

MR-01-04, -16, -64 Mobile Router

4.11.2008



Features

- Embedded stand-alone mobile GPRS device router
- 24V DC power supply
- ARM9 CPU
- Linux operation system
- Web browser user interface
- MR-01-04 for up to 4 mobile connections
- MR-01-16 for up to 16 mobile connections
- MR-01-64 for up to 64 mobile connections

Description

MR-01 Mobile Router is the connection link between mobile devices (like MIC-controllers) and the control servers (ClearScada-servers) which communicates with each other via GSM/Internet network. The link is accomplished with two TCP/IP-server applications: Mobile server and control server. Both servers are embedded inside the MR01 box.

Applications

- Si-Tecno modular systems easy and operator independent way to route GPRS data from numerous data control and collection points to host server system.
- Any remotely located data collection system based to GPRS data

Mobile device addressing

Mobile device (MIC01-CLR) identification is accomplished with fixed mobile ID numbers. IP-addresses are not used. Mobile ID number range is limited to 1...10000. Same ID number with two mobile devices is not allowed. It is a conflict and disables the second connections.

Mobile server structure

Mobile server embedded inside the MR01 software is the connection point for all mobile devices. Mobile server listens to the connection port and waits for incoming connections from mobile devices (MIC-controllers). Data packet compress/decompress is used to reduce the GPRS data costs and to increase the speed of the communication.

Communication method between mobile device and mobile server is GPRS. Basic SIM-card with GPRS support is required for any mobile device. After user configuration the mobile device is ready to connect to the mobile server.

In most cases the incoming connections from the mobile devices are coming via public Internet to the mobile server. This means that the mobile server must be located to the place where there is a static and public IP-address or domain. **Note:** In most countries this static internet IP-address must be separately ordered from the local internet service provider.

Control server structure

Control server embedded inside the MR01 software is the connection point for the host system (like ClearScada server). Control server listens to the connection port and waits for incoming connections from host devices. Data packet compress/decompress is not used between the control server and the host system.

Communication method between control device and mobile server is TCP/IP communication.

In cases where the incoming connections from the host devices are coming via public Internet to control server, the host server requires static internet IP-address only if other applications (like ClearScada WEBX) do need it.

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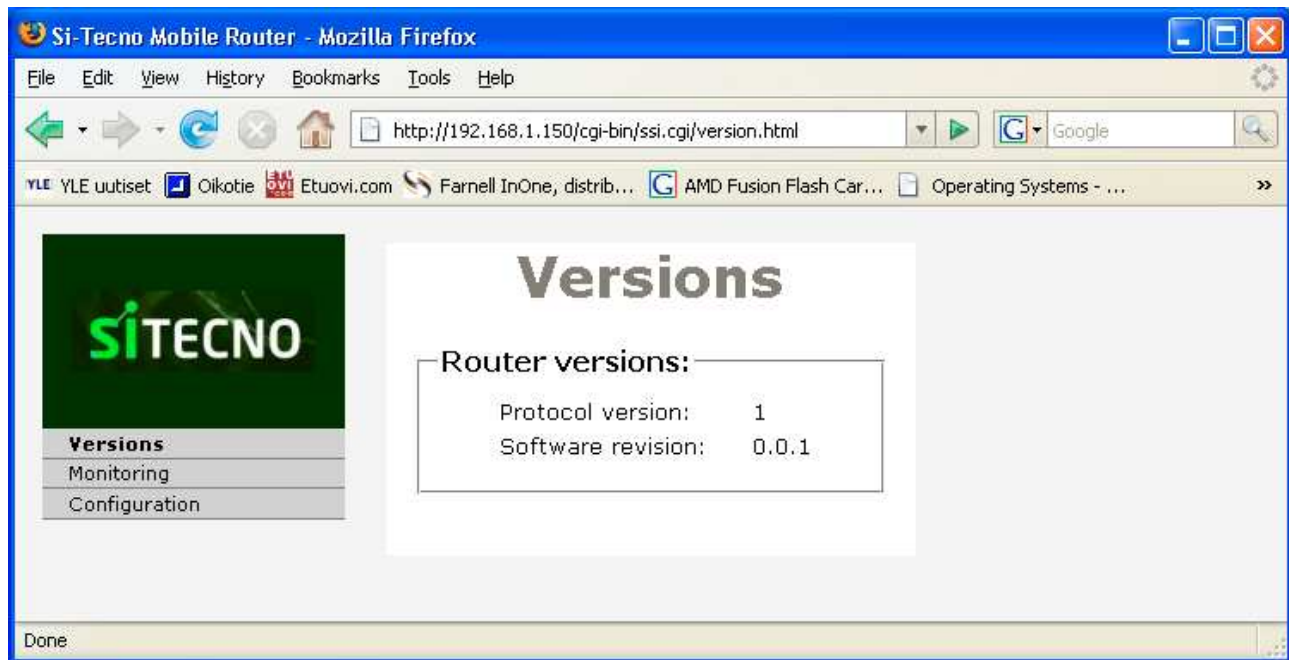
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Note! If all host devices are located on the same intranet with MR01 only one static and public IP-address is necessary for this intranet.

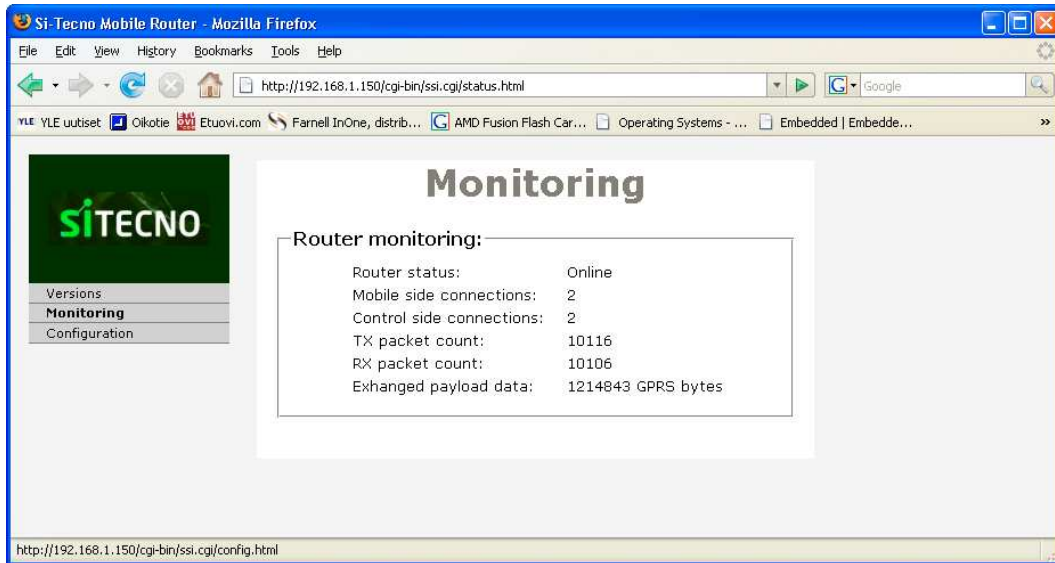
Web User Interface

Web interface on port 80 is used as system monitor and configuration tool (we recommend browsers that are based on mozilla).

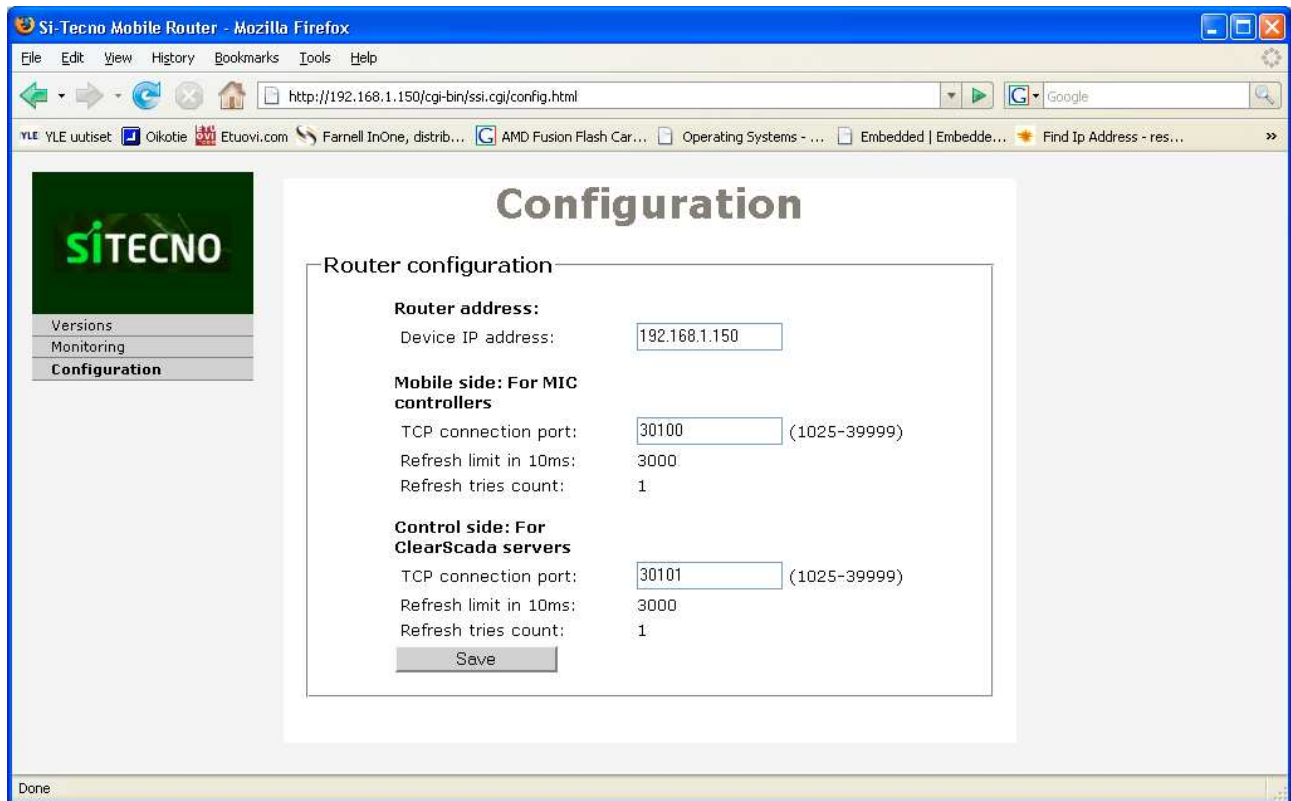
Version page



Monitoring page



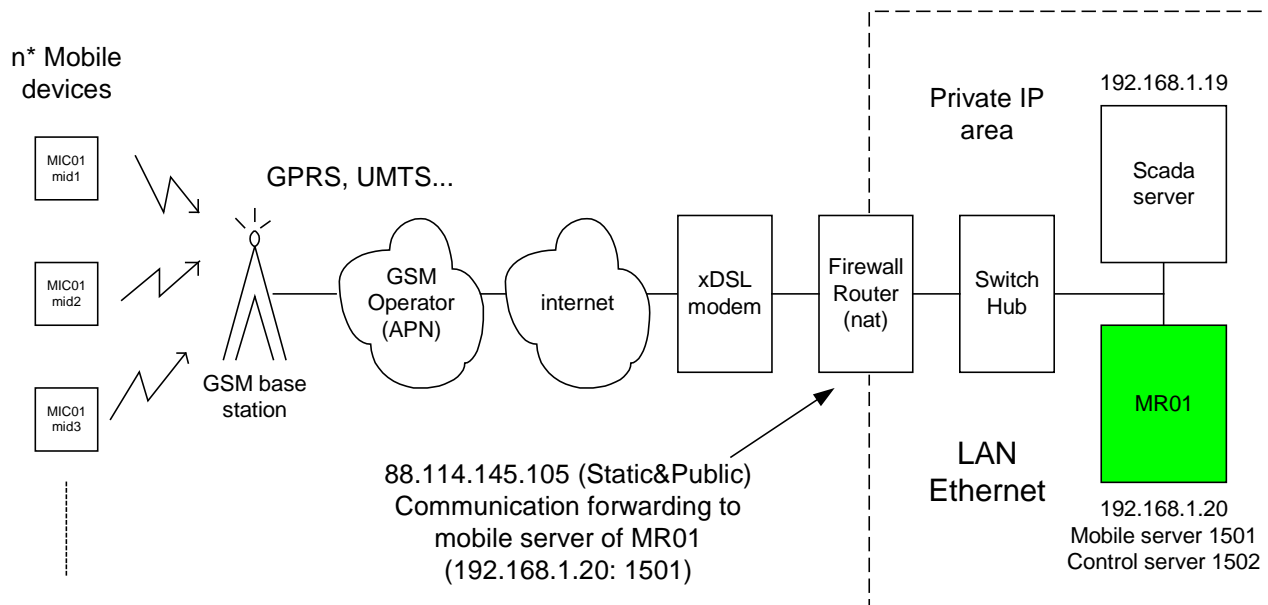
Configuration page



Connection examples

Example 1

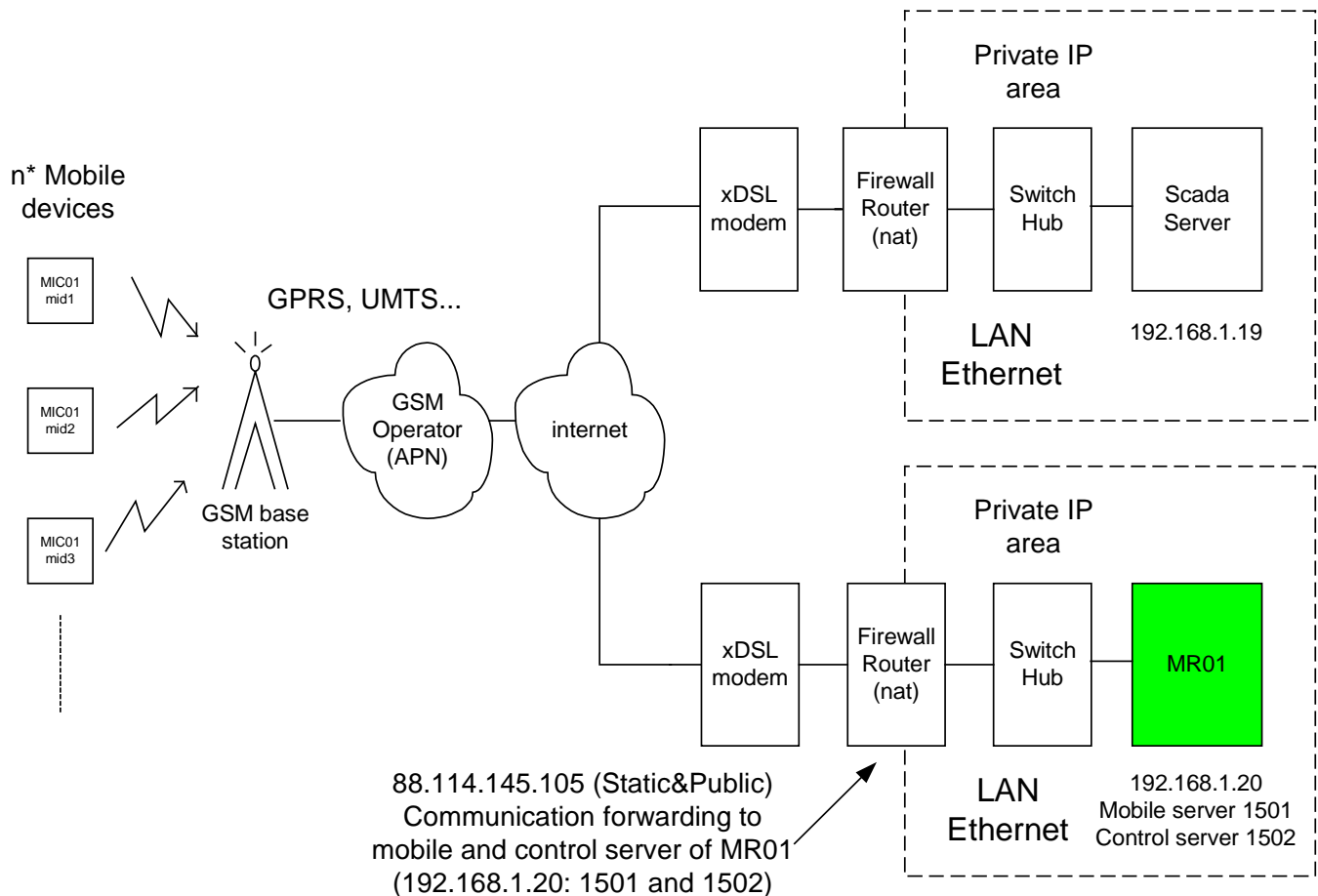
Typical connection in corporation network. All shown IP-addresses are fictional and user shall use the public static IP received from the local internet service provider and local self selected intranet IP-addresses.



Example 2

Typical connection in corporation network. All shown IP-addresses are fictional and user shall use the public static IP received from the local internet service provider and local self selected intranet IP-addresses.

In this case the connections to the host server is coming via public Internet. The host server requires static internet IP-address only if other applications running in the server (like ClearScada WEBX remote interface) do need it.



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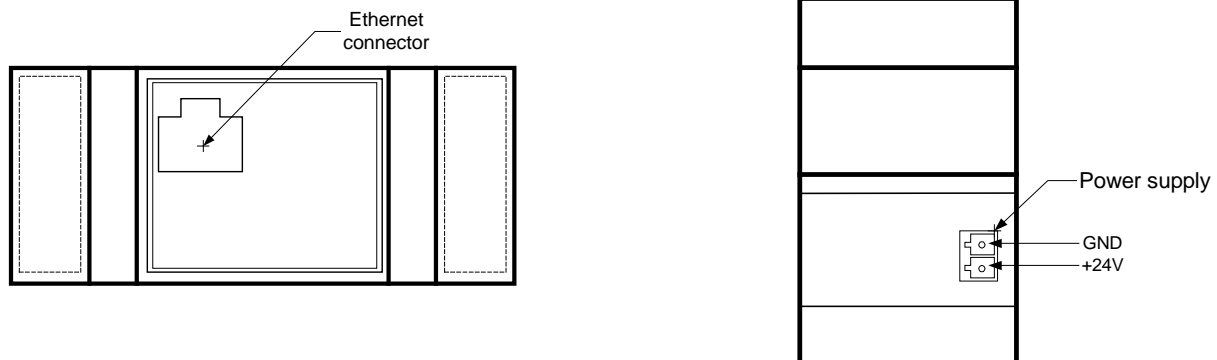
Software version

Latest revision	Date	Available
0.0.1	5.4.2008	Now, from Si-Tecno Oy

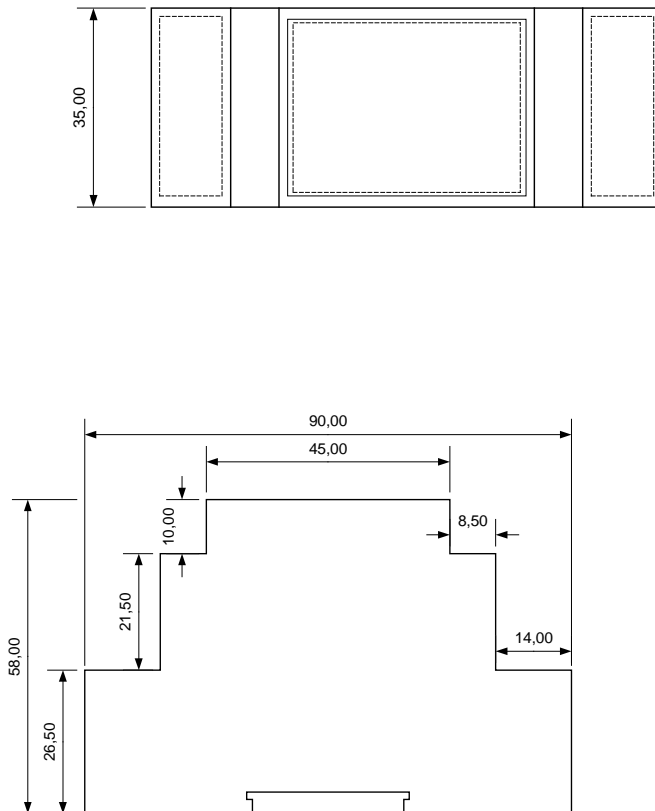
Technical Specifications

PARAMETER	System Controller	UNIT
Power supply Supply voltage Max supply current	+24 0.3 Phoenix-2	VDC ADC
Ethernet interface Network interface Network connector Services: Default IP-address (factory)	10/100Base-T RJ-45 WEB User interface, GPRS routing 192.168.1.13	
USB2.0 interface (option) Interface type Interface connector	Host USB_A	
MMC-card interface (option) MMC-card type	uSD up to 2GB	
Operating temperature	(+0) – (+60) degrees	Celsius

Connectors



Measures:



Contact information

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