



Remote Assistance Solutions

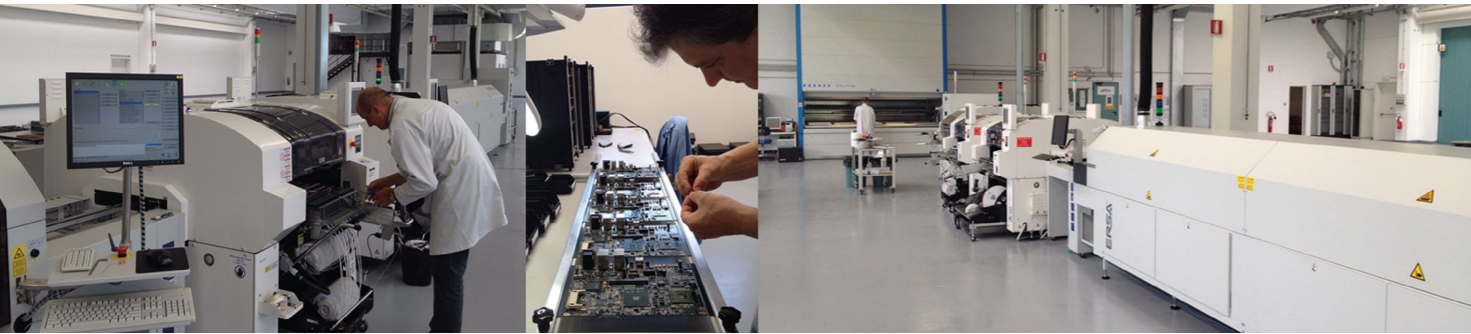


Table of content



ASEM	4
UBIQUITY SOFTWARE PLATFORM	6
UBIQUITY ROUTER	18
UBIQUITY RK10 - RK10 ET - RK11 - RK11 ET	20
UBIQUITY RM10 - RM10 ET - RM11 - RM11 ET	22
BRETON CASE STUDY	24

Solutions for the OpenAutomation

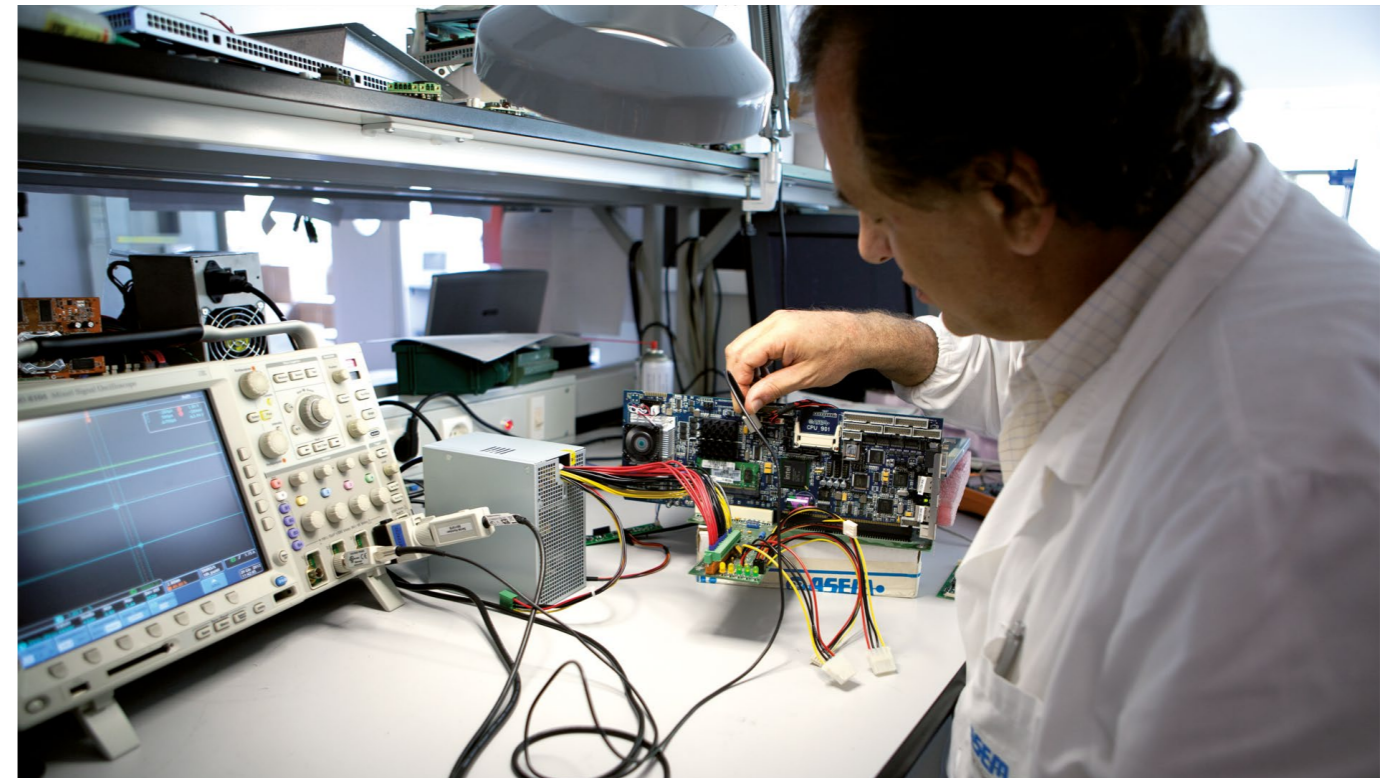


ASEM operates since more than 25 years in the IPC market and since 10 years ASEM has been specializing in the industrial automation market.

Leading the "Open PC Automation" in Italy, ASEM is guiding the technological evolution of its customers' HMI, control and remote assistance solutions, providing "open and standard" hardware platforms integrating with innovative, flexible and easy-to-use software solutions.

Reliability

ASEM is a reliable and professional partner mastering the key technologies of automation systems. ASEM designs, engineers and manufactures all its hardware, firmware and software solutions with an internal manufacturing process that includes board assembly.



ASEM in numbers:

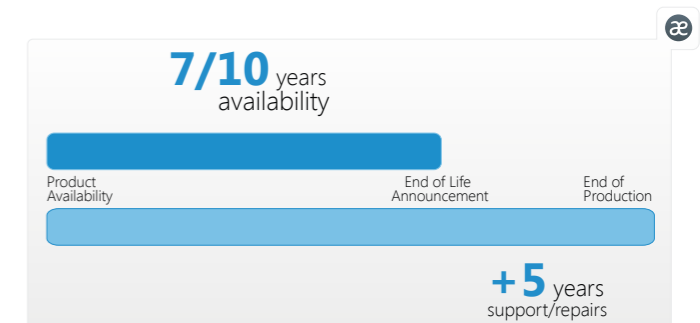
- 2015 Revenues: 30 million Euros
- 155 employees
- 5.200 sqm Headquarters in Artergna (UD)
- 3.250 sqm manufacturing facility in Artergna (UD)
- R&D offices in Verona
- R&D offices in Giussano (MB)
- Sales offices in Germany

Innovation

ASEM's technological excellence is guaranteed by important investments in R&D and a continuous staff training. The ability to understand and anticipate the fast market evolution and set and follow the right strategies has enabled the company to maintain a steady growth momentum in the last 10 years.

Continuity

ASEM products and solutions have 7 to 10 years life-cycle with additional 5 years of support and repair service.



Ubiquity

Software platform

Ubiquity

The innovative remote assistance solution



In 2011 ASEM presented Ubiquity, the innovative software platform for remote assistance and control.

The development idea came up to solve customer requests for an easy-to-use tool to install and setup machinery and, in particular, to manage post-sales service, phases during which customers often require modifications, customizations and support.

Designed for machine builders, the remote assistance and control solution UBIQUITY allows to operate on the remote system and its sub-networks as if it was in your own office.

Traditionally, the most challenging aspect of meeting such needs is the availability of qualified technical resources, that would need the gift of **ubiquity**.



The software solution UBIQUITY enables the access to remote supervision and control systems (based on Windows CE and Windows 32/64 operative systems) and to the automation devices (PLC, drive, etc), connected to the Ethernet and Serial sub-networks of the HMI/controller, through a VPN (Virtual Private Network) based on proprietary technology comparable to a cable connection.

UBIQUITY does not require additional hardware and allows to operate in remote plants as if they were directly connected to your enterprise network. It enables technical support teams to solve any issue, eliminating the need for on-site assistance, dramatically reducing post-sale service costs.

This solution is particularly useful during machine setup and commissioning, to monitor remote applications, to modify and update software applications and remotely debug PLCs and other automation devices.

What I can do with Ubiquity

- Remotely program, debug and update HMI/IPC/Controllers and automation devices (PLCs/drives, etc.) connected to Ethernet and Serial sub-networks
- Malfunctioning Analysis
- Software applications updates

How it works

- Uses a simple internet connection
- Creates a VPN between the remote assistance PC and the remote device activating sub-networks access
- Activates safety procedures with end-to-end sessions without any intermediate
- Ensures reliability and service continuity thanks to a redundant and distributed server infrastructure

Ubiquity

Value added for all automation devices



Highlights

- Remote control of the IPC/HMI/Controller
- Access to Ethernet and Serial devices connected to the IPC/HMI/controller sub-network
- Additional tools: remote desktop, file transfer, chat, etc.
- Proprietary VPN technology optimized for industrial communication
- Available with the same features for Windows 32/64 and Windows CE platforms
- No additional hardware required
- SSL/TLS safe connection and use of certificates
- Simple and easy-to-use interface
- Distributed and redundant server infrastructure ensuring service continuity
- Possibility to implement a private server infrastructure
- SDK (Software Development Kit) for programming the activation of the Control Center functions also by external applications
- Runtime with multiple connection support
- Built-in firewall:
 - VPN communication protocols filter
 - Higher security and bandwidth control
- Advanced user profiling and access control
- Trace of all Domain administration activities
- Trace of all Ubiquity session's activities (v7)
- Internet sharing for LAN devices (v7)

Ubiquity is a simple and ready-to-use solution. Its installation does not require any ICT expertise in network and firewalls configuration. It has a user-friendly interface that enables access to remote systems (PLCs, HMIs, drives, etc.) with a simple click through a VPN optimized for industrial communications.

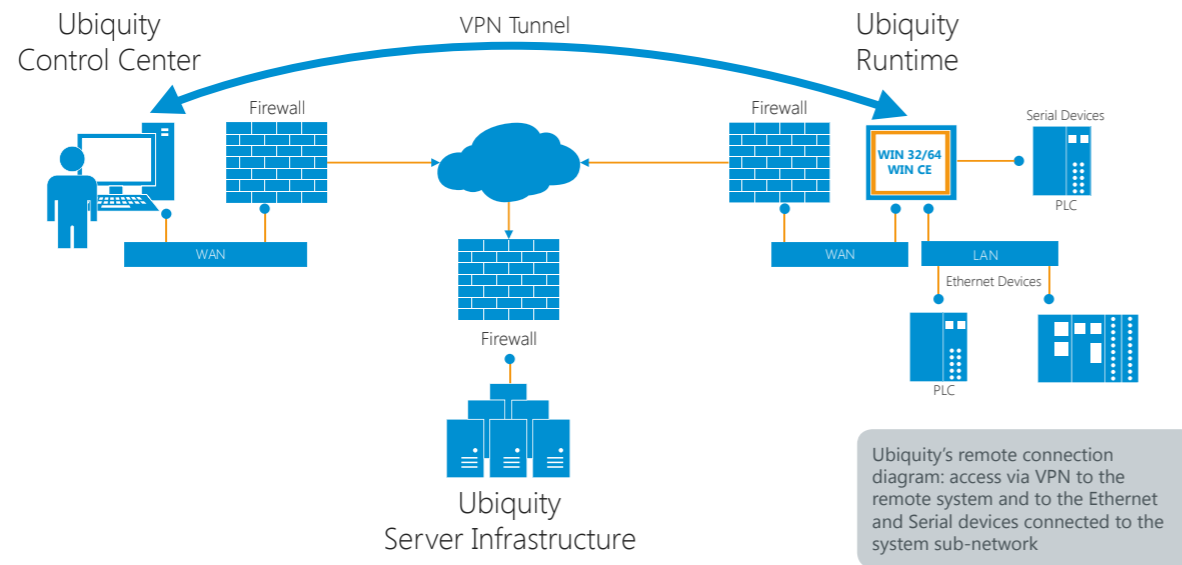
The solution allows transparent management of remote systems as if they were connected to the enterprise network and it does not require the support of network administrators for any NAT, proxy, firewall, public IP and reserved ports.

Ubiquity adds huge value in ASEM supervision and control system, but it is also a solution delivered as a software component to install on ASEM IPCs and third parties hardware.

Ubiquity is included in ASEM Windows based HMI & PAC Solutions.

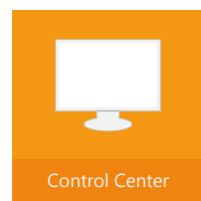
Ubiquity

The components

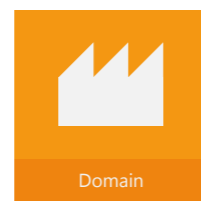


Ubiquity platform is made up of "Control Center", the software tool to be installed on the remote assistance PC to manage the "Ubiquity Domain", of the Server infrastructure and different versions of Runtime.

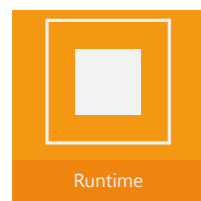
The connection between Control Center and the Runtime installed on the remote IPC/HMI/controller leverages on a safe end-to-end connection.



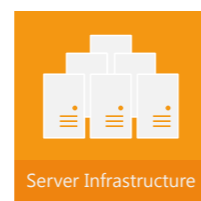
Ubiquity Control Center
Control Center is installed and executed on the remote assistance PC and allows to manage the domain, the users and their privileges, and the connection with remote devices.



Ubiquity Domain
Ubiquity Domain is the "customer account" to make use of Ubiquity infrastructure and services.



Ubiquity Runtime
The runtime is the software component installed and executed on the remote IPC/HMI/controller that supervises or controls the automation process. It requires neither additional hardware nor network configuration and it uses the existing Internet connection.



Ubiquity Server Infrastructure
Communication between Control Center and Runtime is ensured by a redundant server infrastructure built and maintained by ASEM which uses state-of-the-art security technologies for data exchange such as SSL/TLS, public key cryptography, safe, fault tolerant and redundant server farms to secure data privacy and adequacy.

Runtime versions

Runtime component is available in Basic and PRO versions for WIN CE and WIN 32/64 operating systems. The Basic version provides access to the IPC/HMI/remote

controller and provides remote-desktop, remote task manager, remote file manager and chat with the remote operator. The PRO version enables also the access to all

the automation devices (PLCs, drives, etc.) connected to the Ethernet or Serial subnetwork of the IPC/HMI/remote controller.

Ubiquity Runtime	Windows CE		Win32/64	
	Basic	Pro	Basic	Pro
Remote desktop, file & task management, chat, screenshot	✓	✓	✓	✓
VPN to the remote device	✓	✓	✓	✓
VPN with access to the Ethernet sub-network of the device/router	-	✓	-	✓
VPN with access to the Serial sub-network of the device/router	-	✓	-	✓
Integrated firewall	✓	✓	✓	✓
API to interface proprietary software applications	✓	✓	✓	✓
Runtime operations persistent log	✓	✓	✓	✓
Multiple connections from different Control Center	✓	✓	✓	✓
Structured Domain creation, users and remote devices management	✓	✓	✓	✓
Internet connection via PROXY for Control Center e Runtime	✓	✓	✓	✓
Functioning in local network without license	✓	✓	✓	✓
Runtime update procedure with automatic shutdown and restart of services	✓	✓	✓	✓
Log & Audit of Domain administration activities	✓	✓	✓	✓
Log & Audit of Ubiquity session's activities (v7)	✓	✓	✓	✓
Internet sharing for LAN devices (v7)	-	✓	-	✓

Domain types

Ubiquity Domain is available in three different versions: Single Entity-Single Access, Single Entity-Multi Access and Multi Entity-Multi Access. Single Entity Domains are

accessible by users of one only company, Multi Entity Domains are accessible by users of different companies. Single Access Domains give access to Ubiquity

infrastructure and services to one user at a time, Multi Access Domains give access to Ubiquity infrastructure and services to more users at the same time.

	Ubiquity Domain types		
	Single Entity-Single Access	Single Entity-Multi Access	Multi Entity-Multi Access
Domain accessible by	Users of one company	Users of one company	Users of more companies
Remote assistance services enabled for	One user per time	More users at the same time	More users at the same time

Server infrastructure

To provide an excellent service ASEM built a redundant and globally distributed server infrastructure that counts two farms in Europe (Munich and Amsterdam), two in the United States (western and eastern coast) and two in Asia (Singapore and Honk Hong).



ASEM Server Infrastructure, does not give any limitation to the number of configurable users, devices, concurrent remote desktop and VPN sessions.

Private Server Infrastructure

As ASEM provides a redundant and distributed Server infrastructure to manage Ubiquity services, it is possible to replicate and build up a **private server infrastructure** managed autonomously.



Private Server
With the Private Server package, it is possible to install a private server infrastructure in complete autonomy. The server application can be installed on dedicated systems or cloud servers.

The **Primary Server** is the basic software package and provides authentication security and communications as the ASEM server infrastructure.

Primary Server:
→ Data storage: authentication, permission and security management
→ Ubiquity Runtime licenses management
→ Relay feature to implement end-to-end communication

The **Secondary Server** is an optional package to improve and increase the connectivity performances. It is possible to buy several secondary server licences and install them in different locations worldwide.

Secondary Server (option):
→ Relay feature to implement end-to-end communication
→ You can install multiple instances to reduce latency and balance traffic load.

Ubiquity Highlights



Proprietary VPN
Differently from VPNs based on the IP layer, Ubiquity VPN works on the data-link layer bringing concrete advantages:
→ Remote assistance PC becomes part of the remote host network using the same physical IP addresses

→ Remote assistant can use broadcast-based protocols
→ It is not necessary to configure the gateway of the remotely accessed devices. The remote assistant connection appears as a locally connected IP.



Remotation of Serial Communication
Ubiquity installs a virtual serial port on the Control Center PC.

This virtual serial port can be mapped on a physical port of the remote device executing Ubiquity Runtime.

Benefits:
→ Possibility to carry out supervision and diagnostics tasks on remote serial devices.



Multi-client
Ubiquity Runtime supports multiple concurrent connections from different supervisors whether with interactive session (remote

desktop, file transfer, etc) or in VPN. Control Center can activate multiple interactive sessions with different devices and only one VPN connection to a remote device.

Benefits:
→ Maximum productivity being able to operate simultaneously on the same system.

Full compatibility with the existing firewalls
Ubiquity Control Center and Ubiquity Runtime connection are automatically configured

using outbound connections which are recognized as safe and therefore allowed by firewall policies.

Benefits:
→ No need to configure the end-user's firewall and network. Only an outbound connection is necessary.

→ Ubiquity automatically uses enabled TCP and UDP protocols and can use HTTP, HTTPS or custom ports, ensuring compatibility with existing IT policies.

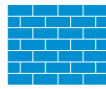


Industrial Security
Ubiquity infrastructure uses the highest network security standards, such as:

→ SSL/TLS protocol via UDP or TCP
→ Asymmetric cryptography and X509 certificates for authentication sessions

→ Symmetric cryptography for data transimission
→ Message authentication codes (MAC) for data integrity.

Ubiquiti Highlights



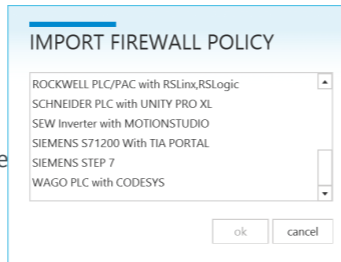
Integrated firewall

Ubiquiti's integrated firewall allows to control communication packets passing through the VPN. Introducing firewall policies, it is possible to filter Ethernet datagrams depending on communication protocols and target addresses.

The server infrastructure provides a library of policies that can be imported into the Domain and applied to devices and folders. Filtering rules can be assigned to single users or groups of users.

Benefits:

- Increased security and bandwidth control
- Increased flexibility in access permissions.



Access profiling and control

Ubiquiti allows the creation of an unlimited number of users, user groups, device groups, each with different access rules.

Permissions can be flexibly configured up to the single device or folder: possibility to create local and global users, and sub-domains.

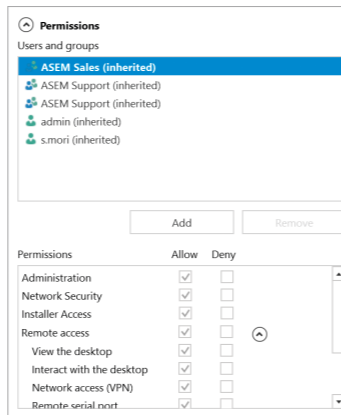
Ubiquiti provides 4 different user profiles: **Administration** enables folders and users management, **Device**

Installer allows to add new devices in the Domain,

Network security enables configuration and set up of Firewall rules, **Remote access** allows to practice remote access sessions.

Benefits:

- Users can implement their own organizational structure (made up of users, administrators, power-users, third parties, limited users, etc.) to reach in a flexible and controlled way all customers around the world
- Access to remote devices is properly secured and restricted to the required personnel.



Internet connectivity sharing with LAN devices

Internet connectivity can be shared with specific devices of the LAN network:

Benefits:

- Internet access from laptops or IP phones connected to the LAN network
- Usage of Ubiquiti runtime services on LAN devices
- Access to the web servers of LAN devices

Modern user interface

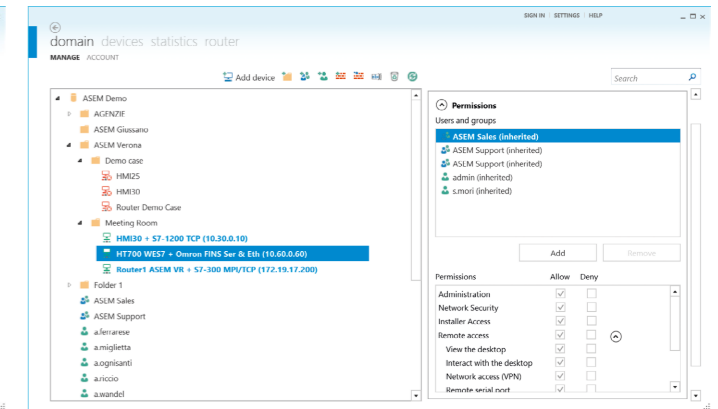
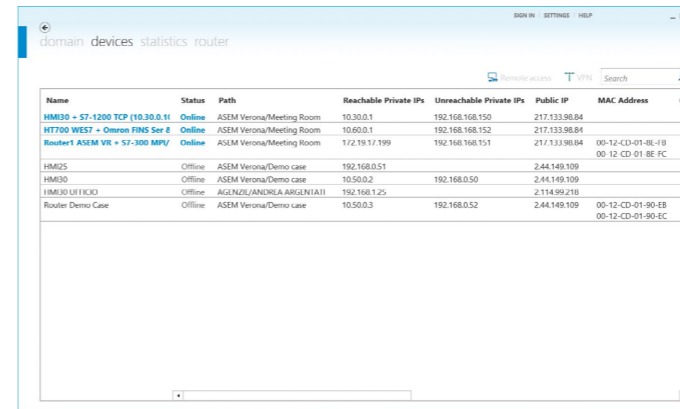
ASEM Ubiquiti provides a completely redesigned graphic interface based on Modern-UI standards.

The new design presents additional controls and views, as the new table view that enables the "Search" function using the text field on the

right of the tree view that now gives also users (or groups of users) information.

Benefits:

- Ubiquiti Control Center becomes clearer and more intuitive
- Users' daily operations are simplified and made more immediate.



SDK Control Center

With the SDK (Software Development Kit) it is possible to program the activation of Ubiquiti Control Center functions also by external applications. Control Center SDK is made of a .NET assembly and a user manual for the usage of the

API (Application Programming Interface) with the related code examples.

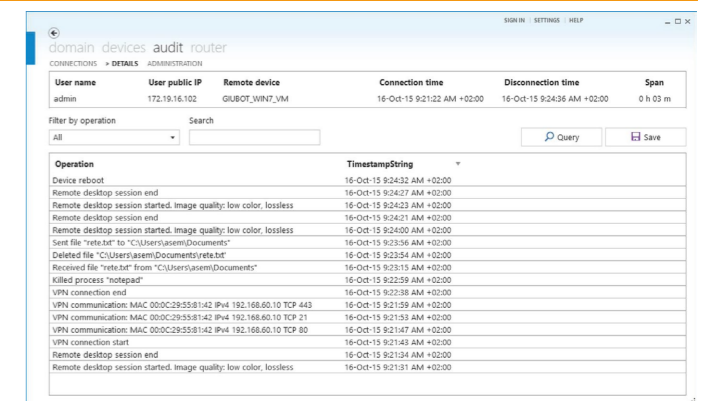
With the available interfaces you can execute the following tasks:

- Domain login/logout
- Browse domain
- Connect/disconnect remote device

- Connect/disconnect VPN
- Connect/disconnect virtual serial
- File transfer to and from the remote device
- Launch application on the remote device
- End process and restart

Log and Audit of Domain and Ubiquiti sessions' activities

- Trace of all Domain Administration activities with a simple audit tool
- Trace of all Ubiquiti sessions' activities (v7): all activities and chat contents are registered and accessible by domain administrators.



Ubiquity Highlights



Remote desktop

Control center includes remote desktop function.

Benefits:

→ No need to activate RDP services or to install optional utilities like VNC.



File exchange

Control Center includes a complete tool to perform remote files download and upload.

Benefits:

→ No need to open shared folders or to install optional utilities like FTP servers.



Statistics and Audit

Ubiquity records and stores on the Domain all the remote access activities.

Benefits:

→ The network administrator can verify anytime the post-sales support workload, the

accuracy of the jobs carried out and get statistics for customers, PCs and operators.



Chat

Control Center and Runtime include a chat.

Benefits:

→ Instead of using the phone to communicate with remote operators, the user can simply take advantage of Ubiquity chat reducing costs.



Cloud-based accessibility

Ubiquity domain is registered on the Cloud. This architectural paradigm allows service continuity and data safety.

Benefits:

→ Wherever the user is located, he can launch Control Center getting access to remote machines worldwide.



Full support of Embedded platforms

Ubiquity Runtime is available for the following operative systems:

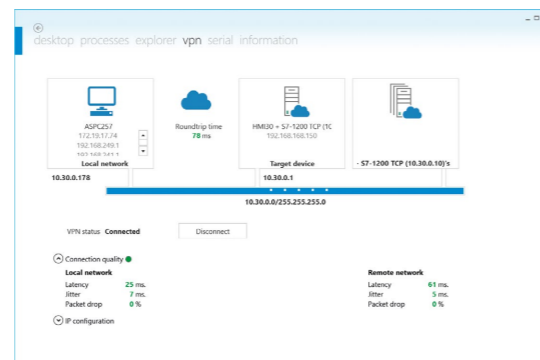
→ Windows XP, Vista, 7, 8 (32 and 64 bit)

→ Windows Embedded Standard 2009, Windows Embedded Standard 7E and 7P

→ Windows CE 5.0, 6.0, Windows Embedded Compact 7.0

Connectivity quality measurement

Ubiquity provides a simple function that measures connectivity quality on both local and remote network. Performances are measured in terms of latency time, jitter and packet drop.



Requirements

The following tables list the minimum hardware, software and network requirements for the correct installation and usage of Ubiquity.

Control Center		
SW Requirements	Operating System	HW Requirements
.Net Framework 4.0 Client Profile	Windows XP	At least Celeron 1,6 GHz with 512 MB RAM
	Windows Vista 32-bit and 64-bit	
	Windows 7 32-bit and 64-bit	Suggested at least Pentium 4, 3 GHz, 1 GB RAM
	Windows 8 32-bit and 64-bit	
	Windows 8.1 32-bit and 64-bit	
	Windows Server 2008 and Server 2008 R2	
	Windows Server 2012	

Runtime		
SW Requirements	Operating System	HW Requirements
.Net Compact Framework 3.5	Windows CE 5.0 (ARM, X86)	256 MB RAM
	Windows CE 6.0 (ARM, X86)	At least CPU 500 MHz
	Windows CE Compact 7.0 (ARM, X86)	
.NET Framework 2.0 SP1 or 3.5 (distributed with setup)	Windows XP	512 MB RAM
	Windows XP Embedded	At least CPU 500 MHz
	Windows Vista 32-bit and 64-bit	
	Windows 7 32-bit and 64-bit	
	Windows 8 32-bit and 64-bit	
	Windows 8.1 32-bit and 64-bit	
	Windows Server 2008 and Server 2008 R2	
	Windows Server 2012	

Private Servers			
Primary Server		Secondary Server	
Hosting	Software	Hosting	Software
2 public IP addresses	Windows 7 64 bit or later Windows Server 2008 64 bit or later	1 public IP addresses	Windows 7 64 bit or later Windows Server 2008 64 bit or later
1 Internet domain name	SQL Server Express (included in the installation package) or greater (Standard, Enterprise, ...)		

Ubiquity Router

Ubiquity RK and RM Remote access and monitoring have no limits



UBIQUITY
ROUTER

Ubiquity Routers complete the range of Remote Assistance Solutions with a combined hardware + software solution that ensures remote access and remote monitoring functionalities on every automation device.

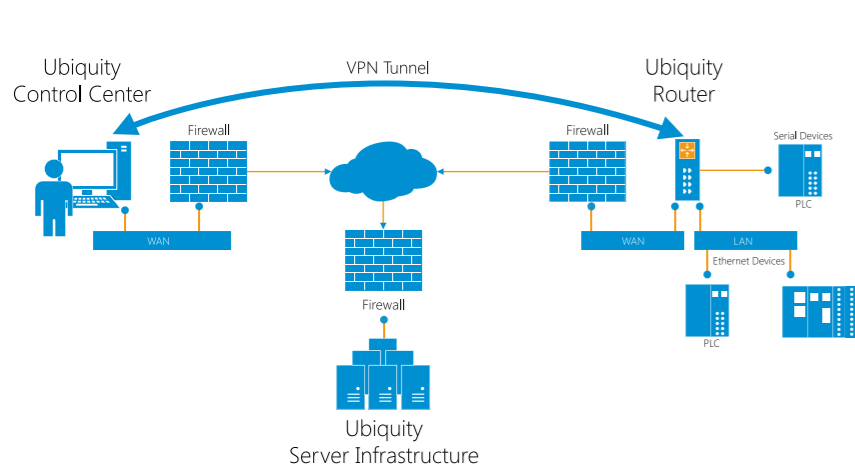
With the built-in 2G/3G/3G+ modem of RK11 and RM11 it is possible to reach and monitor also plants and automation networks without a wired Internet connection.

Ubiquity software creates a VPN between the Control Center PC and the router enabling access to automation devices connected via Ethernet and Serial ports. The features of Premium HMI, ASEM's HMI software, enable additional remote monitoring functionalities that allow RM10 and RM11 to directly access controller's memory and perform data sampling, archiving and monitoring, dispatch of alerts and notifications. Ubiquity Routers bring remote assistance services on plants and machinery where it is

not possible to install the Ubiquity software solution, as automation systems with HMI/IPC/controller with operating system other than WIN 32/64 and WIN CE, machinery controlled only by serial devices without Ethernet interface and even machines and plants without a wired internet connection. Furthermore Ubiquity Routers separate the automation devices from the external Internet connection adding a further protection to the Local Area Network.

RK10 - RK11 - RK10 ET - RK11 ET

Remote Access Industrial Routers



**RK10
RK10 ET**

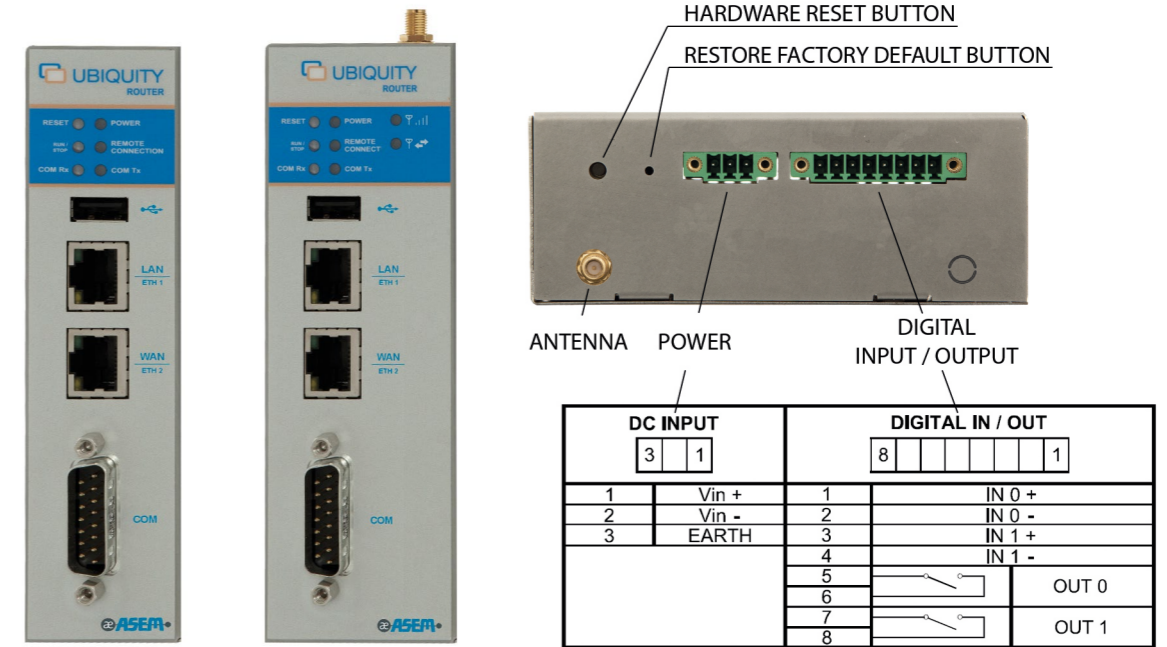
**RK11
RK11 ET**

Ubiquity RK10 and RK11 are systems dedicated to remote assistance based on a 1 GHz ARM Cortex A8 processor enclosed in a "book mount" stainless steel case for DIN rail or wall mounting, with 9÷24 V DC power supply range. RK families have one 10/100 Mbps Ethernet WAN port for Internet connection, one 100 Mbps Ethernet LAN for automation devices connection, an optoisolated serial interface RS 232/422/485/MPI and one USB 2.0 port.

The systems include one 24 V DC digital input for the security key activation that activates the router also from remote and one 24 V DC digital input for the remote reset function. RK10 and RK11 include also a low voltage relay output to remote the "UBIQUITY RK enabled for WAN connection" signal and a relay output to remote the "ongoing remote assistance service" signal. RK11 integrates a built-in 2G/3G/3G+ EDGE/HSPA quadriband modem compatible with cellular networks worldwide.

➤ Highlights

- Ubiquity software creates a VPN between the Control Center PC and the Router enabling access to devices connected via Ethernet and Serial ports
- Debug, programming and update of the automation devices connected to the RK10/11 via Ethernet and Serial interfaces
- Proprietary VPN technology designed for Industrial communication
- MPI protocol support
- Immediate setup and configuration
- Firewall friendly
- RK11 integrates a built-in 2G/3G/3G+ modem to access machines and plants without a wired Internet connection



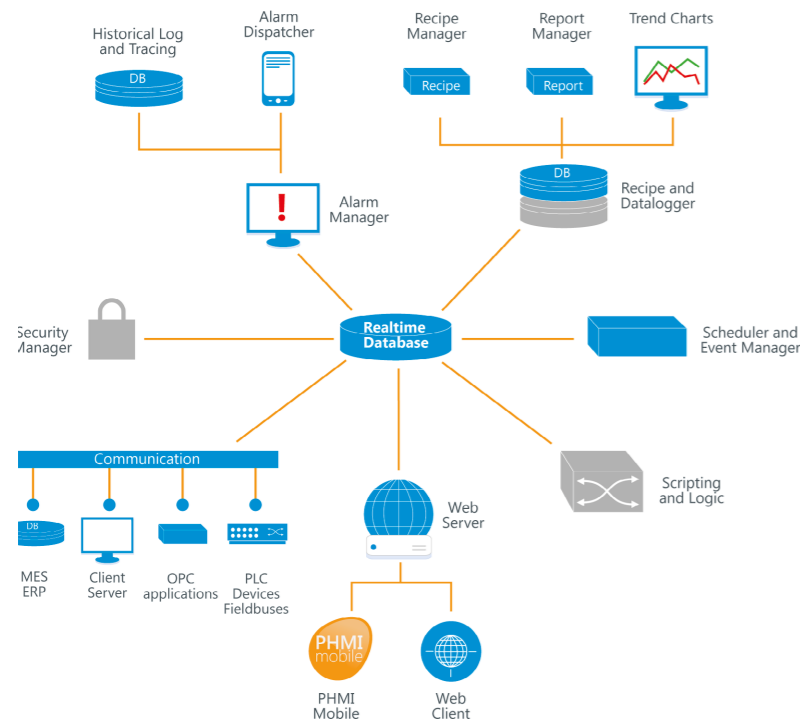
**RK10
RK10 ET**

**RK11
RK11 ET**

	RK10	RK10 ET	RK11	RK11 ET
CELLULAR NETWORK	Standard			2G/3G/3G + EDGE/HSPA quadriband modem up to 5,76 Mbps upload / 14,4 Mbps download
	Antenna			1 x SMA connector (auxiliary Diversity antenna option)
	SIM			1 x SIM card socked push-push type
REMOTE ASSISTANCE SW	ASEM UBIQUITY Router Runtime			
O.S. INSTALLED	Microsoft Windows Embedded Compact 7 Pro			
CASE	Material	Stainless Steel		
	Mounting	DIN rail book mounting holders, Wall book mounting kit included		
	Dimensions	36x138x116 mm		45x138x116 mm
PROTECTION GRADE	IP20			
PROCESSOR	ARM Cortex A8 processor Freescale® i.MX535 1 GHz	ARM Cortex A8 processor Freescale® i.MX537 800 MHz	ARM Cortex A8 processor Freescale® i.MX535 1 GHz	ARM Cortex A8 processor Freescale® i.MX537 800 MHz
SYSTEM MEMORY - RAM	512 MB			
MASS STORAGE	256 MB Ready-Only NAND-Flash for operating system and runtime			
	4 GB eMMC (Solid State Disk) 8bit, file system organization for projects and applications	2 GB eMMC (Solid State Disk) 8bit, file system organization for projects and applications	4 GB eMMC (Solid State Disk) 8bit, file system organization for projects and applications	
LAN	LAN1 Ethernet 100 Mbps (RJ45) LAN2 Ethernet 10/100 Mbps (RJ45)			
USB	1 x USB 2.0			
SERIAL	1 x RS-232/422/485 (DB15M) optoisolated			
DIGITAL INPUT	IN0	Security key for WAN connection activation. Function managed by Control Center		
	IN1	UBIQUITY Router software reset		
	Type	0÷24V DC, 500V optoisolated		
DIGITAL OUTPUT	OUT0	UBIQUITY Router WAN enabled connection signal		
	OUT1	Remote assistance service running signal		
	Type	Output with relay 200mA@24V DC max for contact (N.O. - normally open)		
BUTTONS	UBIQUITY Router hardware reset UBIQUITY Router factory default restore			
POWER SUPPLY UNIT	Input voltage 24V DC (9÷36 V DC)			
OPERATING TEMPERATURE	0°C ÷ +50°C	-20°C ÷ +70°C	0°C ÷ +50°C	-20°C ÷ +60°C
APPROVALS	CE, cULus			

RM10 - RM11 - RM10 ET - RM11 ET

Remote Access and Monitoring Industrial Routers



Ubiquity RM10 and RM11 add remote monitoring functionalities to the Ubiquity RK families providing a complete solution for applications where remote access needs to be supported by constant data monitoring. RM solutions provide flexible data monitoring and data collection functionalities managing efficiently real-time data, historical archives and instant notifications. Data is stored in the local memory of the RM10/11 and Ubiquity Control Center provides an easy way to export data and monitor the application from remote. Data monitoring features include alarm notifications via e-mail and SMS.

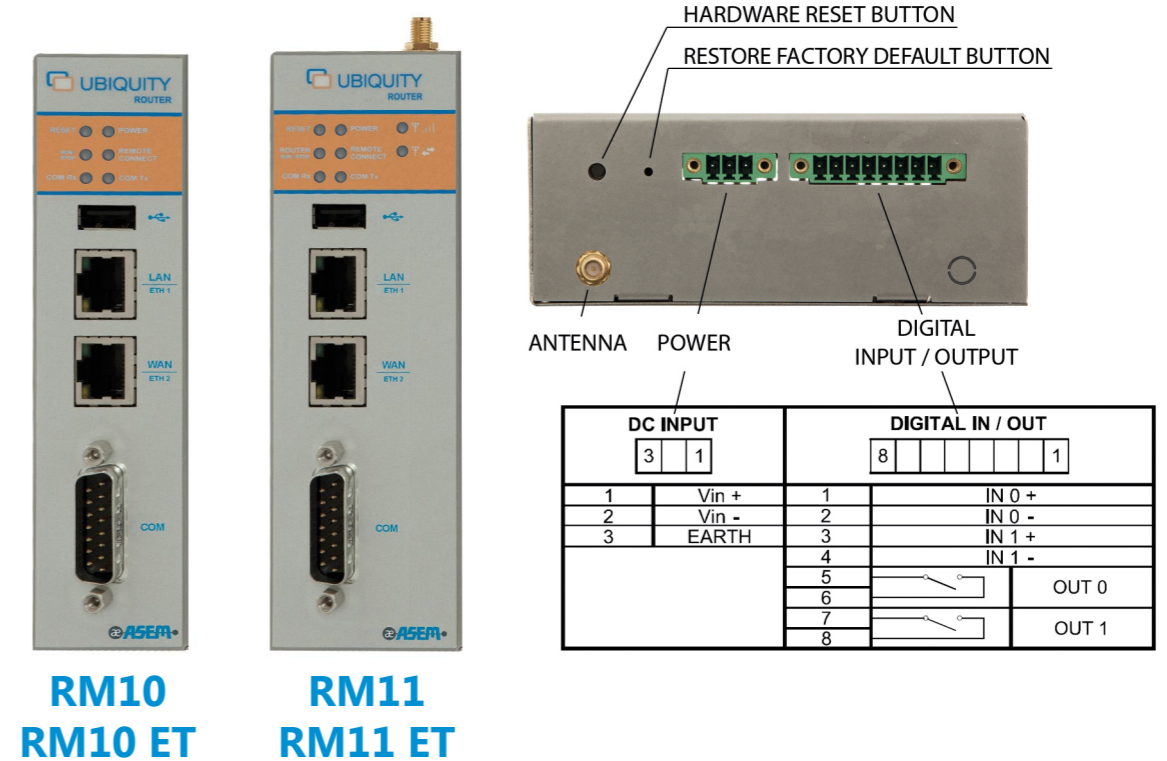
Premium HMI RM Runtime provides compatibility with PLC and controllers protocols allowing RM10/11 to connect directly to the PLC's memory for data acquisition. Data gateway is also supported and RM families can be programmed to transfer data between different communication drivers. Ubiquity RM families provide also VBA scripting functions that extend application flexibility providing a comprehensive solution to all common needs of a data monitoring device. Furthermore, RM families allow graphic screens programming and provide a web client that enables Web and Mobile HMI visualization

of local screens via Ubiquity Control Center and web browsers. HMI screens are also accessible from the local Wi-Fi network using the new Premium HMI Mobile App for iOS and Android devices. RM11 integrates a built-in 2G/3G/3G+ EDGE/HSPA quadriband modem compatible with cellular networks worldwide. RM10 and RM11 are a full-featured remote monitoring solution that leverages on the innovative remote assistance solution Ubiquity and Premium HMI 4 advanced functionalities.

+ **Highlights**
 In addition to RK families features RM10 and RM11 provide:
 → Flexible Scripting with integrated VBA Engine and multi-threading support
 → Web and Mobile HMI using Ubiquity Control Center, web browser or Premium HMI Mobile App
 → Data logging (with data export procedure)
 → Alarms management
 → SMS alarm and notification dispatcher based on SMPP protocol
 → Recipe management
 → Integrated gateway for multiple PLC drivers communication
 → Programmable with Premium HMI Studio
 → RM11 integrates a built-in 2G/3G/3G+ modem to access machines and plants without a wired Internet connection

RM10
RM10 ET

RM11
RM11 ET



RM10
RM10 ET

RM11
RM11 ET

	RM10	RM10 ET	RM11	RM11 ET
CELLULAR NETWORK	Standard	-		
	Antenna	2G/3G/3G+ + EDGE/HSPA quadriband modem up to 5,76 Mbps upload / 14,4 Mbps download		
	SIM	1 x SMA connector (auxiliary Diversity antenna option) 1 x SIM card socked push-push type		
REMOTE ASSISTANCE SW	ASEM UBIQUITY Router Runtime			
REMOTE MONITORING SW	ASEM Premium HMI RM Runtime			
O.S. INSTALLED	Microsoft Windows Embedded Compact 7 Pro			
CASE	Material	Stainless Steel		
	Mounting	DIN rail book mounting holders, Wall book mounting kit included		
	Dimensions	36x138x116 mm	45x138x116 mm	
PROTECTION GRADE	IP20			
PROCESSOR	ARM Cortex A8 processor Freescale® i.MX535 1 GHz	ARM Cortex A8 processor Freescale® i.MX537 800 MHz	ARM Cortex A8 processor Freescale® i.MX535 1 GHz	ARM Cortex A8 processor Freescale® i.MX537 800 MHz
SYSTEM MEMORY - RAM	512 MB			
MASS STORAGE	256 MB Ready-Only NAND-Flash for operating system and runtime 4 GB eMMC (Solid State Disk) 8bit, file system organization			
LAN	LAN1 Ethernet 100 Mbps (RJ45) LAN2 Ethernet 10/100 Mbps (RJ45)			
USB	1 x USB 2.0			
SERIAL	1 x RS-232/422/485 (DB15M) optoisolated			
DIGITAL INPUT	IN0	Security key for WAN connection activation. Function managed by Control Center.		
	IN1	UBIQUITY Router software reset		
	Type	0÷24V DC, 500V optoisolated		
DIGITAL OUTPUT	OUT0	UBIQUITY Router WAN enabled connection signal		
	OUT1	Remote assistance service running signal		
BUTTONS	Output with relay 200mA@24V DC max for contact (N.O. - normally open) UBIQUITY Router hardware reset UBIQUITY Router factory default restore			
POWER SUPPLY UNIT	Input voltage 24V DC (9÷36 V DC)			
OPERATING TEMPERATURE	0°C ÷ +50°C	-20°C ÷ +70°C	0°C ÷ +50°C	-20°C ÷ +60°C
APPROVALS	CE, cULus			

Breton Case Study



“Using the remote assistance solution ASEM UBIQUITY we saved over € 400'000 of our yearly travel expenses” said Denis Soldan, After Sales Dept. Director at Breton.

In 2012, thanks to the collaboration with an important customer, Breton S.p.A., a manufacturer of high speed CNC machining stations and stone working machines for processing marble and granite, ASEM with its Ubiquity solution won the "Windows Embedded Intelligent Systems Partner Excellence Award" in the Global Manufacturing category. The award recognizes each year Microsoft partners that stood out by delivering creative problem-solving intelligent solutions to customers.

The "Success Case" shows how Breton S.p.A. found useful and convenient to install the software Ubiquity in all their plants and machinery worldwide obtaining an overall saving in service costs higher than 30% and a level of proximity to customers never achieved before.

Breton Case Study

A large, white Breton industrial machine with a prominent orange top rail is shown in a factory environment. The machine is long and extends into the background. In the foreground, a control panel is visible, featuring a touchscreen display showing a graphical interface with various data points and charts. Below the screen are several physical buttons and a red emergency stop button. The machine has the 'breton' logo printed on its side in a dark, lowercase font. The background shows a typical industrial setting with concrete floors, overhead pipes, and other machinery.

breton

Founded in 1963 by Marcello Toncelli, who perceived the enormous potential of a developing innovative market, Breton has become one of the world's leading companies in the high speed CNC machining stations sector and in the field of stone working machines for processing marble, granite and ornamental stone. Furthermore Breton, after years of R&D and several international patents filed, is the global leading manufacturer of plants for compound stone production.

Breton plants, machines and high speed CNC machining stations are recognized worldwide for the high technological level, the innovative solutions, and for the undisputed quality of the products and services offered to customers.

Breton, a customer oriented company

"We have always paid particular attention to customer needs, providing up-to-date, comprehensive and efficient services to integrate our high-performance machines offering. Being a Breton customer means choosing not only the quality, efficiency and excellence of machines and plants, but also the highest level services" said Enrico Favaro CTO at Breton.

Each year Breton realizes on average between 250 and 300 machines. After-sales services and maintenance are provided also on machines sold 15 years ago. The fleet is huge and counts around 4.000 plants and machines worldwide. "Reaching each machine is really challenging, with different time zones and on-site staff shortage. On-site service personnel must be high-qualified and able to cover every automation need. This is the reason why remote connection and remote access have always been considered a must-have.

In fact Breton had previously assisted machines controlled with PCs using several remote desktop solutions available on the market. However these did not allow an easy access to the different networks of the customers. "Configuring the different firewalls and networks required many days of work and high level IT expertise. Sometimes, to access the machine we had to use different software solutions at the same time. It was paradoxical" continues Favaro. The PLC-controlled machines had never been assisted or remotely controlled. It was impossible to find a reliable and easy-to-use solution thus Breton had to give up the chance to remotely access PLC-controlled machines.



Ubiquity, the solution for any problem

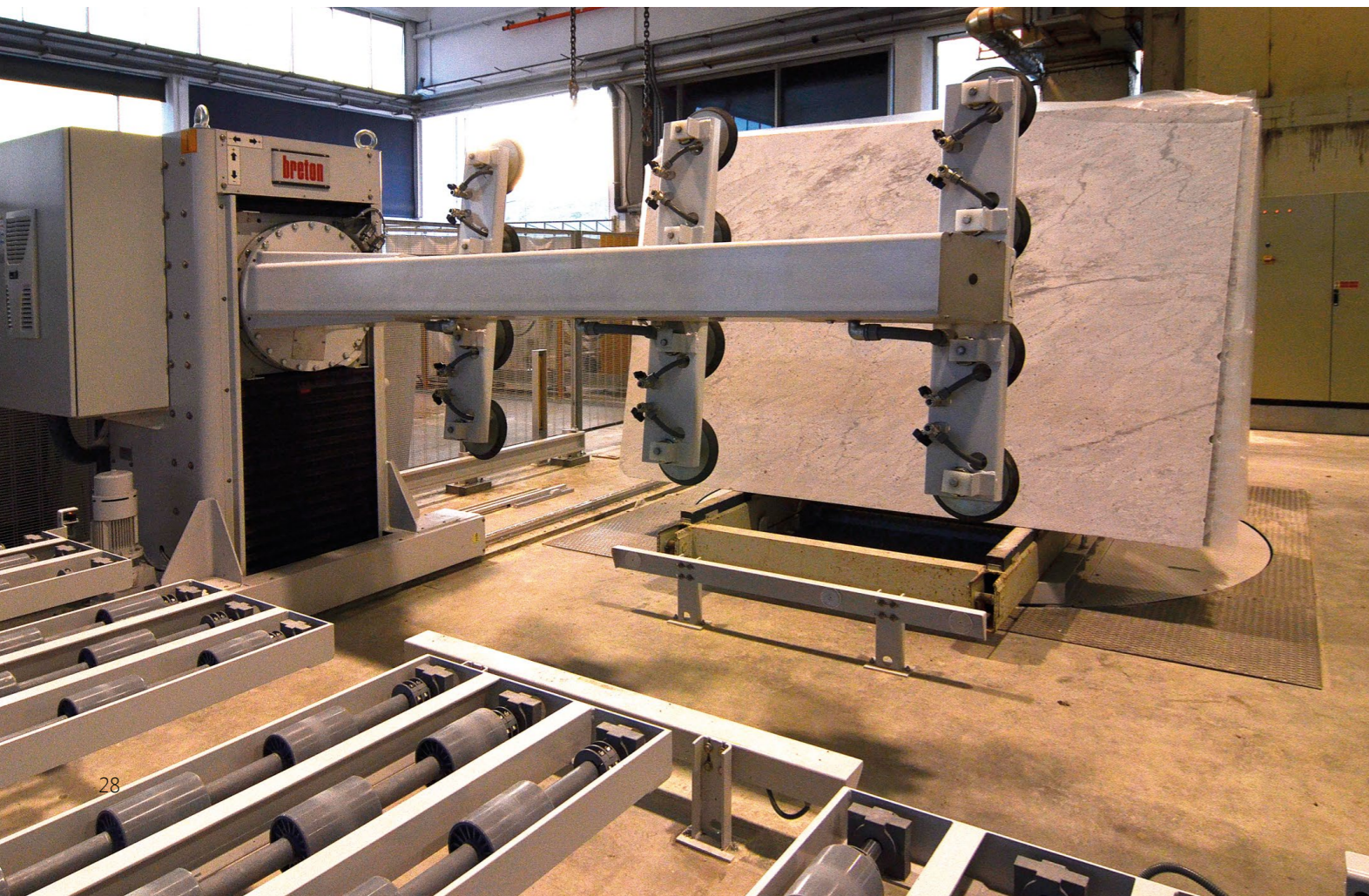
"When ASEM presented us UBIQUITY, we immediately realized that it was the solution to our issues. UBIQUITY opened new horizons enabling remote assistance even on PLC-controlled machines, providing us with a unique and complete solution to remotely access the Ethernet and Serial subnetwork of the IPC/HMI running the Ubiquity Software, on both Win 32/64 and Win CE operating systems" said Favaro.

Therefore Breton decided to install the software UBIQUITY on each IPC-controlled machine, and appreciating the offer of ASEM HMI solutions that integrate the remote assistance software Ubiquity, decided to provide each PLC-controlled machine with an HMI30 obtaining the possibility to operate from remote on the controller via the HMI.

Breton is now taking full advantage of Ubiquity potential. The company is constantly connected to the several machines all over the world to perform software updates and troubleshooting. "UBIQUITY has become essential. In the different branches of Breton, there are at least 5 or 6 people permanently connected to the UBIQUITY servers to perform preventive maintenance and to get machines' operating data."

Using UBIQUITY, Breton is always on customers' side providing them with an efficient machine set up and commissioning while offering an unrivaled after-sale service able to satisfy every need taking advantage of high-qualified staff availability.

The desire to provide an excellent assistance service belongs to BRETON philosophy and UBIQUITY is a primary tool to ensure reliability and continuity of service which is often the reason why customers choose Breton rather than other competitors" said Favaro.



An easy and ready-to-use solution

"One of the key advantages of ASEM UBIQUITY, compared with other remote assistance solutions on the market, is certainly the ease-of-use. The connection to the customer enterprise network does not require any network or firewall configuration. Therefore it is possible to activate the service and access the customer's network without any assistance or technical support" continued Favaro.

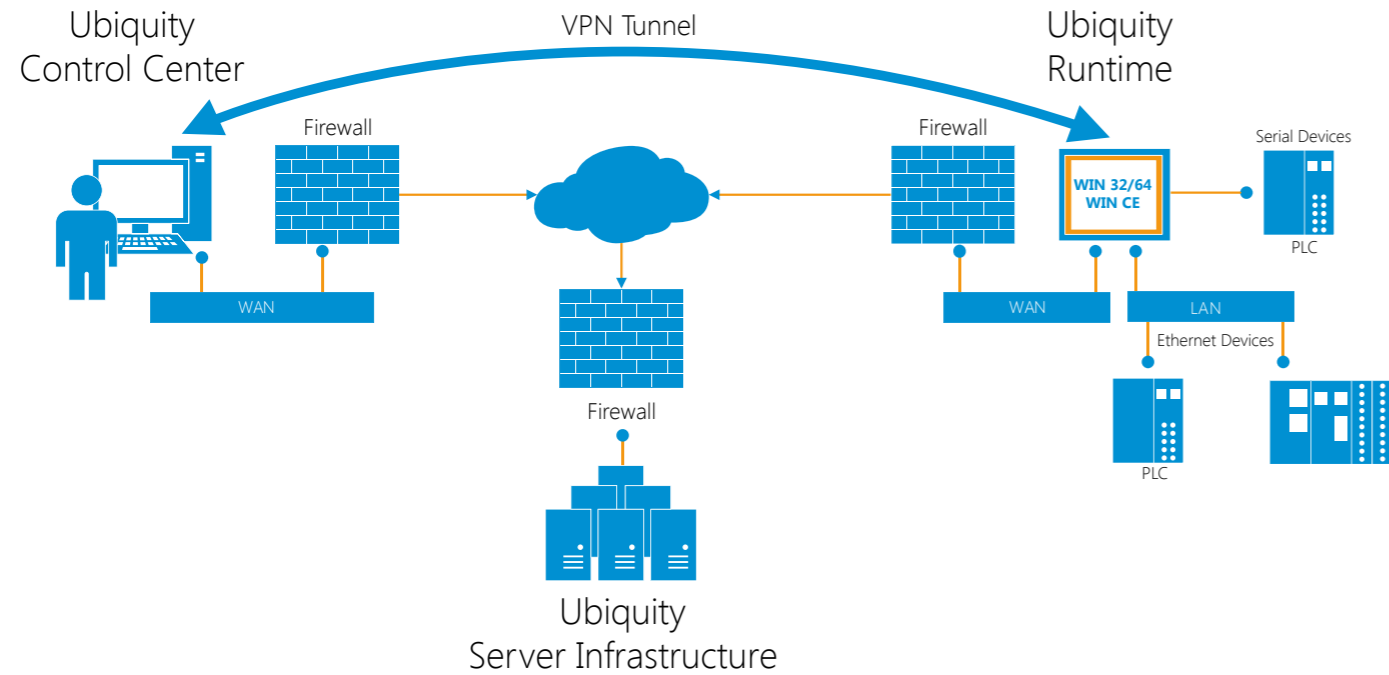
A proprietary VPN optimized for industrial communication

"The most important aspect is definitely the VPN end-to-end connection. In the past, Breton used to install a direct VPN to bigger plants to get access to customer's automation system since the remote desktop was not enough to get all the plant operating data. This functionality is native and completely integrated in the ASEM UBIQUITY Solution.

In fact ASEM UBIQUITY includes a proprietary VPN specifically designed for the industrial communication needs. The UBIQUITY Virtual Private Network works on the ISO/OSI model data-link layer and supports broadcast messages such as UDP. This avoids the introduction of complex routing rules and the need to adjust the gateway configuration of the devices that must be reached, since the remote supervisor appears as a locally connected IP.



UBIQUITY



Hierarchical and flexible management of accesses and permissions

"Another important feature of UBIQUITY is the machine accesses management, that allows to differentiate profiles and authorizations depending on specific user expertise. For example the engineer in charge of preventive maintenance and data storage can perform a first remote diagnosis of the problem. Once the engineer realizes that the PLC might need to be debugged, the technician with related PLC programming software expertise can access the controller and execute a system debug thanks to a broader authorization access profile" states Enrico Favaro.

As a matter of fact, Ubiquity allows the creation of an unlimited number of users, user groups or remote machines groups with different access rules.

Offering an unmatched and cost-effective service with remote assistance

Today, service is one of the most important levers to establish a fruitful relation with the customer. The chances to be successful for supplier who has a flawless product but does not ensure a very good service are really low. Breton has always invested in after-sales service and UBIQUITY allows us to stay a step ahead of our competitors.

Ubiquity benefits are huge. We have had 30% savings on service cost. Just think about the reduction of on-site support with a related saving on travel expenses, not to mention the continuous availability of key-staff during after-sales support.

Breton plants and machining stations are appreciated worldwide for the high-technology and innovation standards, but the unchallenged service quality is the reason why customers finally choose Breton. In fact customer service affect up to 50% on the choice to buy a Breton machine or plant and Ubiquity allowed Breton to reach a customer support and service level never achieved before."





ASEM S.p.A.

ASEM | Artegna | Headquarters
Via Buia 4
33011 Artegna (UD) | Italy
Phone: +39/0432-9671
Fax: +39/0432-977465

ASEM | Giussano
Via Prealpi 13/A
20833 Giussano (MB) | Italy
Phone: +39/0362-859111
Fax: +39/0362-859121

ASEM | Germany
Walbenstraße 41
72127 Kusterdingen-Wankheim | Deutschland
Phone: +49 (0) 7071 7963 070
Fax: +49 (0) 7071 7963 071

email: industrialautomation@asem.it
website: www.asem.it

USER INFORMATION

Copyright © ASEM 2014. All right reserved ASEM reserves the right to make changes, corrections and improvements to the products and programs described at its sole discretion and at any time, without any obligation to notify users. Nor can be excluded inconsistencies and inaccuracies, despite the continued pursuit of perfection. The content of this document is still subject to periodic review. Pictures, diagrams and examples in this document are for illustrative purposes only. ASEM decline any responsibility or liability for actual use based on the examples, diagrams and technical data therein reported. Premium HMI®, NETcore® are ASEM trademarks.