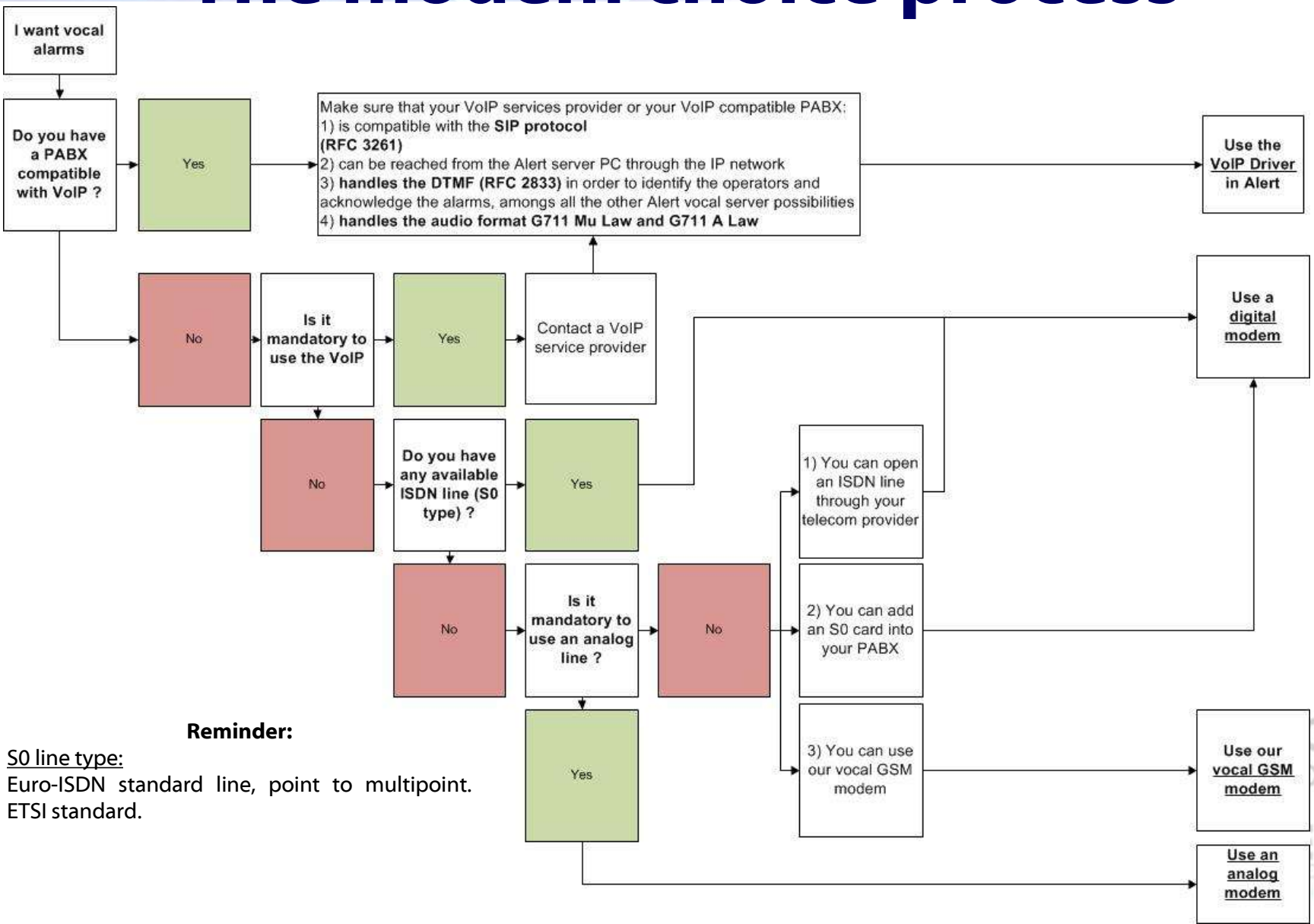
For each medium, a modem 1/2

Medias	Required modem	Benefits	Drawbacks	Supported protocol	Remarks
Vocal (analog phone line)	Digital modem	Reliability: You are sure that the operator has listened to the alarm message		S0	S0 basic access : Standard Euro-ISDN (ETSI standard), in point to multipoint mode.
Vocal (digital phone line)	Analog modem	Reliability: You are sure that the operator has listened to the alarm message	Regular phone line pick up and hang up issues		Use NOT recommended
Vocal (using VoIP)	None, but an IP network connection	No modem required. Reliability: You are sure that the operator has listened to the alarm message	PABX compatible with SIP protocol (RFC 3261) and DTMF (RFC 2833) handling. Otherwise use of a compatible VoIP service provider	SIP	Audio formats handled: G711 Mu Law and G711 A Law
Vocal (using GSM modem)	GSM modem (from Sierra Wireless). Specific firmware and application provided by Micromedia needed	A single equipment without any physical phone line to send vocal alarms AND SMS. Reliability: You are sure that the operator has listened to the alarm message			GSM signal has to be strong enough where the modem is located. The SIM card and the mobile phone subscription are not provided.
SMS	GSM modem		The mobile phone provider does not guarantee the reception of the SMS by the receiver. Optionally, in Alert, it is possible to know if the recipient has received the SMS but not if the recipient has actually read it.		GSM signal has to be strong enough where the modem is located. The SIM card and the mobile phone subscription are not provided. All subscription which can send SMS will work. The 'DATA' subscription will be appropriate if only sending SMS (no vocal alarms).
Fax	Digital or analog modem				

For each medium, a modem 2/2

Medias	Required modem	Benefits	Drawbacks	Supported protocol	Remarks
Email	Analog modem, digital modem or IP network connection				A RAS predefined connection in Windows is needed when using analog or digital modem. SSL encryption is not supported.
Mini-messages (over ISDN)	Digital modem	Free. Generic, works on any telecom infrastructure.	Restricted to company internal use. Only to be used by phones with text displays compatible with mini-messages (ex: DECT)	S0	S0 basic access : Standard Euro-ISDN (ETSI standard), in point to multipoint mode.
Public pagers	Digital or analog modem	Large coverage: world, underground,…		TAP,ERMES UCP	
Private pagers, beeps	None. Serial or an IP network connection	Fastest way to send alarms.Once installed, messaging is free. The installation can cover specific premises which have no GSM signal (underground,…)	Local coverage: limited to the area covered by private antennas	ESPA 444, DAKS, Alcatel, Alcatel OXE, NIRA, ASCOM, IXARMA, Cisco XML compliant phone , Quentris, Spectralink	
AlertMobile	GSM modem ou IP network connection	Enables multi-sites supervision using 3G, Wifi or SMS		3G, Wifi, SMS	

Vocal alarms focus
The modem choice process



Reminder:

S0 line type:
Euro-ISDN standard line, point to multipoint. ETSI standard.

Mini-messages text focus 1/2

- Text messages can only be sent to phones of a given site supporting text messages. They are generally used in internal networks with a short range, less than 3 km. **This is not SMS.** SMS are mini-messages text which use national or international GSM telecommunication providers (wide public area).
- The phones receiving the text alarms **must be compatible with mini-messages text** and compatible with the PABX sending the text messages. These phones may be DECT or not. The phone model will determine if it is compatible with the reception of mini-messages text.
- Knowing the PABX type will determine which driver Alert will use to send the mini-messages text :
  - « mini-message over ISDN » feature: Feature included by default with the ISDN standard. Free driver. Constraint : use of a digital modem (S0 basic access) connected to the Alert server and a digital line between the modem and the PABX. The text message is not directly displayed on the phone screen, one has to navigate through the phone menu to display the message.
  - Use of the ESPA444 protocol between the Alert server and the PABX (or its associated alarm central*). Free driver. Constraint : Serial connection (RS-232) to the PABX (or its associated alarm central*) and no alarm or call acknowledgment possibility. The PABX (or its associated alarm central*) must handle the ESPA444 protocol in input.
  - Use of specific driver dedicated to the PABX. drawback : paid driver. Main advantages are :
    - No modem needed to send text messages. Most of the time an IP link is used between Alert and the PABX.
    - A short text message is displayed directly on the phone. You don't have to navigate through all your phones menus
- The current available driver list can be seen on the next page.
- You get the list from here:

  http://www.micromedia-int.com/index.php/fr/component/content/article/114-private-pagers-beep-dect.html

* Alarm central: external module provided by the constructor of the PABX. For example: M7900 for Matra, HiPath DAKS for Siemens, …

Text mini-messages focus 2/2

Driver	Required hardware	Connection type between Alert and the required hardware	Acknowledgment management: On server receipt On phone receipt On operateur reading action	Driver license	Remarks
Mini-message over ISDN	S0 digital line	S0	Ack on server receipt Ack on phone receipt. Manual call ack possible	Free	Possible when using digital line whatever the PABX is.
ESPA444	PABX or alarm central handling ESPA444 input	RS-232	Ack on server receipt Ack on phone receipt. No manual call ack possible	Free	Many PABX or alarm central support this protocol
Alcatel 4400	Notification Server (Windows NT machine)	IP	Ack on server receipt Ack on phone receipt. No manual call ack possible	Free	Obsolete.:Alcatel does not support this installation type anymore
Alcatel OXEPaging	PABX Alcatel OXE (≥5.0) With Notification Server option ≥ 50	IP on port 2555	Ack on server receipt Ack on phone receipt. Manual call ack possible	Charged	
Aastra	PABX Aastra IntelliGate Version ≥ I6.6 with license ATAS.	IP	Ack on server receipt Ack on phone receipt. Manual call ack possible	Charged	Installation done with Aastra 2065 release 7.51
EricssonCTI	Ericsson CTI	IP	Ack on server receipt Ack on phone receipt. No manual call ack possible	Charged	
Ascom OAS	Ascom OAS card	IP	Ack on server receipt Ack on phone receipt. Manual call ack possible	Free	
Ascom OAP	IMS card handling the OAP protocol	IP	Ack on server receipt Ack on phone receipt. Manual call ack possible	Free	
Cisco XML	Cisco Call Manager Version ≥4	IP	Ack on server receipt Ack on phone receipt. No manual call ack possible	Charged	
DAKS TR500	Siemens DAKS-TR500	IP	Ack on server receipt Ack on phone receipt. No manual call ack possible	Free	

Frequently Asked Questions

The GSM signal is weak where my GSM modem is located, what should I do ?

You have 2 options

1) The extension of the GSM antenna cable

Depending on the cable shield, the GSM antenna can be deported several meters away (up to 30 meters or more)

2) The RS-232/IP or USB/IP converter

We have tested several RS-232/IP and USB/IP converters. With this type of converters, you will be able to install the GSM modem on the same IP network as the Alert server, but at a place where the GSM signal is stronger. You will then be able to use the GSM mode as if it was next to the Alert server.

The Micromedia International application will be installed on a virtual machine, is it possible ?

Yes, Micromedia International applications may be installed on virtual servers. However, this type of architecture implies to comply with some restrictions regarding the communication equipments.

In a virtual machine environment, USB and RS-232 physical ports can be assigned to specific virtual machines. If you cannot achieve this procedure, **the use of equipment dedicated to Micromedia International applications should be done through the use of an IP network connection**. You will then have to use a **USB/IP or RS-232/IP converter**.

If you want to send alarm vocal calls, we recommend the use of **VoIP**. This feature enables you to emit vocal calls through the IP network. If your infrastructure is not compatible with VoIP, a modem is needed. A **RS-232/IP or USB/IP converter can be used** to access your modem through your IP network.

Find answers to other questions on our web site in the FAQ section.

In a nutshell

Modems / Alarms	Analog	Digital	GSM
Vocal	not recommended	Strongly recommended	Yes[3]
Data (Fax, pager, TRSII[1])	Yes	Yes[1]	Impossible
SMS	Impossible in France[2]	Impossible in France[2]	Yes

1 – The TRSII driver enables transmitting of alarms to remote monitoring centers.
Be sure that the remote monitoring center accepts connections from ISDN modem
2 – Possible outside of France through telecom provider servers (TAP or ERMES UCP protocol)
3 – Possible since Dec. 2011, with specific modem provided on demand by Micromedia

Connection types and prices

Modem type	Connection type	Prices
Digital modem (up to 2 simultaneous calls on 1 ISDN physical line)	PCI, PCI-Express	From ~ 200 € to ~700 €
Digital modem (up to 4 simultaneous calls on 2 ISDN physical lines)	PCI, PCI-Express	~1400 €
Digital modem (up to 8 simultaneous calls on 4 ISDN physical lines)	PCI, PCI-Express	~ 1800 €
Analog modem (1 call on 1 PSTN physical line)	RS-232, USB	~ 300 €
Analog modems (with signal treatment) (up to 2 simultaneous calls on 2 PSTN physical lines)	PCI	~ 900 €
Vocal GSM modem (Vocal calls and SMS only, 1 SIM card)	RS-232	~ 600 €
GSM modem (SMS only, 1 SIM card)	RS-232, USB	~ 600 €

Technical telecom glossary

- **B Channel** — The bearer channel (B) is a standard 64 kbit/s voice channel of 8 bits sampled at 8 kHz with G.711 encoding. B-Channels can also be used to carry data, since they are nothing more than digital channels.
- **BRI** — The entry level interface to ISDN is the Basic Rate Interface (BRI), a 144 kbit/s service delivered over a pair of standard telephone copper wires. The 144 kbit/s rate is broken down into two 64 kbit/s bearer channels ('B' channels) and one 16 kbit/s signaling channel ('D' channel or Data channel). BRI is sometimes referred to as 2B+D. BRI-ISDN is very popular in Europe but is much less common in North America
- **Interface T0** — Interface de l'accès de base côté réseau public.
- **ISDN** —Integrated Services Digital Network. Integrated Services refers to ISDN's ability to deliver at minimum two simultaneous connections, in any combination of data, voice, video, and fax, over a single line
- **PABX or PBX**— Private Automatic Branch eXchange.
- **S interface** — The S interface is a four-wire bus that ISDN consumer devices plug into
- **T interface** — The T interface is a serial interface between a computing device and a Terminal Adapter, which is the digital equivalent of a modem.

To know more

Micromedia International tested and validated modems :

- http://www.micromedia-int.com/index.php/en/modems.html

Micromedia International FAQ section:

- http://www.micromedia-int.com/index.php/en/faq.html

Wikipedia:

- ISDN http://en.wikipedia.org/wiki/ISDN
- PBX/PABX http://en.wikipedia.org/wiki/Private_branch_exchange

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Thank you

Do you have questions?

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