Web Control System

Cooling management

Water management

Building management system

Millenium Web Server

freedom for professionals

a company of Schneider Electric

Crouzet

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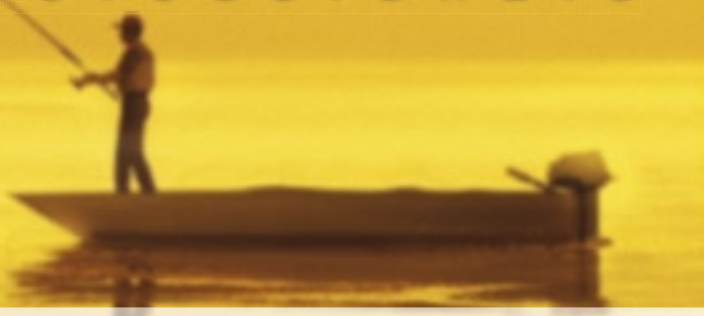
f r e e d o m f o r p r o f e s s i o n a l s

Millenium Web Server



> “ *Supervise your installations remotely, optimise your maintenance activities, make economies of scale: Crouzet created the Millenium Web Server for your tranquillity.* ”

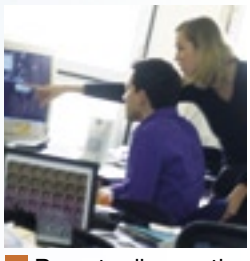
" Alain, automation solution specifier."

Lighting management

Cooling management

Access control

Pump control



Remote diagnostics

The *Millenium Web Server* is an Embedded Web SCADA (Supervisory Control and Data Acquisition) solution

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Why does the Millenium Web Server free professionals:

- Keeps management and maintenance costs down (both preventive and corrective).
- Optimises operating costs and technicians' visits to the site.
- Enables you to react immediately to equipment malfunctions.
- Improves the reliability of production processes.
- Provides event traceability and archiving...

Crouzet has incorporated in its logic controller offer, an "Embedded Web SCADA" solution which is easy to use and compatible with the communicating products in the marketplace. With the breakthrough in communication technologies (EDGE, GRPS, Wi-Fi...), the *Millenium Web Server* is clearly the best-performance and most competitive control-command solution today. With the *Millenium Web Server*, you will be able to control and manage remotely the maintenance of equipment in different locations, and avoid systematic visits to the site.

A simple Internet navigator is all you need for the key functions:

The *Millenium Web Server* enables you to interconnect automated industrial or residential unit processes to the VDI network under TCP/IP protocol, and to the MODBUS field bus.

Associated with a *Millenium II* logic controller, and via a simple Internet navigator (PC, cell phone, Pocket PC...), you can manage in absolute tranquillity:

- Monitoring.
- Archiving / Traceability.
- Remote diagnostics / Remote alarms.
- Manage the field bus (MODBUS).

The *Millenium Web Server* also offers you simplicity:

- Access the events and parameters (setpoints, alarms...) without a dedicated PC.
- Intuitive programming for the monitoring pages - no need to know computer language.
- Adapted and discrete format for successful integration in all installations.

Function 1
Archiving Traceability

Perfect mastery of historical consumption data and statistical processing !

- Retrieve analog data (temperature...) or digital data (alarms...).
- Access the data archived, using a spreadsheet (sort by date, time, variable name).
- Sample the data from the *Millenium II* logic controllers or other MODBUS slaves.

Millenium Web Server gives you more:

- Archive file in text format compatible with most spreadsheets on the market (in particular Excel®); download using a simple FTP client.
- Up to 32 Mb for storing pre-programmed events. Manages up to 100 events (100 16-bit function variables).
- Guaranteed security : unextractable Compact Flash memory.

Function 2
Monitoring Control

So simple to implement and use !

- Create your own monitoring windows from a library of animated objects.
- Display the parameters and changes in each event in graphic form.
- Control the state of the actuators and sensors managed by the logic controller remotely.

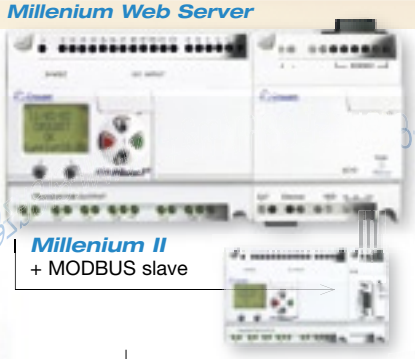
Millenium Web Server gives you more:

- Web monitoring pages generated automatically (up to 20 pages).
- Monitoring accessible from any system with an Internet navigator (PC, cell phone...).
- Autonomous system with no licence fees.
- Extendable library of graphic objects (library import/export function).

With your PC:

- Configure the *Millenium Web Server* using the software.
- Connect to the Web monitoring pages.
- Download the archive file.

Web interface:
Millenium Web Server



Millenium II
+ MODBUS slave

GPRS modem
STN modem /
Wi-Fi adapter /
ADSL hub /router

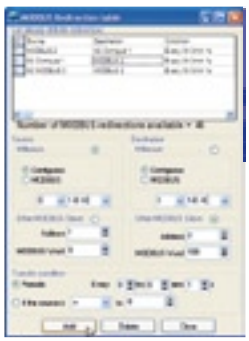
Pump control
Application

With your PDA:
- Connect to the Web monitoring pages.

On your cell phone (GPRS, UMTS - 3G...):

- Receive alert SMSs.
- Connect directly to the *Millenium Web Server* and display the PC Web monitoring pages.

Function 4
Field bus management (MODBUS)



Make your local networks easier to administer ! As a MODBUS master, *Millenium Web Server* **enables you to:**

- Sample data from the *Millenium II* or other MODBUS slaves.
- Issue commands using the functions defined in the MODBUS RTU protocol.
- Create a table for exchanging the MODBUS variables between various *Millenium II* slaves using a data gateway.

Function 3
Remote alarms Remote diagnostics

Optimised productivity with fewer site visits !

- Obtain a diagnostic and take action remotely from a simple Internet navigator (immediate reactivity and no on-site visit costs).
- You are alerted by eMail or SMS of any change in a state monitored.
- Consult the operating history and prepare the maintenance tasks.

Millenium Web Server gives you more:

- Malfunctions listed and stored chronologically.

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f r e e d o m f o r p r o f e s s i o n a l s

Millenium Web Server

> “ Because the *Millenium Web Server* is so easy to use, my technicians were able to develop a monitoring solution to guarantee the continued operation of our equipment with no outside help... ”

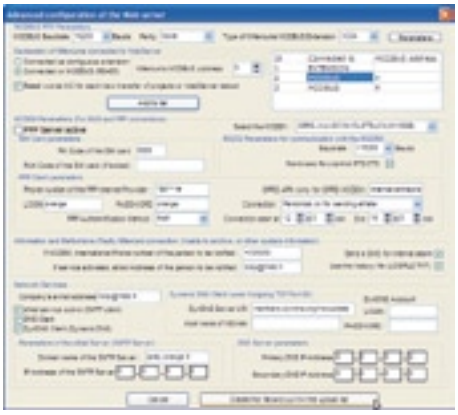
Millenium Web Server
set yourself free in 4 easy steps !

Step 1 *Assemble Connect*

- **Assemble** a 24 V DC extendable *Millenium II* module with the Millenium Web Server as an adjacent extension (connector provided).
- **Connect** your PC to the *Millenium Web Server* module.
- **Connect a**ll the peripherals (STN or GPRS modem, third party slaves on the 3-wire RTU MODBUS network) to the *Millenium Web Server* module.

Step 2 *Configure Register*

- **Install** the software on your PC which will update your *Millenium II* software automatically (version 1.36, at the least).
- **Register** the *Millenium II*s connected via MODBUS and/or adjacent **(automatic configuration with *Millenium II* by addresses and words)**.
- **Configure** the various peripherals to be connected to the *Millenium Web Server* (Modem, MODBUS slaves...).



"Oliver, electrician in charge of the cold chain at the county laboratory."

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Web Control System

Step 3 *Program Download*

- **Program** intuitively: the various monitoring pages from an animated object library, the MODBUS table and event archiving.
- **Customise** the applications library with your own graphic objects.
- **Draw** animated objects to design the schematics for your application.
- **Compile** your project.
- **Configure** your IP addresses.
- **Download** your program into the *Millenium Web Server* module.
- **Program** the various MODBUS slaves using their respective programs.

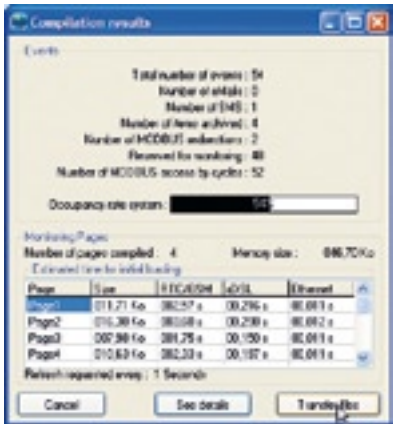
Step 4 *Operate*

- **Start up** the Internet, fill in the IP address, then the access rights and password.
- **Access** the monitoring, the MODBUS table and the *Millenium Web Server* parameters.
- **Retrieve** the archive file via an FTP server (FTP client provided in the software).
- **Via Internet,** access the various *Millenium Web Server* functions.

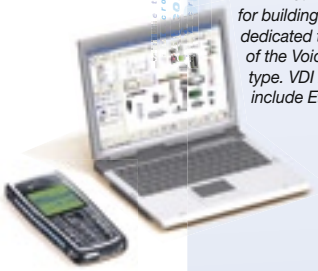
Step 5 *Assess your savings !*

- ***Automatic configuring for quick installation and implementation.***
- ***Implementation within the capabilities of any electrician:*** *no need to call upon outside help either for optimisation or updating.*
- ***Its evolutive configuration provides for adding MODBUS slaves or communication peripherals.***
- ***No need to dedicate a PC to the monitoring,*** *because it is compatible with standard communications tools (PC/PDA/Laptop)*
- ***No need for dedicated monitoring programs any more,*** *so no need to buy a licence and updates.*
- ***No specific training required*** *to process archive files, because they are compatible with spreadsheets on the market.*

= Practical and economic, the *Millenium Web Server* is the "Embedded Web SCADA" solution which brings you freedom !



See the installation sheet delivered with the product.



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GLOSSARY

- **DNS client:** *provides for associating an URL (e.g.: www.mywebserver.com) with an IP address (62.145.23.6).*
- **EDGE** *(Enhanced Data Rates for GSM Evolution): transmission mode for cell phones improving the functions and transmission rate compared to GSM.*
- **Ethernet:** *Standard for cable networks intended to carry data over TCP/IP at 10Mbps, 100Mbps...*
- **GPRS** *(or General Packet Radio Service): standard for cell phones derived from GSM and providing a higher data transmision rate.*
- **Internet:** *Worldwide WAN network enabling networks running on the IP protocol stack to be interconnected and run together.*
- **IP** *(Internet Protocol): basic protocol on which the Internet runs. It provides for exchanging data in packets between two stations identified by a unique IP address. The datagrams are routed using this protocol which networks the web, ensures redundancy and increases its reliability through the numerous routers.*
- **Protocol:** *Set of syntax and /or synchronisation rules enabling a number of devices to exchange data through a media.*
- **STN:** *Switched Telephone Network.*
- **Server:** *access to an IP protocol stack service. A station connecting to a server is termed a "client station". An Internet navigator is the client application for a Web server.*
- **SMTP Server:** *messaging server providing for depositing eMails for an addressee, at his his eMail address. The TCP/IP stack protocol used is SMTP (Simple Mail Transfer Protocol).*
- **TCP/IP** *(Transfer Control Protocol on IP): protocol encapsulated in the IP datagrams aimed at improving exchange reliability by data flow control.*
- **VDI:** *network intended for building applications dedicated to carrying data of the Voice, Data, Image type. VDI networks may include Ethernet networks.*

f r e e d o m f o r p r o f e s s i o n a l s

Millenium Web Server

"With the Millenium Web Server, wherever I am, and at any time, I can keep an eye on the quality of the water in our networks and issue our treatment reports to the health authorities. This is freedom with peace of mind !"

Water treatement and management.

Application: Managing the automation system for a lock with remote communication.

Your needs:

1/ Be sure of the quality of your action wherever you are and at all times.

2/ Manage water level probes (analog).

3/ Automate the operation based on level thresholds.

4/ Save the data (water level values, various action taken...).

5/ Manage and display the Control-Command, remotely, on Web pages (communication by GPRS modem).

6/ Receive warning on alarms by SMS and manage the situation remotely.

We bring you the following solutions:

- A *Millenium II* logic controller as an adjacent extension to the Millenium Web Server, to control small automation devices in the application.
- The *Millenium Web Server* to:
  - Manage recording the probe values.
  - Generate monitoring Web pages.
  - Read the MODBUS network values sent by the *Millenium II* slave.
  - Send SMSs via the GPRS modem.
- A *Millenium II* slave to drive the 2 analog inputs from the level probes and communicate in MODBUS with the *Millenium Web Server*.
- A GPRS modem to:
  - Send SMSs via the GPRS wireless network.
  - Consult the monitoring Web pages.
  - Retrieve the archive file.

" Sophie, water treatment and processing department manager."

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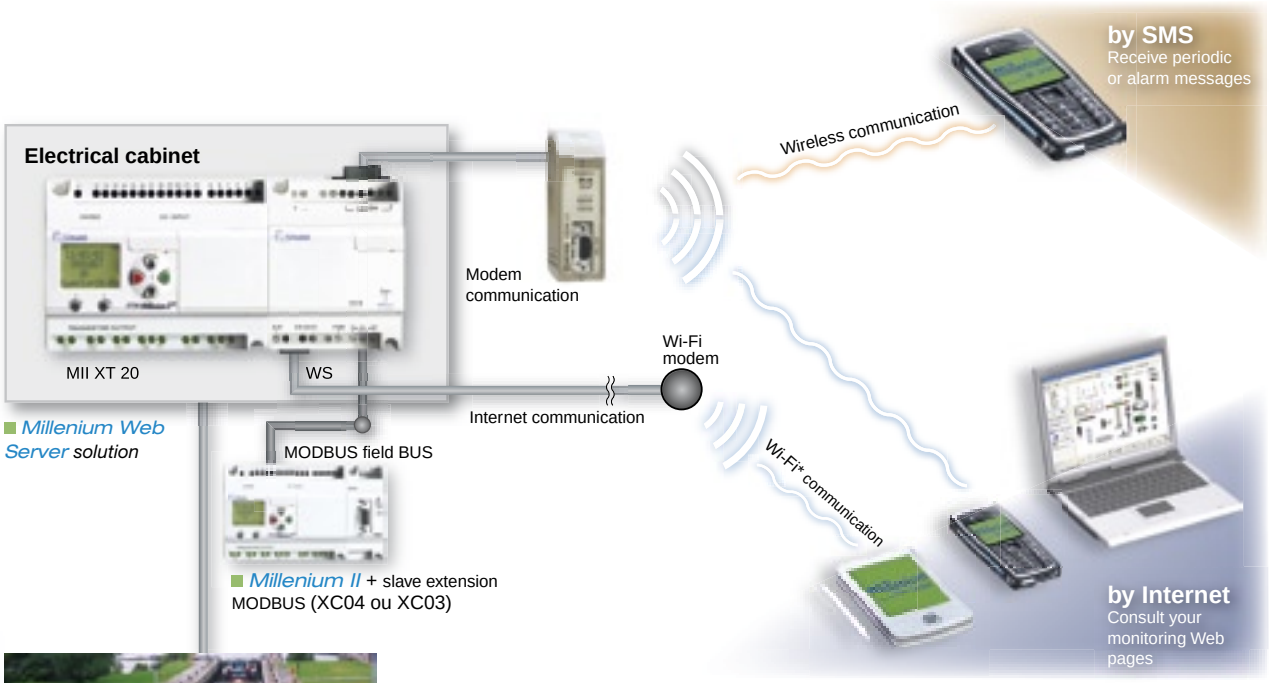
The *Millenium Web Server* solution brings you more:

- ***Simple, non-proprietary software to manage:***
  - *Saving analog or digital values (traceability).*
  - *Creating monitoring Web pages.*
  - *Your pre-configured GPRS modem.*
  - *Retrieving in the field the remote MODBUS data from another Millenium II slave or any other slave automation device.*
- ***Simple installation and integration*** *within the capabilities of any electrician, without needing to know computer language.*
- ***Easy to run for the end user:*** *monitoring and remote alarms are simple to set up.*
- ***A system which is open to standard communicating products*** *(PC and cell phones).*

Example of a communicating architecture: *remote and local MODBUS*



■ *Millenium Web Server solution*

■ *Millenium II* + slave extension MODBUS (XC04 ou XC03)

* Wi-Fi communication, wireless Internet over short distances

■ *Managing lock automation*

f r e e d o m f o r p r o f e s s i o n a l s

Millenium Web Server

> “ *For us, the Millenium Web Server means freedom to take action remotely ! It gives us more flexibility in managing "on-call" times and working hours for all our staff.* ”

CENTRALISED MANAGEMENT SYSTEM

APPLICATION 1 :
Controlling remotely the operation of the electricity supply in a camp site.

Your needs:

1) Control remotely the state of your installations.

2) Read the consumption for each site.

3) Command switching the supply (validate the credit).

4) Notify your technical department of any fault which may arise on the site.

5) Monitor changes and historical data for the operation of your installations.

We bring you the following solutions:

■ A *Millenium II* logic controller to:

- Validate the time credit for switching the supply.
- Drive the switch states to detect electrical disconnection and control the voltage and amp levels.

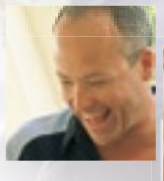
■ A *Millenium Web Server* to:

- Archive consumption data.
- Notify the Technical Dept; by eMail / SMS of any requests for servicing.
- Retain historical data of malfunctions and requests for servicing.

The *Millenium Web Server* solution brings you more:

- ***Increase the number of plots managed*** *by any one person through remote monitoring.*
- ***Guaranteed security*** *by managing the system access rights by password (3 different levels of authorisation).*
- ***Cut system down time*** *with faster reactivity.*

"Xiao Ling, Technical Dept. manager with a Town Hall."



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BUILDING MANAGEMENT SYSTEM.

APPLICATION 2 :

Monitor the heating and technical alarm for a village hall.

Your needs:

1) Easy and safe maintenance of the climate control equipment (technical alarms).

2) Traceability on consumption for statistical processing and seeking energy savings.

We bring you the following solutions:

- A *Millenium II* to manage the "automation" part of the heating (clock, setpoints).
- A *Millenium Web Server* to facilitate remote monitoring by feeding back the analog data (temperatures) and digital data (presence detection, alarms...).
- A GPRS modem to make the connection with the remote system from the town technical dept.

The *Millenium Web Server*, is also your solution for:

- **Managing renewable energy sources.**
- **Managing cooling** in laboratories and in the food and beverage industry (cold chain).
- **Traceability of medical equipment.**
- **Access control** (motorway tolls...).
- **Monitoring pools** (water quality, motorised covers...).
- **Industrial maintenance** (machines).
- **Managing vending machines.**
- ...

The *Millenium Web Server* solution brings you more:

- ***Monitoring accessible*** *to all monitoring staff, whatever the monitoring PC station.*
- ***Good integration*** *in building cabinets through careful design of the modular housing format.*
- ***Easy remote connection*** *via GPRS modem during "on-call" periods.*
- ***Optimised management*** *of working hours and "on-call" periods.*

Managing heating monitoring

Technical alarm

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Millenium Web Server

- Up to 100 events managed (100 16-bit variables)
- Modular plug-in housing for DIN rail mounting
- Capable of driving all types of MODEM using AT commands
- A local monitor can be connected on an RS232 port for on-site configuration
- 2 LEDs on the front panel indicate the presence of the power supply and network traffic
- Functions:
  - WEB monitoring
  - Archiving
  - Remote diagnostics, SMS and e.mail alarm management
  - Field bus management (MODBUS)

XC 10

Part numbers

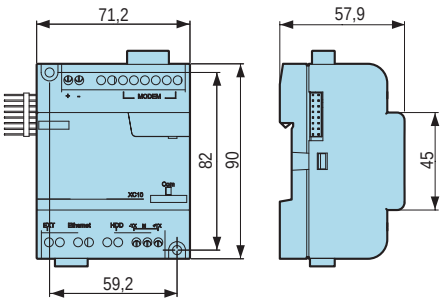
Type	Supply	Code
XC10	24 V ⎓	88950124

General characteristics

General characteristics	
Storage temperature	-40°C → +70°C
Maximum memory capacity	30 Mo on Compact Flash card
Protection rating	Front panel: IP40 Terminal block: IP20
Operating temperature	-5 → +55°C
Certifications	Complies with EC low voltage directives 73/23/CEE & 93/68/CEE Complies with EMC directive 89/336/CEE Complies with RoHS directive
Protocol	Web service (Web server; FTP server; TELNET server; SMTP client; DNS/ DynDNS client: DHCP client, UDP server) ; MODBUS RTU communication
Electrical characteristics	
Tolerance	± 20%
Absorbed power	7 VA
Maximum inrush current	4 A (10 ms)

Dimensions

XC10



The logical complements to the Millenium II Web Server

➜ Millenium II+ Logic Controller : "Expandable" Version

- Intuitive programming using Function Block Diagram (FBD) or SFC
- Functions : Timer, Counter…
- Application-specific functions: Pump management, Cam timer…
- Digital, analog or potentiometer inputs
- Relay, solid state or PWM outputs

XT 20

EX 20

Part numbers

Type	Input	Output	Supply (V)	Code
XT 20	12 PNP	8 relays	24 V ⎓	88 950 061
	12 PNP	8 solid state	24 V ⎓	88 950 062
EX 20	12 PNP	8 relays	24 V ⎓	88 950 831
	12 PNP	8 solid state	24 V ⎓	88 950 832

➜ Modem Communication Solutions

- Download, modify and upload the program remotely
- Access all the Millenium II+ functions remotely
- Automatic warning should an alarm occur

STN

Modem GSM/GPRS

Part numbers

Type	Input	Output	Supply (V)	Code
Modem STN	2	2 relays	10 → 80 V ⎓	88 950 106
Modem GSM/GPRS	-	-	12 → 24 V ⎓	88 970 119

➜ Alphanumerical Displays

- Backlit LCD screen (72 x 20 mm); 4 lines of 20 characters with 8-key keypad, 4 of which can be renamed
  - Three-colour screen: green/orange/red
  - Monochrome screen: green
- Communicates with the Millenium II+ via the Modbus module

Three-colour screen

Monochrome screen

Part numbers

Type	Designation	Code
Programming kits	Kit monochrome LCD screen Display + Modbus Module + programming software + cables (RS485 + RS232)	88 950 844
	Kit three-colour LCD screen Display + Modbus Module + programming software + cables (RS485 + RS232)	88 950 849

➜ Communication Module

- Field bus communication under the MODBUS RS-485 protocol (1 adjacent extension on a Millenium II+ controller)

XC 04

Part numbers

Type	Description	Supply (V)	Code
XC 04	MODBUS RS-485 Communication module	24 V ⎓	88 950 823

For more information, visit the website : www.crouzet.com/m2+

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