# MAINTENANCE WITHOUT THE TRAVELLING

ETIC Telecom's remote maintenance solution is designed to enable manufacturers to maintain automated devices without having to travel.

Machines all over the world can be remotely and securely maintained via existing Internet access or the telephone network, GSM or ISDN.

The remote maintenance PC is teleported onto the Ethernet or RS232-RS485 interface of the machine. The remote maintenance operator can use his usual design or diagnostic software for instance, as though he were there.

The solution consists of three elements:

" ☛ The "RAS server", which is connected to the devices network using an Ethernet / IP or RS-232-RS485 interface.

"☛ The M2Me_Secure software, which is installed on the maintenance PC. It is both a machine directory and secure communication software.

The PC is teleported onto the machine network in just one click either by telephone, via the GSM network or by Internet.

"☛ The M2Me_Connect service can be used as an online meeting point for devices - PCs, PLCs ...- to solve more difficult cases : Dynamic IP addresses, impossible incoming connections, etc.

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**etic**
TELECOMMUNICATIONS

## Applications

• Remote machine maintenance :
Automated systems, robots, measuring systems, computers, network equipments  etc...

## Remote machine maintenance on a TCP/IP network

The remote user's PC is teleported onto the Ethernet network, allowing him to carry out all his usual operations as if he were there. The firewall can be tailored to restrict the machines each remote user can access (IP address and port number).

## Remote maintenance of RS232 - RS485 devices

The RAS also has an RS232-RS485 serial inter- face. Many automated devices on the market can be connected via the console connector, in particular Schneider, Siemens, Omron, Rockwell, Moeller, ABB devices, and more. The cables and adaptors are available in our catalogue.

## Emails and SMS

Emails and SMS can be sent using the RAS server. An email or an SMS can be sent when a RAS server digital input is closed or by a device linked to the network (SMTP client). The RAS server routes it to the Internet if necessary.
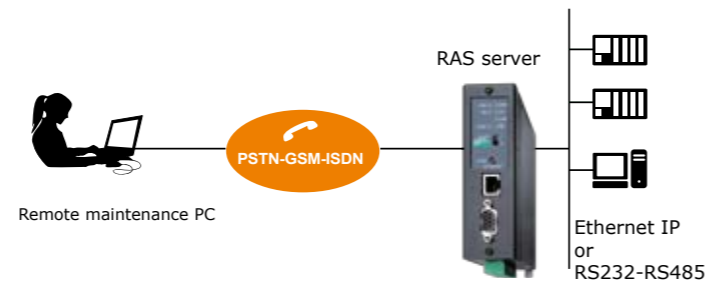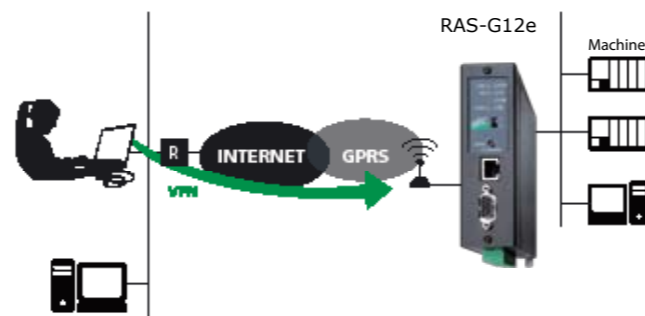
## PSTN, GSM, IDSN and Internet

The maintenance can be done as well through a usual telecom network like the telephone network (or the ISDN or the GSM) or through the Internet by using the Internet connection of the location where the machine is installed, or an ADSL line or a GPRS line.
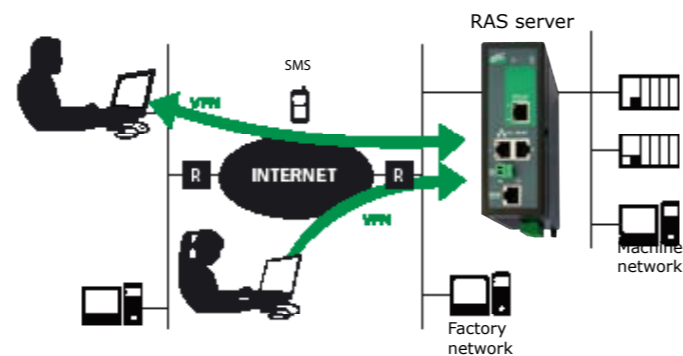
## Telephone remote maintenance



RAS server
Remote maintenance PC
PSTN-GSM-ISDN
Ethernet IP or RS232-RS485

## GSM-GPRS remote maintenance



RAS-G12e
Machine
INTERNET GPRS
VPN

## Internet remote maintenance



RAS server
SMS
INTERNET
VPN
Machine network
Factory network

## The M2Me_Secure software : A machine directory - One click and you are connected

The **M2Me_Secure** software is a directory containing the data required to connect up to any machine: IP address, domain name, the machine's mobile or landline phone number...
Whether you are using the Internet, the tele- phone network or GSM, one click is enough to connect the PC to the machine.



M2Me_Secure
Remote maintenance PC
PSTN- GSM -ISDN
RAS server
Ethernet TCP/IP or RS232-RS485
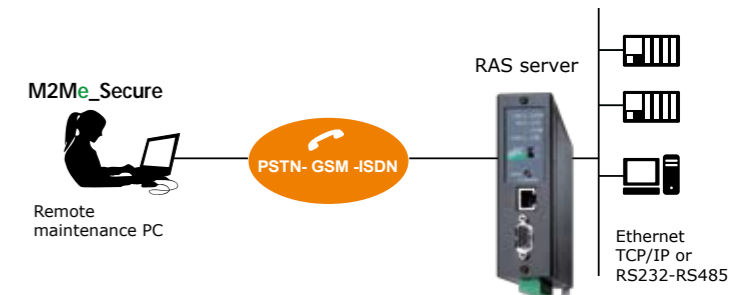
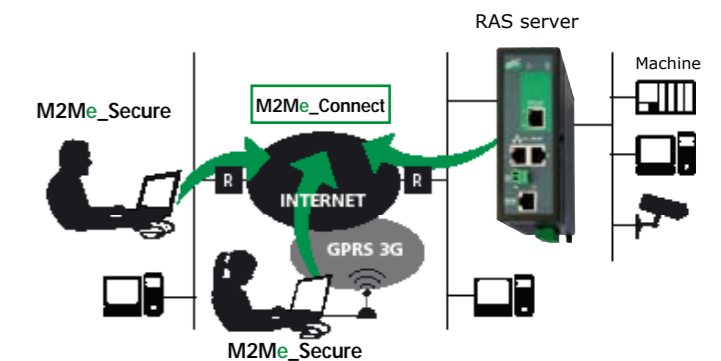## The M2Me_Secure software : A VPN client software for security

The **M2Me_Secure** software is also a security software. It establishes a secure VPN connec- tion which is essential for remote maintenance operations performed on machines via a public network such as the Internet: both extremities are authenticated and data to be transmitted is encrypted.



M2Me_Secure
RAS server
VPN
SMS
INTERNET
Machine
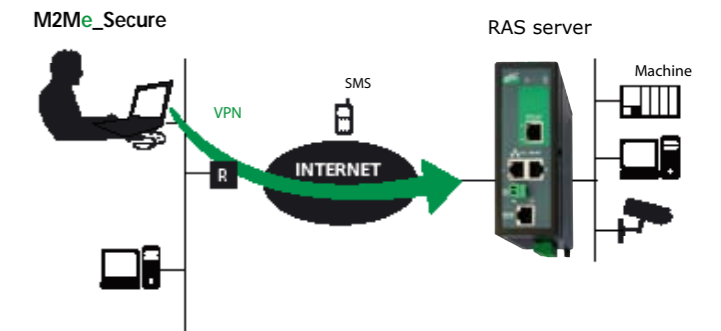
## The M2Me_Connect service : Simplicity and ubiquity on the Internet

The **M2Me_Connect** service makes using Internet for remote maintenance easier in solving the following cases :
• impossible incoming VPN connections;
• the remote maintenance site or the machine site does not have a fixed IP address;
• the remote maintainer is mobile;
• router configuration cannot be easily modified;
• the PC and/or the machine uses the GPRS or or 3G network.



M2Me_Secure
M2Me_Connect
RAS server
Machine
INTERNET
GPRS 3G
M2Me_Secure

* RAS-E, RAS-M156E, RAS-I1128e



M2Me_Secure
M2Me_Connect
RAS-G12e
Machine
INTERNET
GPRS 3G
M2Me_Secure
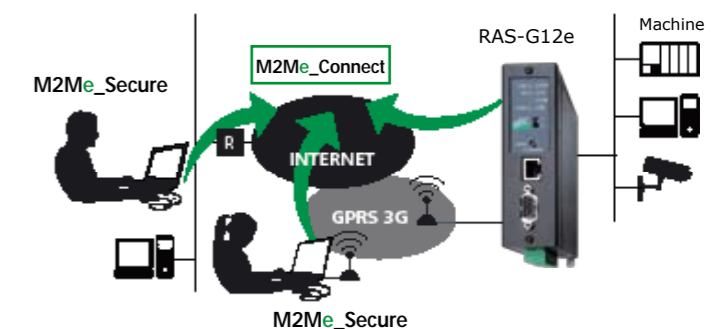
| | | RAS-M156ETH | RAS-I1128ETH | RAS-E | RAS-AD2e | RAS-M156e | RAS-I1128e | RAS-G12e |
|---|---|---|---|---|---|---|---|---|
| Télecom network... | | PSTN | ISDN | - | ADSL | PSTN | ISDN | GSM /GPRS |
| Internet funtions... | | NO | NO | YES | YES | YES | YES | YES |
| **Telecom network** | | | | | | | | |
| V90 PSTN modem | | • | | | | • | | |
| Euro-ISDN SO interface | | | • | | | | • | |
| GSM-GPRS-EDGE | | | | | | | | • |
| ADSL2+ | | | | | • | | | |
| **Internet** | | | | | | | | |
| Through the company network | | | | • | • | • | • | • |
| Secure VPN connection through the Internet | | | | • | • | • | • | • |
| VPN TLS-SSL or L2TP / IPSec or PPTP | | | | • | • | • | • | • |
| M2Me_Connect compatible | | | | • | • | • | • | • |
| **Device interface (Ethernet & serial)** | | | | | | | | |
| Ethernet 10 Mb/s | | 1 | 1 | | | 1 | 1 | 1 |
| Ethernet 10-100 Mb/s auto MDI / MDIX | | | | 2+1 | 2 | | | |
| Serial interface RS232-RS485 | | | | 1-1 | 1-1 | 1* | 1* | 1* |
| RAW, Telnet, multicat, multi-unicast gateway | | | | • | • | • | • | • |
| Modbus Master & slave | | | | • | • | • | • | • |
| **Security** | | | | | | | | |
| Login & password | | • | • | • | • | • | • | • |
| Security and on demand call-back | | • | • | • | • | • | • | • |
| User list (25 users) | | | | • | • | • | • | • |
| Firewall | | | | • | • | • | • | • |
| **Configuration & diagnostic** | | | | | | | | |
| HTML configuration (local & remote) | | • | • | • | • | • | • | • |
| Log | | | | • | • | • | • | • |
| **Alarms** | | | | | | | | |
| Email & SMS | | | | • | • | • | • | • |
| Digital input | | | | 1 | 1 | 3 | 3 | 3 |
| **IOViewer** | | | | | | | | |
| Modbus data html viewer | | | | • | • | • | • | • |
| **Tested with PLCs...** | | • | • | • | • | • | • | • |

Siemens, Rockwell, Schneider-Electric, Omron, ABB...
Application notes available

| **RAS servers** characteristics | |
|---|---|
| Dimensions | 130 x 38 x 110 mm (h, l, p) |
| Power | M156e & I1128e & RAS-E : 9-40VDC 170 mA/24 VDC<br>G134e ou G12e : 9-30VDC 300 mA/24 VDC |
| Banned substances | 2002/95/CE (RoHS) |
| Operating T° | 0°C /+ 60°C - 5 - 95 % humidity rate |
| PSTN<br>(RAS-M156e) | ■ V90 modem<br>■ International PSTN line interface |
| GSM (RAS-G12e) | ■ 850/900/1800/1900 MHz |
| GPRS-EDGE<br>(RAS-G12e) | ■ Max data rate downlink 85,6 Kb/s<br>■ Max data rate uplink 21,4 Kb/s |
| ISDN<br>(RAS-I1128e) | ■ SO ETSI (Euro-Isdn)<br>■ 64 Kb/s |
| ADSL<br>(RAS-AD2e) | ■ ITU G.992.5 (ADSL2 plus)<br>■ 24 Mbit/s down / 1 Mb/s up |
| RS232-RS485 | ■ 9600 à 115200 b/s 10 ou 11 bits |
| VPN | PPTP, TLS, L2TP/IPSec |

| **M2Me_Secure** characteristics | |
|---|---|
| System | Windows XP, 2000.  Vista coming soon |
| VPN | ■ TLS-SSL client<br>■ UDP or TCP<br>■ Port number : 80, 443, 1194, 5000, 50000 to 51000 |
| Authentication | ■ X509 certificate |
| Encryption | ■ AES - 3DES |
| Proxi | HTTP & SOCKS |

✔ RoHS   CE

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