

## MAINTENANCE WITHOUT TRAVELLING

**M2Me** solution is dedicated to remotely maintain and control any type of industrial devices (PLC, HMI, Drive, ...).

Using **M2Me** you can quickly from your PC, your tablet or your smartphone be «teleported» in real time and safely onto the remote site you want to monitor or maintain.

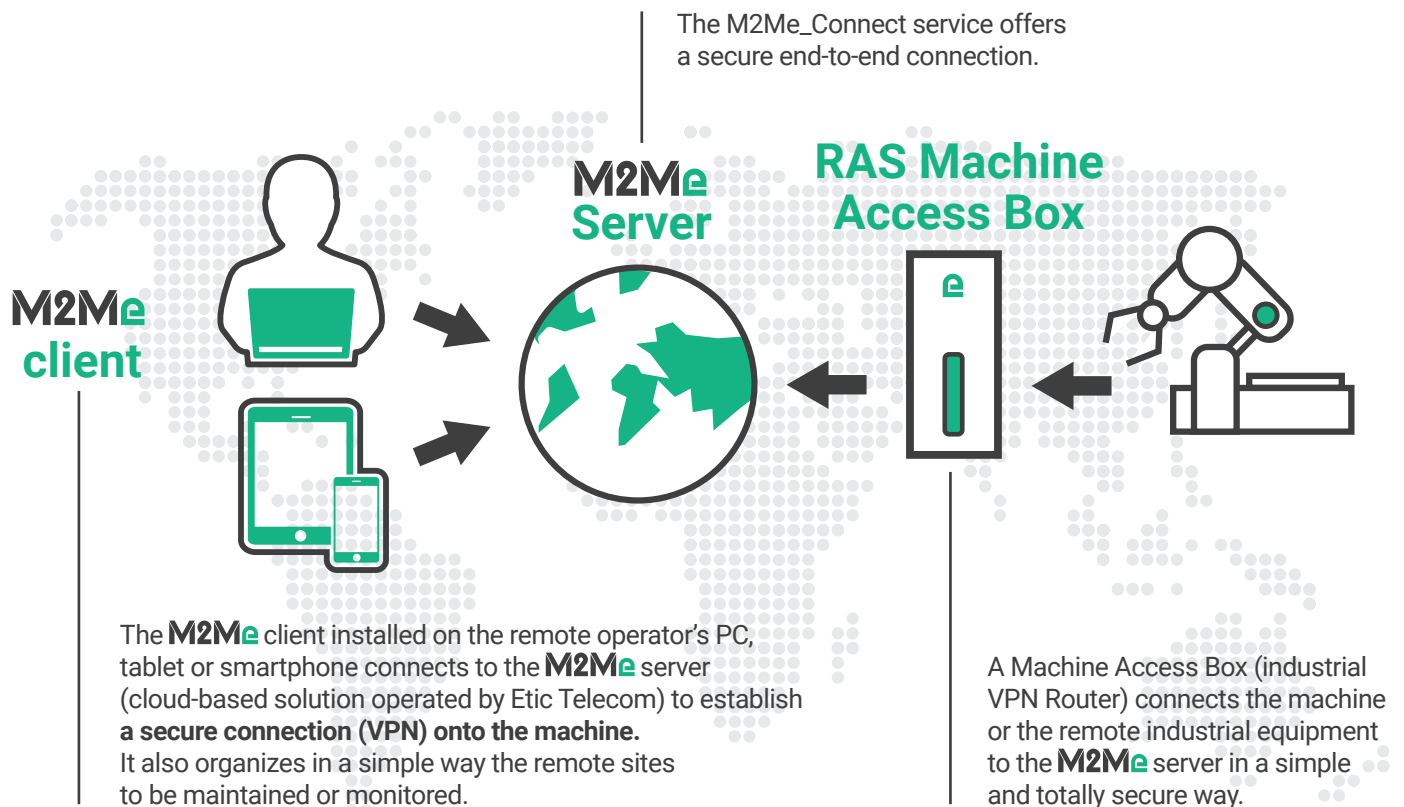
## RAS Machine Access Box

- **Simple configuration**  
Wizard
- **Ultra-secure connection**
- **MultiWAN**  
Ethernet, 3G+/4G, Wi-Fi
- **Dashboard display in the Cloud**
- **Datalogger & Alarms**  
SMS, E-mail, e\*Message, MQTTs, HTTPs, OPCUA  
Compatible with MindSphere & EcoStruxure™ Machine Advisor
- **RS232 & RS485**
- **LoRa Gateway**
- **GPS Tracking**  
Option
- **5 years warranty**



DOC\_MPR\_RAS\_Data sheet\_D (latest update 01/15/2021)

## THE M2Me SOLUTION



## ADVANTAGES



### Simplicity of implementation

RAS is delivered together with a Wizard.



### Plant network integrity

The RAS establishes an outgoing VPN connection that does not require any modification of the existing plant network (firewall, proxy, ...).



### A non-intrusive solution

The **M2Me** technology guarantees that the operator can only connect to the machine network and in no case to the other equipment of the industrial site.



### A secure solution

**M2Me** relies on VPN technology and implements authentication to the **M2Me** server by certificates for the remote user and the RAS.



### Management of access rights

The RAS allows a personalized management of access rights allowing an operator to connect to all or part of the equipment.



### Wireless solution for isolated sites

Some RAS have a 3G + or 4G connection to establish an Internet link through a cellular network.



### A sustainable solution

The RAS is an industrial device with 5 years warranty.



### Compatible with EticDISPLAY solution

This software option allows the display of industrial data from a client customized dashboard. The dashboard can be easily consulted on the Internet from a PC, a tablet or a smartphone.



### RFM

Thanks to Ras Fleet Manager, you simplify the management of your fleet of Machine Access Box by updating automatically the lists of remote maintenance sites and by centralizing in the RFM the management of the access rights for each operator.



### Wireless access to industrial equipment

Some machines may be difficult to access in the factory. The optional RAS Wi-Fi hotspot allows you to remotely configure the Machine Access Box from a PC or a tablet.



### Wireless Internet access via Wi-Fi

The RAS optionally has a Wi-Fi client that allows access to the Internet via a Wi-Fi access point of the industrial site or by using its smartphone in connection-sharing mode.



### Solution compatible with alarms sending and data logger

The Collect & Alert option allows the raising of alarms and its transmission (CSV files). The alerted manager can then visualize Web pages or take the hand (VPN) on the PLC or the HMI of the machine.

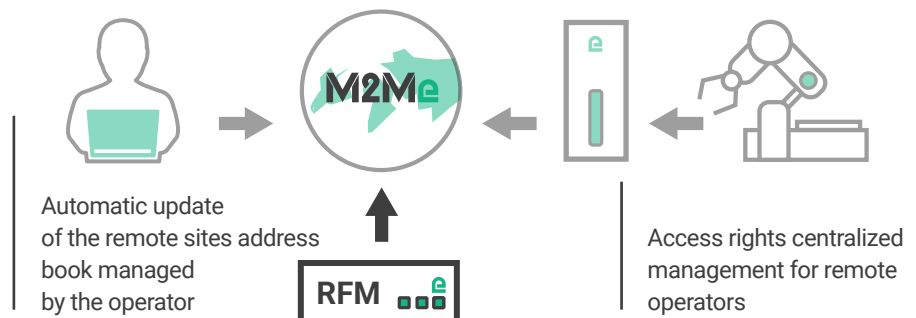
## SELECTION GUIDE



RAS-	E-100	EW-100	C-100	E-400	E-220	EW-400	EW-220	EC-400	EC-220	ECW-400	ECW-220
WAN : Ethernet	1	1		1	1	1	1	1	1	1	1
WAN: cellular (-HG: 3G+, -LE: 4G)			1					1	1	1	1
Wi-Fi: 2,4-5 GHz (Access point & client)		1				1	1			1	1
LAN : Ethernet	1	1	1	4	2	4	2	4	2	4	2
RS232 / RS485					✓		✓		✓		✓
GPS Option (with ANT405)				✓	✓	✓	✓	✓	✓	✓	✓
2 power inputs				✓	✓	✓	✓	✓	✓	✓	✓
2 SIM readers								✓	✓	✓	✓
Passerelle LoRa	E-180					EW-480		EC-480			



**RAS FLEET MANAGER :**  
Centralized management  
of your RAS fleet



## ACCESSORIES



	ANT305	ANT310	ANT320	ANT217	ANT311	ANT219	ANT405
Type	Panel Mount	Roof	Magnet	Panel Mount	Roof	Magnet	Magnet
Network	3G+ / 4G (compatible LoRa)	3G+ / 4G (compatible LoRa)	3G+ / 4G (compatible LoRa)	Wi-Fi (2.4 et 5 GHz)	Wi-Fi (2.4 et 5 GHz)	Wi-Fi (2.4 et 5 GHz)	GPS (1.57 GHz)
Connector	Male SMA	Male SMA	Male SMA	Male RP SMA	Male RP SMA	Male RP SMA	USB
Cable	-	5m	3m	-	2,5m	1m	3m
Dimensions	H = 160mm	H = 82mm Ø = 48mm	H = 72mm Ø = 31mm	H = 90mm	H = 23mm Ø = 80mm	H = 220mm Ø = 60mm	H = 15mm Ø = 38mm

5m coaxial extension: CO-LL6-SF-SM-500 // Kit antenne kit-ANT3xx

# TECHNICAL CHARACTERISTICS

GENERAL CHARACTERISTICS		ROUTING / IP@ / MANAGEMENT	
<b>Dimensions</b>	<ul style="list-style-type: none"> <li>RAS-X-100: 120x37x88mm (h,l,d)</li> <li>Other RAS: 135x47x115mm (h,l,d)</li> </ul>	<b>Routing IP</b>	<ul style="list-style-type: none"> <li>Routing tables</li> <li>RIP or OSPF</li> <li>Address translation (DNAT, SNAT and NAT 1:1)</li> </ul>
<b>Weight</b>	Between 500g and 650g depending on model (without packaging)	<b>Assigning IP@</b>	<ul style="list-style-type: none"> <li>WAN interface: DHCP client or fixed IP</li> <li>LAN interface: DHCP server</li> </ul>
<b>Power</b>	<ul style="list-style-type: none"> <li>RAS-X-100: Nominal 12 - 24 VDC (min 10 - max 30)</li> <li>RAS-E: Nominal 12 - 48 VDC (min 10 - max 60)</li> <li>Phoenix connector 2 points</li> </ul>	<b>DNS</b>	<ul style="list-style-type: none"> <li>WAN interface: compatible with DYNDNS, No-IP or ETIC DNS</li> <li>LAN interface: relay &amp; DNS server</li> </ul>
<b>Consumption</b>	<ul style="list-style-type: none"> <li>RAS-E or RAS-M: 2W</li> <li>RAS-EC et RAS-EW: 5W, RAS-ECW: 8W</li> </ul>	<b>Management</b>	MIB 2 and Traps SNMP
<b>Temperature</b>	<ul style="list-style-type: none"> <li>Storage: -40 °C - +85 °C</li> <li>Operation: -20 °C - +70 °C</li> <li>Humidity 5 to 95%</li> </ul>	<b>Configuration</b>	Web Server
<b>EMC</b>	Immunity (EN 61000-6-2) • EN61000-4-2: Electrostatic discharge (ESD) • EN61000-4-3: RF radiated • EN61000-4-4: EFT/Burst • EN61000-4-5: Surge • EN61000-4-6: RF Conducted • EN61000-4-8: Magnetic field Emission (EN 61000-6-4) • EN 55022: Radiated and Conducted emission FCC: RAS-X-100: FCC PART 15	<b>SECURITY</b>	
<b>Electrical Safety</b>	IEC-EN 62368-1 RAS-X-100: CB FR-704843 (for US market)	<b>VPN tunnel</b>	<ul style="list-style-type: none"> <li>OpenVPN (TLS/SSL), IPSEC, L2TP/IPSEC, PPTP</li> <li>Shared Key or X.509 Certificate</li> <li>Encryption 3DES &amp; AES 128-192-256</li> <li>Authentication: MD5 &amp; SHA-1</li> <li>Up to 10 VPN tunnels (mix OpenVPN and IPSEC allowed)</li> </ul>
<b>Hazardous substances</b>	<ul style="list-style-type: none"> <li>Directive 2002/95/CE (RoHS)</li> <li>REACH</li> </ul>	<b>Firewall</b>	<ul style="list-style-type: none"> <li>Stateful packet inspection (SPI: 50 rules)</li> <li>Filtering IP@ and Ports</li> </ul>
<b>Casing</b>	Metallic IP20 (RAS-E, RAS-M) or IP31 (RAS-X-100) with DINRail mounting	<b>Internal report</b>	<ul style="list-style-type: none"> <li>Timestamped</li> <li>Events: connection, restart, alarms</li> </ul>
<b>WAN NETWORK</b>		<b>Alarms</b>	<ul style="list-style-type: none"> <li>Digital input: email, SMS, SNMP trap</li> <li>Digital output: Power supply failure, user connection, ...</li> </ul>
<b>Ethernet</b>	<ul style="list-style-type: none"> <li>RJ45</li> <li>Auto: 10/100 full &amp; half MDI/MDI-X</li> </ul>	<b>Redondancy</b>	VRRP protocol RFC 3768
<b>4G/3G+</b>	<ul style="list-style-type: none"> <li>4G LTE Europe, China</li> <li>3G+ HSPA "world wide"</li> <li>Max. data rate 4G: UL @ 50 Mbps and DL @ 100Mbps</li> <li>Max. data rate 3G+: UL @ 5,7 Mbps and DL @ 21 Mbps</li> <li>Max. data rate 2G: UL @ 237 Kbps and DL @ 237 Kbps</li> <li>Antenna connector Female SMA</li> <li>Certified antennas: see Accessories page 3</li> </ul>	<b>M2ME SOLUTION</b>	
<b>Wi-Fi</b>	<ul style="list-style-type: none"> <li>Client 2.4 and 5 GHz</li> <li>802.11 a/b/g/n</li> <li>Antenna connector Female RP-SMA</li> <li>Certified antennas: see Accessories page 3</li> </ul>	<b>Users</b>	Up to 100 remote users
<b>LAN NETWORK</b>		<b>Alarms</b>	RAS Compatible with «Collect & Alert» solution
<b>Ethernet</b>	<ul style="list-style-type: none"> <li>RJ45, 1 up to 4 ports depending on model</li> <li>Auto: 10/100 full &amp; half MDI/MDI-X</li> </ul>	<b>Security</b>	<ul style="list-style-type: none"> <li>Access to the RAS by Login &amp; Password &amp; Certificate (optional) and optional certificate</li> <li>Single RAS product key required for the remote user</li> <li>Customizable LAN machine network access rights</li> </ul>
<b>RS232/RS485</b>	<ul style="list-style-type: none"> <li>9600 up to 115200bps 10 or 11 bits</li> <li>RAW TCP server, TCP client &amp; UDP gateway</li> <li>ModBus master or slave gateway</li> <li>Unitelway gateway for master PLC</li> <li>RS232: RJ45</li> <li>RS485: 2 points phoenix connector</li> </ul>	<b>Redondancy</b>	Multi WAN for backup on specific models
<b>Wi-Fi</b>	Access point 2.4 and 5 GHz	<b>Communication</b>	<ul style="list-style-type: none"> <li>Secured Connection onto the M2Me_Connect service</li> <li>OpenVPN</li> </ul>
		<b>Management</b>	<ul style="list-style-type: none"> <li>Saving a configuration</li> <li>Recording on USB flash drive, SD card or internal memory</li> <li>Reset product to return to factory configuration</li> <li>Option managed from the client area of the WEB site</li> </ul>
		<b>M2Me Client</b>	<ul style="list-style-type: none"> <li>PC: All OS versions up to W10</li> <li>Smartphone and tablet PC: Android and iOS</li> </ul>
		<b>M2Me_Connect</b>	Connection to the remote maintenance service
		<b>RAS Manager</b>	RAS fleet centralised management (optional)



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INDUSTRIAL NETWORKING