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Product MetorNet 3 Pro Web		Archives
Title <b>CONFIGURATION GUIDE, METORNET 3 PRO WEB</b>		

# MetorNet 3 Pro Web

## Configuration Guide

### 1. General

MetorNet 3 Pro Web server is a Windows based Remote Security Management System. The system allows full access using a standard web browser from multiple concurrent clients (PC's, Tablets, Mobile Phones)

The MetorNet 3 Pro Web user interface can be viewed from remote locations over Extranet or public Internet (requires VPN tunnel).

With MetorNet 3 Pro Web you can:

- Monitor the passenger information
- Collect the passenger data
- Process collected data with versatile reporting tools
- Monitor and manage parameters of Metor family walk-through metal detectors.
- Adjust Metor walk-through metal detector parameters from web-browser client session

The purpose of this document is to provide understanding of network topologies where MetorNet 3 Pro Web can be utilized. This document also describes the hardware requirements as well as network requirements the MetorNet 3 Pro Web sets.

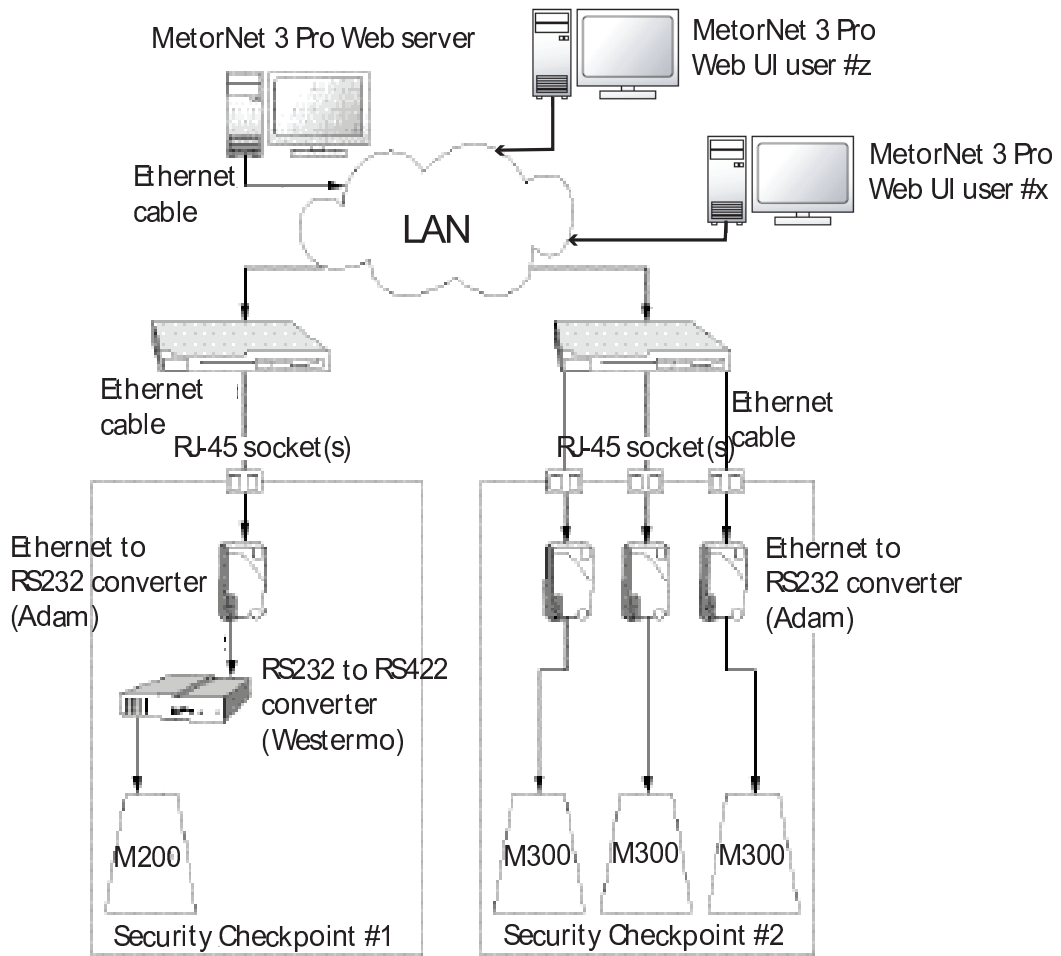
### 2. Alternative Network Topologies

MetorNet 3 Pro Web can be operated in several different network topologies. For example:

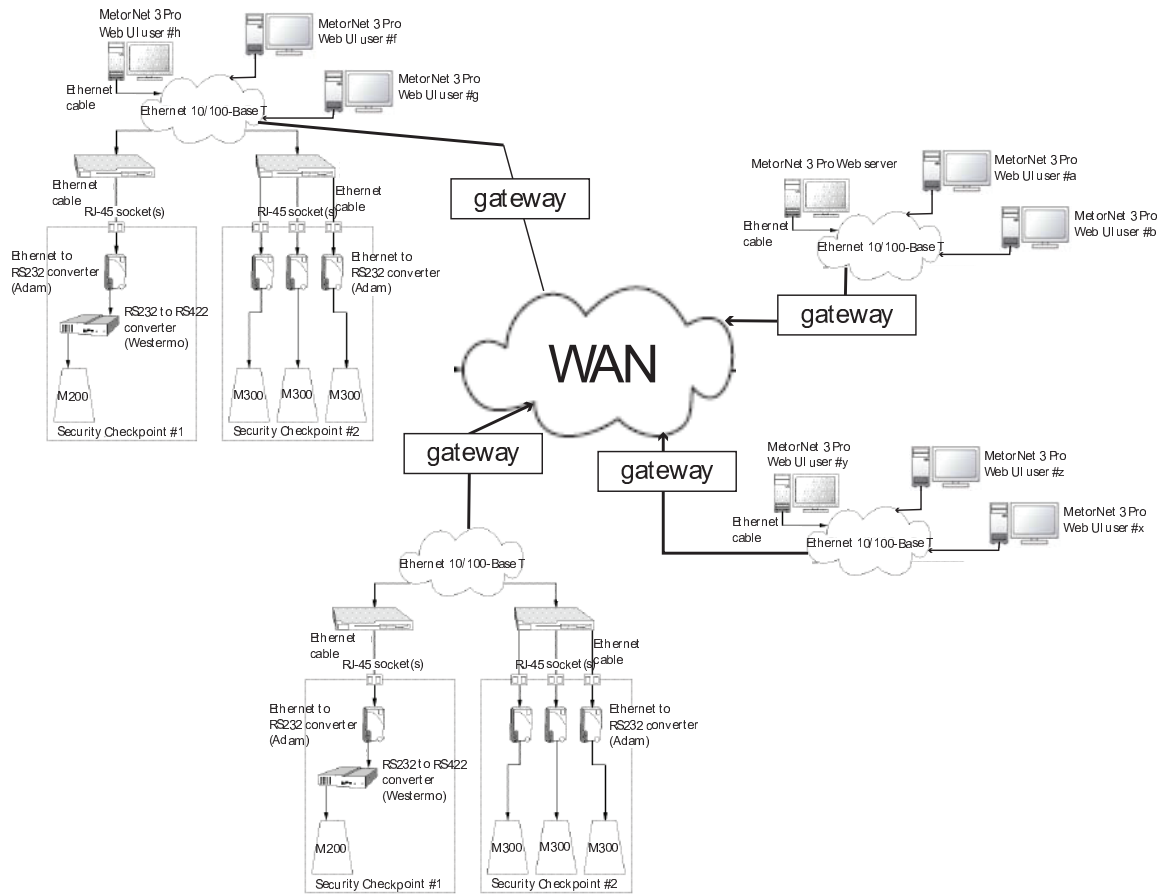
- MetorNet 3 Pro Web Installed and Operated in Local Area Network (LAN)
- MetorNet 3 Pro Web Installed and Operated in Wide Area Network (WAN + Gateway)
- Several MetorNet 3 Pro Web networks operating in several LAN / WAN networks, operated through public internet via VPN tunnel connection

As an additional feature, VPN tunnel can be used to broaden all topology types to operate over public Internet. For more details on VPN tunnel and its possibilities / restrictions in your application, contact your local IT department.

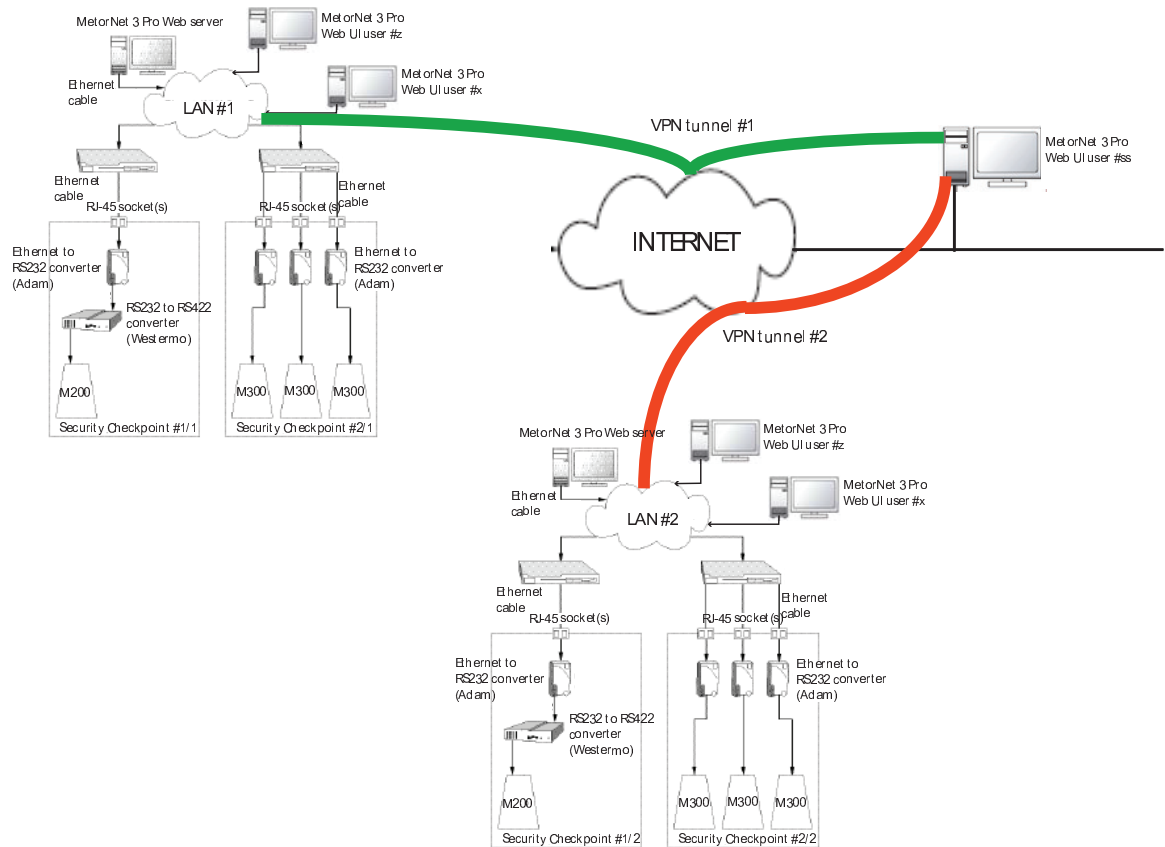
## 2.1 Operating in Local Area Network LAN



## 2.2 Operating in Wide Area Network WAN + Gateway



## 2.3 Several Networks Operating in several LAN/WAN Networks; Operated through Public Internet via VPN Tunnel Connection



Both LAN #1 and LAN #2 have a separate MetorNet 3 Pro Web running on their MetorNet servers.

MetorNet 3 Pro Web UI user #ss that operates over Internet via VPN tunnel has two MetorNet 3 Pro Web sessions open,

- one for LAN #1
- another for LAN #2

**NOTE!** MetorNet 3 Pro Web used over VPN tunnel contacts LAN #1 and LAN #2 using separate MetorNet 3 Pro Web application.

### 3 MetorNet 3 Pro Web Communication Requirements

#### 3.1 Ethernet (10/100 Base-T)

Metor metal detectors are connected to MetorNet 3 Pro Web via Ethernet using ADAM 4571 Ethernet-to-RS232 converters. These ADAM 4571 converters use TCP/IP to communicate with PC.

For more information on ADAM 4571 converter, see APPENDIX B (see also [www.advantech.com](http://www.advantech.com)).

#### 3.2 Minimum Communication Requirements between MetorNet 3 Pro Web server PC and ADAM Converter

In order to ensure that communication between MetorNet 3 Pro Web server PC and ADAM converters is enabled in customer's network topology configuration, the following requirements must be fulfilled:

SHOULD requirement = this should be met, but is not absolute necessary

MUST requirement = this must be met or MetorNet 3 Pro Web can not operate

Requirement	Notes	Checked Yes / No
UDP protocol is allowed (SHOULD requirement)	Required for ADAM configuration utility. COM-port driver works without this.	
At least TCP/IP port 5202 is open between PC and ADAM (MUST requirement)	Required for COM-port driver	
Use of PING is not restricted (SHOULD requirement)	Required for diagnostics purposes.	
Gateway settings are set if any used (MUST requirement IF gateways used)	<b>NOTE! Rapiscan Systems can not guarantee that all gateway setups are supported by ADAM converter.</b>	
If gateway is used, the corresponding settings are set to ADAM via configuration utility. (MUST requirement IF gateways used)	ADAM converter allows user to set gateway IP-address and subnet mask	
Subnet mask settings must be set if any used to ADAMs. (MUST requirement)		
No software or hardware firewalls or any other devices (routers, gateways, etc.) set to limit/block TCP/IP & UDP traffic between PC and ADAM. (MUST requirement)		

*Checklist of communication requirements.*

Requirements above are all customer specific settings and require knowledge of actual Ethernet topology, settings and hardware. It is highly recommended that the network administration of customer will check the list to provide information and set network parameters with correct settings.

**NOTE!** Customer is responsible of the proper communication, setup and settings in customer's Ethernet network that enable MetorNet 3 Pro Web operation. Furthermore customer will be responsible for all necessary modifications required in theirs Ethernet network arising from the implementation of MetorNet 3 Pro Web.

### 3.3 Static IP-addresses Required

Each ADAM converter requires one static IP-address, i.e. DHCP can not be used to ADAMs.

**Example:** 10 ADAMs are used = 10 static IP-addresses are required.

ADAM can be configured so that it accepts commands from one IP-address only (one PC). If this security feature is activated, also the PC should have a static IP-address.

**NOTE!** Latest ADAM firmware versions allow DHCP, however proper operation with MetorNet 3 Pro Web can not be guaranteed and use of static IP-addresses is recommended.

## 4. System Components

### 4.1 MetorNet 3 Pro Web Server Package (new installations)

#### **p/n 20108441 MetorNet 3 Pro Web Server Package**

<b>Contents:</b>		
<b>Each</b>	<b>p/n</b>	<b>Description</b>
1	8100676	MetorNet 3 Pro Web Software Package
1	13107593	MetorNet Server PC

MetorNet Server PC is delivered with all necessary software components installed

### 4.2 MetorNet 3 Pro Web Software Package (upgrade for fielded systems)

In order to build the MetorNet 3 Pro Web network, the following software package is needed

#### **p/n 8100676 MetorNet 3 Pro Web software package**

<b>Contents:</b>		
<b>Each</b>	<b>p/n</b>	<b>Description</b>
1	SW92103524	MetorNet 3 Pro Web software CD
1		License code sticker (attached to the cover of the software CD)
1	92103412	MetorNet 3 Pro Web user manual

### 4.3 Hardware

In addition to software, also different converters and cables are needed, depending on connected Metor model.

#### 4.3.1 Networking Metor 200 Series (*Not available for new installations*)

The following hardware is required for the Metor 200 series products, including

- Metor 200
- Metor 200 HDe
- Metor 200 HS
- Metor 200 WP
- Metor 250

#### **8101271 MetorNet Accessories for Metor 200 Series**

- 1 set per each Metor 200 series metal detector connected to MetorNet 3 Pro Web.

<b>Contents:</b>		
<b>each</b>	<b>p/n</b>	<b>Description</b>
1	4101111	NNAU 1811 M200 Network Adapter Unit
1	3887549	MNES 2541 M200 Connector Plate
2	3059854	Connector MSTB 2,5/5-ST2-5, 08 5-pole 1776142 (= connectors for M200 series / RS 422 cable)
1	3061540	Modem Cable RS232 DB9F/DB25M 1.8m (= cable to connect Westermo and ADAM)

1	8100949	Power Supply 90-264VAC / 12VDC for ADAM 4571
1	3061503	ADAM 4571 RS232/Ethernet converter
1	3058369	Westermo MA-45 RS232/RS422 converter
<p>The hardware above should be purchased from Rapiscan Systems.</p> <p>In addition to components above, the following parts should be purchased:</p>		
1 each / Metor connected	RS422 shielded twisted pair cable (0.3 mm <sup>2</sup> , capacitance 42 pF/m) (example: JAMAK) This cable + 2 each of p/n 3059854 connectors = Cable to connect Metor/MNAU and Westermo	
1 each / Metor connected	CAT 5 Ethernet cable with RJ 45 plugs	

#### 4.3.2 Networking Metor 300 series and Metor 6 series

The following hardware is required:

##### **8101272, MetorNet Accessories for Metor 300**

- 1 set per each Metor 300 metal detector connected to MetorNet 3 Pro Web.

<b>Contents:</b>		
<b>each</b>	<b>p/n</b>	<b>Description</b>
1	3061503	ADAM 4571 RS232/Ethernet converter
1	8100661	ADAM / M300 cable
<p>The hardware above should be purchased from Rapiscan Systems.</p> <p>In addition to components above, the following parts should be purchased:</p>		
1	CAT 5 Ethernet cable with RJ 45 plugs	

##### **8101273, MetorNet Accessories for Metor 300 EMD, Metor 6M and Metor 6S**

- 1 set per each Metor 300 EMD or Metor 6 series metal detector connected to MetorNet 3 Pro Web.

<b>Contents:</b>		
<b>Each</b>	<b>p/n</b>	<b>Description</b>
1	3061503	ADAM 4571 RS232/Ethernet converter
1	8100928	ADAM / M300 EMD and Portable cable
<p>The hardware above should be purchased from Rapiscan Systems.</p> <p>In addition to components above, the following parts should be purchased:</p>		
1	CAT 5 Ethernet cable with RJ 45 plugs	



**20105667, MetorNet Accessories for Metor 6WP**

- 1 set per each Metor 6WP (or Metor 300 Portable) metal detector connected to MetorNet 3 Pro Web.

<b>Contents:</b>		
<b>Each</b>	<b>p/n</b>	<b>Description</b>
1	3061503	ADAM 4571 RS232/Ethernet converter
1	8100928	ADAM / M300 EMD and Portable cable
1	21103740	ADAM cable 5M for Metor 300 Portable
<p>The hardware above should be purchased from Rapiscan Systems.</p> <p>In addition to components above, the following parts should be purchased:</p>		
1		CAT 5 Ethernet cable with RJ 45 plugs

## 4.4 Connections

- ADAM 4571 converter to Ethernet (RJ-45)
- ADAM 4571 converter mains connection (110V/230V)
  - *Note! Needed with Metor 200 series only (Metor 300 series and Metor 6 series models electronics unit powers the converter)*
- Westermo converter mains connection (110V/230V)
  - *Note! Needed with Metor 200 series only*
- RS422 Connection between Metor 200 series model and Westermo converter
  - *Note! RS422 maximum cable length approx. 1km*
- RS232 connection
  - Between Metor 300 series/Metor 6 series model and ADAM 4571 converter
  - Between ADAM 4571 converter and Westermo converter with Metor 200 series models
  - *Note! The special cable required for RS232 connection will be provided by Rapiscan*

## 4.5 MetorNet 3 Pro Web PC Requirements

### 4.5.1 Server PC Requirements

PC hardware requirements:

- Processor CPU: 2 GHz Intel Core minimum (3 GHz Intel Core 2 Duo recommended for large topologies)
- Minimum RAM memory size: 2 Gb (4 Gb recommended for large topologies)
- Operating System: Windows XP
- Minimum hard disk space: 320 Gb (1Tb RAID [mirror] recommended for large topologies)
- Diskette drive: CD-ROM drive
- Monitor: Colour display 19" or higher
- Serial ports: COM 1... COM 255 (Ethernet). 10/100Mbit Ethernet card
- Mouse: All Windows supported mouse
- Printer: All Windows supported printers (optional)

### 4.5.2 Client PC Requirements

- Standard PC with Windows, Mac, Linux or Mobile (iOS, Android etc.) operating system
- MetorNet 3 Pro Web UI operates over a standard web browser.  
Requirements for the browser are:
  - Web Browser: Internet Explorer 6+, Mozilla Firefox 2+, Opera 9+, Java script and cookies enabled

**NOTE!** When operating MetorNet 3 Pro Web over public Internet / open network, a VPN tunnel is recommended.

# APPENDIX A

## ADAM-4571



### 1 Port Ethernet to RS-232/422/485 Data Gateway

#### Main Features:

- Easy to locate specific ADAM-4571
- Remote download firmware: Easy to maintain
- Auto-detecting Configuration Utility
- Easy managing Port Mapping Utility
- Surge protection for RS-485 line and power supply
- 1 RS-232/485/422 port
- Supports high transmission speeds up to 230 kbps
- Supports an advanced security mechanism to avoid unauthorized access
- Network broken handling
- Automatic RS-485 data flow control Introduction
- Standard 10/100BASE-T Ethernet Support

#### Introduction

The ADAM-4571 is a lightning fast and cost effective data gateway between RS-232/422/485 and Ethernet interfaces. This unit immediately upgrades your existing device(s) to the Ethernet world. Functionally transparent and efficient, the ADAM-4570/4571 is specially designed for remotely controlling and monitoring devices via the Internet.