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ASEM operates since more than 25 years in the x86-based industrial applications 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 them with “open and standard” hardware platforms integrated with innovative, flexible and easy-to-use software solutions.

Reliability
ASEM is a reliable and professional partner able to dominate the key technologies of automation systems. In fact ASEM designs, engineers and manufactures entirely all its hardware, firmware and software solutions and controls directly an internal manufacturing process that includes board assembly and welding.

ASEM in numbers:
- Revenues: euro 22 millions (2012)
- 130 employees
- 5,200 sqm Headquarters in Artegna (UD)
- 3,250 sqm manufacturing plant in Artegna (UD)
- R&D department in Verona
- R&D department in Giussano
- Sales unit in Germany

Innovation
The technological excellence of ASEM 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.
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.

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

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

**Highlights**
- Remote control of the HMI system
- 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
- Automatic selection of relay servers depending on the best response time
- Runtime with multiple connection support

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 CE-based HMI & PAC Solutions (HMI25, HME30, HMB600, HMB700, LP30, LP700, LOGIC300).

**Ubiquity Value added for all automation devices**

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 CE-based HMI & PAC Solutions (HMI25, HME30, HMB600, HMB700, LP30, LP700, LOGIC300).
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’s remote connection diagram: access via VPN to the remote system and to the Ethernet and Serial devices connected to the system sub-network.

**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 Kong).

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.

**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.

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Domain accessible by</td>
<td>Users of one company</td>
<td>Users of one company</td>
<td>Users of more companies</td>
</tr>
<tr>
<td>Remote assistance services enabled for</td>
<td>One user per time</td>
<td>More users at the same time</td>
<td>More users at the same time</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Runtime</th>
<th>Windows CE</th>
<th>WIN32/64</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic</td>
<td>Basic</td>
<td>Basic</td>
</tr>
<tr>
<td>Pro</td>
<td>Pro</td>
<td>Pro</td>
</tr>
</tbody>
</table>

- 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 device management
- Internet connection via PROXY for Control Center & Runtime
- Functioning in local network without license
- Runtime update procedure with automatic shutdown and restart of services

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**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 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 Domain**

Ubiquity Domain is the “customer account” to make use of Ubiquity infrastructure and services.
**Ubiquity Highlights**

**Proprietary VPN**
Differently from VPNs based on the IP layer, Ubiquity VPN works on the data-link layer bringing concrete advantages:

**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.

**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 transmission**
**Message authentication codes (MAC) for data integrity.**

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**Control Center**
Software application for Windows 32/64 PCs to access the Domain and manage Ubiquity services.

- Level 2 (data-link) and level 3 (network, IP) VPN towards remote system and Ethernet devices connected to it
- Remote serial connection support
- Remote desktop
- Remote task manager - Processes execution and stop
- Remote system and OS resources monitoring
- Chat
- Accesses statistics visualization
- Users database, remote devices and access profiles management
- Ubiquity Router configuration
- Windows Xp, Vista, 7, 8 (32 and 64 bit) support
- Requires .Net Framework 3.5

**Runtime**
Software application for Win CE and Win 32/64 remote devices (IPC/HMI/controller) and Ubiquity Routers to make them accessible from remote.

- Supports systems with 1 Ethernet (WAN) or 2 Ethernet (WAN + LAN) interfaces
- Level 2 (data-link) and level 3 (network, IP) VPN
- Automatic or manual activation (activation possible also from third party applications using API - Application Program Interfaces)
- Allows to display connection status and log of remote accesses and remote actions
- Supports integrated firewall
- Low CPU and memory footprint
- Allows to avoid the usage of VNC, FTP Server, folder sharing and PLC development tool on the remote system
- Supports Windows CE 5.0, 6.0, 7.0 (ARM and X86), Windows Xp, Vista, 7 (also embedded versions) 32/64 bit
- Requires .Net Compact Framework 3.5, min. 500 MHz CPU, min. 256 KB RAM for Win CE OS
- Requires .Net framework 2.0 SPL, min. 500 MHz CPU, min. 256 KB RAM for Win 32/64 OS

**Server Infrastructure**
Redundant and multiple servers located worldwide.

- Allows secure connection between Control Center and remote devices without any firewall and NAT configuration
- Enables management of an unlimited number of devices, users, configurable in different profiles and groups
- Uses a connection with SSL/TLS protocol cryptography and use of certificates
- Allows performances optimization with end-to-end connections (server is excluded)

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**Ubiquity**

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## Ubiquity Highlights

### Integrated firewall
Ubiquity’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.

**Benefits:**
- Increased security and bandwidth control
- Increased flexibility in access permissions.

### Access profiling and control
Ubiquity provides an unlimited number of users, user groups, device groups, 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.

**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.

### New user interface
With a completely redesigned graphic interface based on Modern-UI standards. The new design gives 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:**
- Ubiquity Control Center becomes clearer and more intuitive
- Users’ daily operations are simplified and made more immediate.

### 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.

**Benefits:**
- Ubiquity Control Center becomes clearer and more intuitive
- Users’ daily operations are simplified and made more immediate.
Ubiquity Highlights

Remote desktop
Control center includes remote desktop function.
Benefits:
→ No need to activate RDP services or to install optional utilities like VNC.

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 and reduce costs.

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.

Statistic 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.

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.

Windows Embedded
Ubiquity Runtime is available for the following operative systems:
→ Windows XP, Vista, 7, 8 (32 and 64 bit)
→ Windows CE 5.0, 6.0, Windows Embedded Compact 7.0
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 for the eventual delivery of alerts and notifications.

Ubiquity Routers bring remote assistance services on plants and machinery where it would have not been 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**

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.

**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+ EDGE/HSPA quadriband modem compatible with cellular networks worldwide.

**RK10**

- **Cellular Network**: Standard
- **Antenna**: SIM card slot
- **Antenna Type**: Push-push type
- **Processor**: ARM Cortex A8 processor Freescale® i.MX535 1 GHz
- **System Memory - RAM**: 512MB
- **Mass Storage**: 256MB Ready-Use NAND-Flash for operating system and runtime 2GB eMMC (Solid State Disk) 8bit, file system organization
- **LAN**: Ethernet 100 Mbps (RJ45)
- **Serial**: 1 x RS-232/422/485 (DB15M) optoisolated
- **Digital Input IN0**: Security key for WAN connection activation. Function managed by Control Center.
- **Digital Input IN1**: UBIQUITY Router software reset
- **Digital Output OUT0**: UBIQUITY Router WAN enabled connection signal
- **Digital Output OUT1**: Remote assistance service running signal
- **Buttons**: UBIQUITY Router hardware reset, UBIQUITY Router factory default restore
- **Power Supply Unit**: Input voltage 24V DC (±3% tolerance)
- **Operating Temperature**: 0° ~ +50°C (-20° ~ +70°C option)
- **Approvals**: CE, cULus

**RK11**

- **Cellular Network**: Standard
- **Antenna**: SIM card slot
- **Antenna Type**: Push-push type
- **Processor**: ARM Cortex A8 processor Freescale® i.MX535 1 GHz
- **System Memory - RAM**: 512MB
- **Mass Storage**: 256MB Ready-Use NAND-Flash for operating system and runtime 2GB eMMC (Solid State Disk) 8bit, file system organization
- **LAN**: Ethernet 100 Mbps (RJ45)
- **Serial**: 1 x RS-232/422/485 (DB15M) optoisolated
- **Digital Input IN0**: Security key for WAN connection activation. Function managed by Control Center.
- **Digital Input IN1**: UBIQUITY Router software reset
- **Digital Output OUT0**: UBIQUITY Router WAN enabled connection signal
- **Digital Output OUT1**: Remote assistance service running signal
- **Buttons**: UBIQUITY Router hardware reset, UBIQUITY Router factory default restore
- **Power Supply Unit**: Input voltage 24V DC (±3% tolerance)
- **Operating Temperature**: 0° ~ +50°C (-20° ~ +70°C option)
- **Approvals**: CE, cULus
RM10 - RM11

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/HSUPA quadband 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
- 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

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**CELLULAR NETWORK COMPATIBILITY**

<table>
<thead>
<tr>
<th>RM10</th>
<th>RM11</th>
</tr>
</thead>
<tbody>
<tr>
<td>2G/1.9G + EDGE/HSUPA quadband modem up to 5.76 Mbps upload / 14.4 Mbps download</td>
<td>1 x SIM card socketed push-push type</td>
</tr>
</tbody>
</table>

**REMOTE ASSISTANCE SW**

<table>
<thead>
<tr>
<th>RM10</th>
<th>RM11</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASEM UBQIUTY Router Runtime</td>
<td>ASEM Premium HMI RM Runtime</td>
</tr>
</tbody>
</table>

**REMOTE MONITORING SW**

<table>
<thead>
<tr>
<th>RM10</th>
<th>RM11</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASEM Premium HMI RM Runtime</td>
<td>ASEM Premium HMI RM Runtime</td>
</tr>
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</table>

**O.S. INSTALLED**

<table>
<thead>
<tr>
<th>RM10</th>
<th>RM11</th>
</tr>
</thead>
<tbody>
<tr>
<td>Microsoft Windows Embedded Compact 7 Pro</td>
<td>Microsoft Windows Embedded Compact 7 Pro</td>
</tr>
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**CASE Material**

<table>
<thead>
<tr>
<th>RM10</th>
<th>RM11</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stainless Steel</td>
<td>Stainless Steel</td>
</tr>
</tbody>
</table>

**Mounting**

<table>
<thead>
<tr>
<th>RM10</th>
<th>RM11</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wall box mounting predisposition, DIN rail holders kit included</td>
<td>Wall box mounting predisposition, DIN rail holders kit included</td>
</tr>
</tbody>
</table>

**DIMENSIONS**

<table>
<thead>
<tr>
<th>RM10</th>
<th>RM11</th>
</tr>
</thead>
<tbody>
<tr>
<td>36x138x116 mm</td>
<td>46x138x116 mm</td>
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**PROTECTION GRADE**

<table>
<thead>
<tr>
<th>RM10</th>
<th>RM11</th>
</tr>
</thead>
<tbody>
<tr>
<td>IP20</td>
<td>IP20</td>
</tr>
</tbody>
</table>

**PROCESSOR**

<table>
<thead>
<tr>
<th>RM10</th>
<th>RM11</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARM Cortex A8 processor Freescale® i.MX535 1 GHz</td>
<td>ARM Cortex A8 processor Freescale® i.MX535 1 GHz</td>
</tr>
</tbody>
</table>

**RAM**

<table>
<thead>
<tr>
<th>RM10</th>
<th>RM11</th>
</tr>
</thead>
<tbody>
<tr>
<td>512MB</td>
<td>512MB</td>
</tr>
</tbody>
</table>

**MASS STORAGE**

<table>
<thead>
<tr>
<th>RM10</th>
<th>RM11</th>
</tr>
</thead>
<tbody>
<tr>
<td>256MB Ready-Only NAND-Flash for operating system and runtime</td>
<td>2GB eMMC (Solid State Disk) Bin, file system organization</td>
</tr>
</tbody>
</table>

**LAN**

<table>
<thead>
<tr>
<th>RM10</th>
<th>RM11</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethernet 100 Mbps (RJ45)</td>
<td>Ethernet 10/100 Mbps (RJ45)</td>
</tr>
</tbody>
</table>

**USB**

<table>
<thead>
<tr>
<th>RM10</th>
<th>RM11</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 x USB 2.0</td>
<td>1 x USB 2.0</td>
</tr>
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</table>

**SERIAL**

<table>
<thead>
<tr>
<th>RM10</th>
<th>RM11</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 x RS-232/422/485 (DB15M) optoisolated</td>
<td>1 x RS-232/422/485 (DB15M) optoisolated</td>
</tr>
</tbody>
</table>

**DIGITAL INPUT**

<table>
<thead>
<tr>
<th>RM10</th>
<th>RM11</th>
</tr>
</thead>
<tbody>
<tr>
<td>Security key for WAN connection activation. Function managed by Control Center</td>
<td>Security key for WAN connection activation. Function managed by Control Center</td>
</tr>
<tr>
<td>IN1</td>
<td>IN1</td>
</tr>
<tr>
<td>UBIQIUTY Router software reset</td>
<td>UBIQIUTY Router software reset</td>
</tr>
<tr>
<td>Type</td>
<td>Type</td>
</tr>
<tr>
<td>0÷24V DC, 500V optoisolated</td>
<td>0÷24V DC, 500V optoisolated</td>
</tr>
</tbody>
</table>

**DIGITAL OUTPUT**

<table>
<thead>
<tr>
<th>RM10</th>
<th>RM11</th>
</tr>
</thead>
<tbody>
<tr>
<td>UBIQIUTY Router WAN enabled connection signal</td>
<td>UBIQIUTY Router WAN enabled connection signal</td>
</tr>
<tr>
<td>OUT0</td>
<td>OUT0</td>
</tr>
<tr>
<td>Remote assistance service running signal</td>
<td>Remote assistance service running signal</td>
</tr>
<tr>
<td>Type</td>
<td>Type</td>
</tr>
<tr>
<td>Output with relay 200mA@24V DC max for contact (N.O. - normally open)</td>
<td>Output with relay 200mA@24V DC max for contact (N.O. - normally open)</td>
</tr>
</tbody>
</table>

**BUTTONS**

<table>
<thead>
<tr>
<th>RM10</th>
<th>RM11</th>
</tr>
</thead>
<tbody>
<tr>
<td>UBIQIUTY Router hardware reset</td>
<td>UBIQIUTY Router hardware reset</td>
</tr>
<tr>
<td>UBIQIUTY Router factory default restore</td>
<td>UBIQIUTY Router factory default restore</td>
</tr>
</tbody>
</table>

**POWER SUPPLY UNIT**

<table>
<thead>
<tr>
<th>RM10</th>
<th>RM11</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input voltage 32V DC (±3.6V V DC)</td>
<td>Input voltage 32V DC (±3.6V V DC)</td>
</tr>
</tbody>
</table>

**OPERATING TEMPERATURE**

<table>
<thead>
<tr>
<th>RM10</th>
<th>RM11</th>
</tr>
</thead>
<tbody>
<tr>
<td>0° to +50°C (-20° to +70° C option)</td>
<td>0° to +50°C (-20° to +70° C option)</td>
</tr>
</tbody>
</table>

**APPROVALS**

<table>
<thead>
<tr>
<th>RM10</th>
<th>RM11</th>
</tr>
</thead>
<tbody>
<tr>
<td>CE, cULus</td>
<td>CE, cULus</td>
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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

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.

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.

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.
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.”