

# Kofax Communication Server

## Model 350 GSM Box Installation Guide

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The KOFAX logo is rendered in a bold, blue, sans-serif typeface. The letters are thick and closely spaced, with a clean, modern aesthetic. The 'K' and 'F' are particularly prominent due to their size and weight.

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## Chapter 1

# Product Description

**Model350** (GSM box) is a standalone device to send and receive SMS messages via Kofax Communication Server (KCS). Model350 may be connected to the KCS via a local network or as a Branch Box via WAN.

## Chapter 2

# Specifications

<b>GSM frequency bands</b>	900/1800/1900MHz with MC55 module (default) 850/1800/1900MHz with optional MC56 module
<b>Interface</b>	10Base-T and 100Base-TX (auto sensing)
<b>Operating voltage</b>	100-230V/60-50Hz
<b>Operating current</b>	0,15-0,22A max.
<b>Mechanical size</b>	145mm x 125mm x 75mm (without antenna)
<b>Weight</b>	app. 500g
<b>Operating Temperature</b>	0-40°C

## Chapter 3

# Installation Instructions

This section describes the installation of Model350.

## Prerequisites

- DeviceInstaller program is necessary. It can be downloaded from the Lantronix website ([http://ltxfaq.custhelp.com/app/answers/detail/a\\_id/644](http://ltxfaq.custhelp.com/app/answers/detail/a_id/644)).  
(  
Most recently tested version: 4.3.0.1 on Windows Server 2008 R2 64-bit)
- Laptop/PC with Windows 2003 or later with network access
- Valid SIM card
- Free IP address and net mask from network administrator
- Power cord and network cable.
- Mobile phone to find the location with best GSM-reception of the chosen provider.
- MAC address of the device to install (optional)

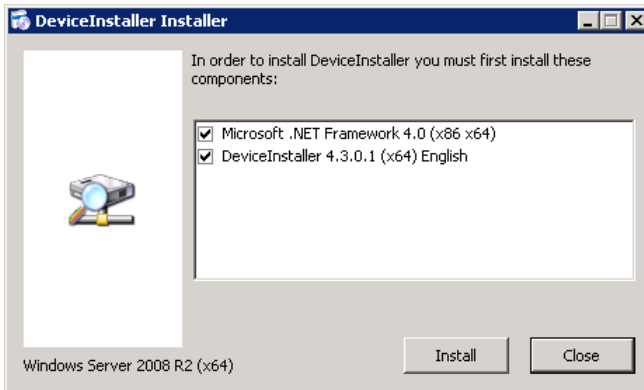
**Note** Do not update firmware of the GSM box with the DeviceInstaller.

Model350 is supported from TC/LINK-MD/WM V2.10.08 on.

1. Remove Model350 rear panel (where no connectors are) and insert a SIM card.
2. Place Model350/GSM antenna in a location with LAN access and good GSM reception (check with a mobile phone of the same provider). An external antenna may be connected via a 50 Ohm (e.g. RG174) cable of max. 3m length with FME connector if preferred.
3. Connect antenna to Model350.
4. Connect Model350 to LAN.
5. If you have not installed DeviceInstaller on your PC yet continue with [Installation of DeviceInstaller](#).
6. Start DeviceInstaller.exe on a Computer in the same subnet as the device to configure.
7. Start Device – Search.
8. Remember other devices which are eventually found on the network.
9. Connect Model350 to power.
10. Wait 1 minute, then start Device – Search again.
11. Identify the new device.
12. Select the new device and then click 'Assign IP'.
13. Continue with [Assign IP Address](#).

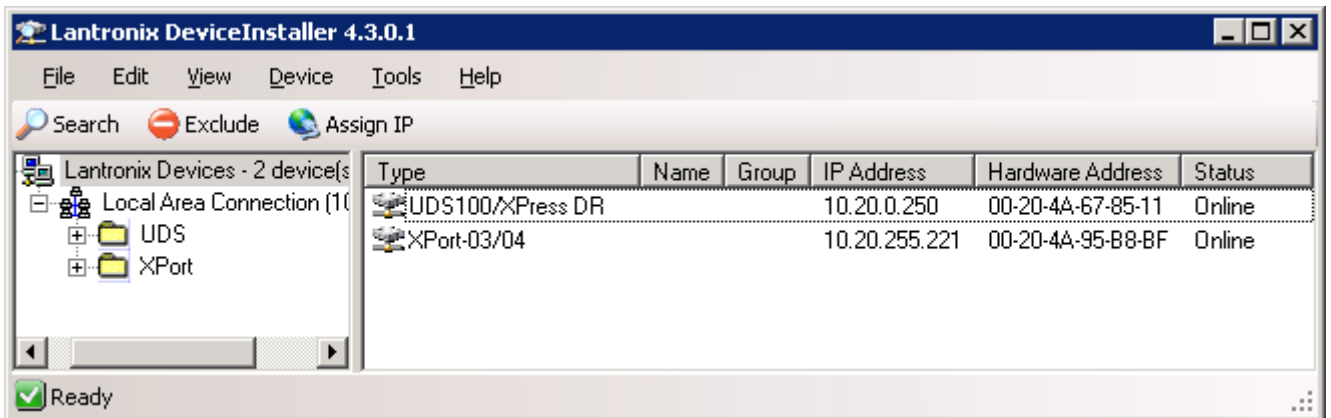
## Installation of DeviceInstaller

Start DeviceInstaller setup file. This software requires .NET Framework; a required version is installed automatically along with the product.



## Select Device to Configure

Start DeviceInstaller. The program will automatically start searching for devices in your network.



The 'Hardware Address' (=MAC address) is marked internally on the LAN-connector (= COM server).

## Assign IP Address

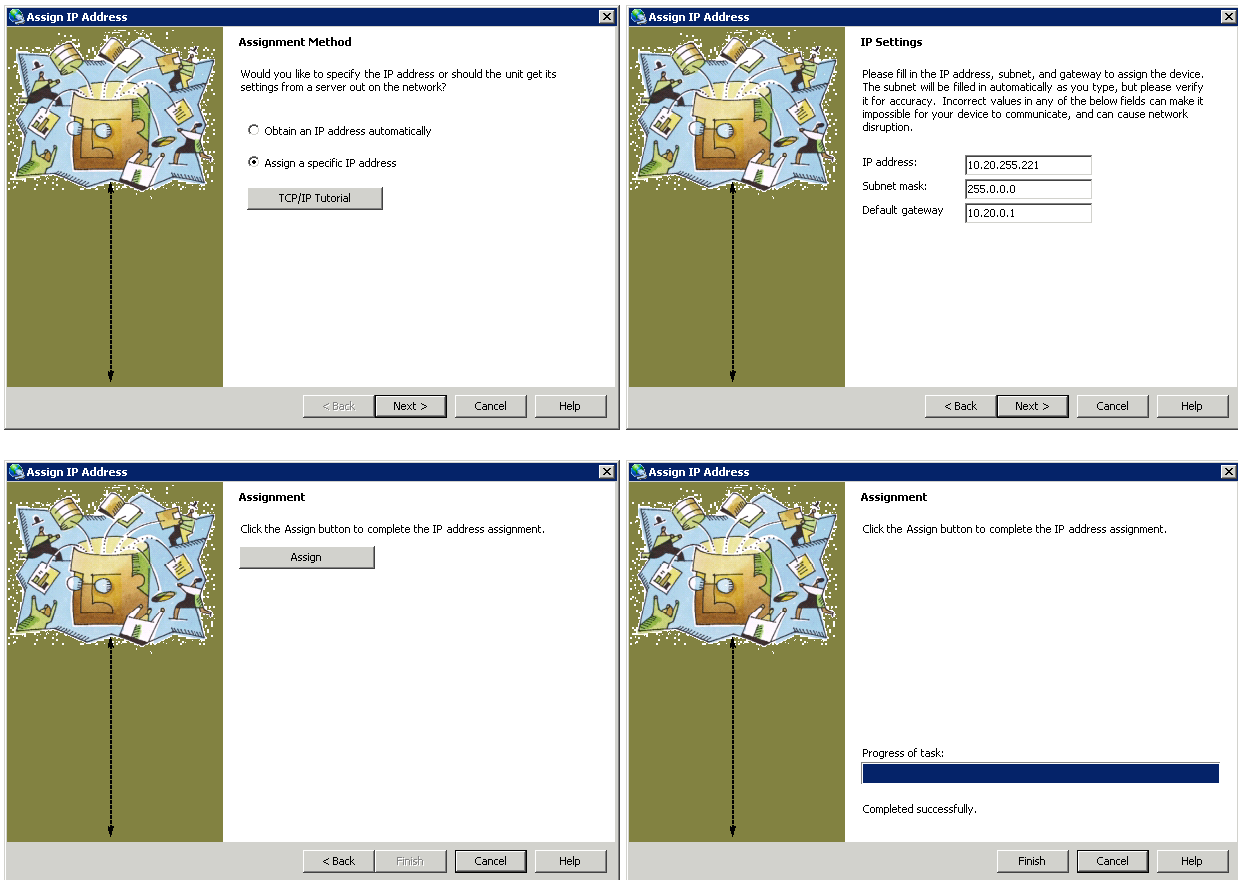
Assign IP address, Subnet mask and Default Gateway for your network or enable DHCP/Auto-IP. The DeviceInstaller gives you a warning if you try to configure Subnet masks different from the Workstation where DeviceInstaller is running. It will display such a device as 'Unreachable' for further configuration.

Via Telnet there is no config-check and therefore you can set a different Subnet mask. It even is possible to configure a mask which will make it impossible to reach the device from that workstation again via Telnet without a change of network configuration of the workstation. Keep this in mind when planning an installation.

There are 3 possible scenarios for assigning an IP address:

- 1. Configuration is performed in the target network:** Workstation with DeviceInstaller is in the same subnet as Model350 -> all features of DeviceInstaller are available, configuration of IP's within the same subnet are possible.
- 2. Configuration is performed outside the target network:** DeviceInstaller's Search finds the Model350 but is NOT running in the same subnet as Model350 -> only the 'assign IP'-option of DeviceInstaller is available (find the MAC address of Model350 on the COM-server inside Model350 if the device is not found with the 'Search' feature). Note the IP-address of the device in question and connect via Telnet (Port 9999) – continue at 3.12. 'Alternatively use Telnet setup'.
- 3. IP-address of Model350 was set to an invalid value with Telnet:** e.g. 000.xxx.xxx.xxx -> Model350 will be unreachable via network, return to factory.

There are multiple ways how to assign the IP address via DeviceInstaller. This chapter describes the Assign IP Address wizard (select a device, click **Assign IP**). Alternatively, you can modify it via web configuration (double-click a device, select the Web Configuration tab).

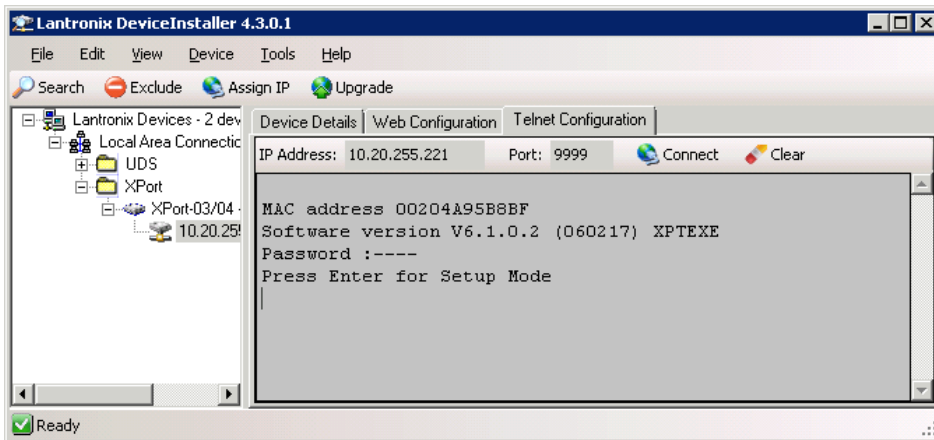




## Telnet Setup

**Note** Be careful when configuring the COM-Server by Telnet, wrong configuration e.g. of the Subnet mask may lead to a LAN-deadlock of the device – see [Recovery from LAN-Deadlock via arp Command!](#)

Select device to configure by a double-click. Go to the Telnet Configuration tab and click Connect.



Type the password. Press Enter again to start setup mode.

Alternatively, you can start telnet via Start > Run, and the command “*telnet [IP address] 9999*”. 9999 is the unit's fixed network configuration port number. Follow the instructions.

```

c:\ Select Telnet 192.168.1.200
MAC address 00204084CF31
Software version U6.1.0.2 <060217> XPIEXE
Password :----
Press Enter for Setup Mode

*** basic parameters
Hardware: Ethernet TPI
IP addr 192.168.1.200, no gateway set,netmask 255.0.0.0
Telnet config password set

*** Security
SNMP is          enabled
SNMP Community Name: public
Telnet Setup is  enabled
FTIP Download is enabled
Port 77FEh is    enabled
Web Server is    disabled
Web Setup is     enabled
ECHO is          disabled
Enhanced Password is disabled
Port 77F0h is    disabled

*** Channel 1
Baudrate 19200, I/F Mode 4C, Flow 02
Port 05004
Connect Mode : C0
Send '+++' in Modem Mode enabled
Auto increment source port disabled
Remote IP Addr: --- none ---, Port 00000
Disconn Mode : 00
Flush Mode : 00

*** Expert
TCP Keepalive      : 45s
ARP cache timeout : 600s
CPU performance: Regular
Monitor Mode @ bootup : enabled
RS485 tx enable   : active low
HTTP Port Number  : 80
SMTP Port Number  : 25
MTU Size: 1400
Alternate MAC: disabled
Ethernet connection type: auto-negotiate

*** E-mail
Mail server: 0.0.0.0
Unit       :
Domain     :
Recipient 1:
Recipient 2:

- Trigger 1
Serial trigger input: disabled
Channel: 1
Match: 00.00
Trigger input1: X
Trigger input2: X
Trigger input3: X
Message :
Priority: L
Min. notification interval: 1 s
Re-notification interval : 0 s

- Trigger 2
Serial trigger input: disabled
Channel: 1
Match: 00.00
Trigger input1: X
Trigger input2: X
Trigger input3: X
Message :
Priority: L
Min. notification interval: 1 s
Re-notification interval : 0 s

- Trigger 3
Serial trigger input: disabled
Channel: 1

```

Change the following settings:

\*\*\* Server configuration

IP Address: (xxx).(xxx).(xxx).(xxx)

Set Gateway IP Address: (xxx) .(xxx) .(xxx) .(xxx)

Netmask: Number of Bits for Host Part (0=default): xx -> e.g. 12 gives a netmask 255.255.240.0 (=FF.FF.F0.00), 24 will give a netmask of 255.0.0.0.

Change telnet config password (N) Y

Enter new Password: tcte ; (max. 4 digits of TCTEch) – lower case only!

\*\*\* Channel 1

Baudrate:	19200
I/F Mode:	4C
Flow:	02
Port No:	5004
Connect Mode:	C0

\*\*\* Security

Disable Web Server (N) Y

Disable Port 77F0 (N) Y

\*\*\*\* Save and exit

## Test Connection to Model350

You may test the connection to the Model350 by entering:

*TELNET [IP address] 5004*

This will open you a Telnet connection to the GSM-Module. Entering at return should be echoed and be answered with an

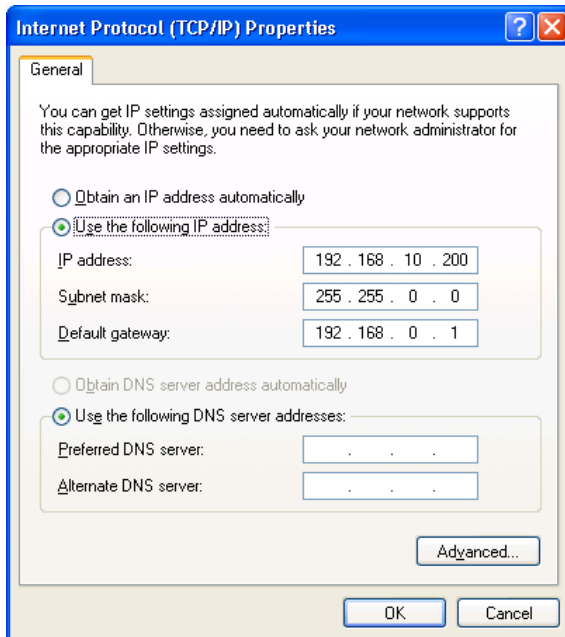
>OK

from the module. This indicates the Model350 to be ready for a TCROSS/GSM-link connection.

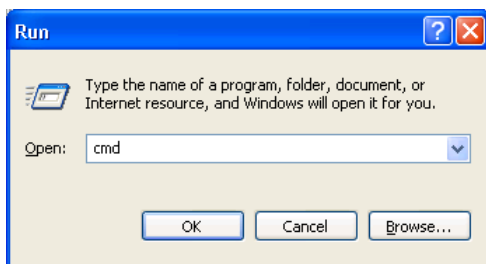
## Recovery from LAN-Deadlock via arp Command

In case you cannot reach anymore your Model 350, neither with DeviceInstaller nor with Telnet, then use the following procedure. If this does not work either, return the box to factory.

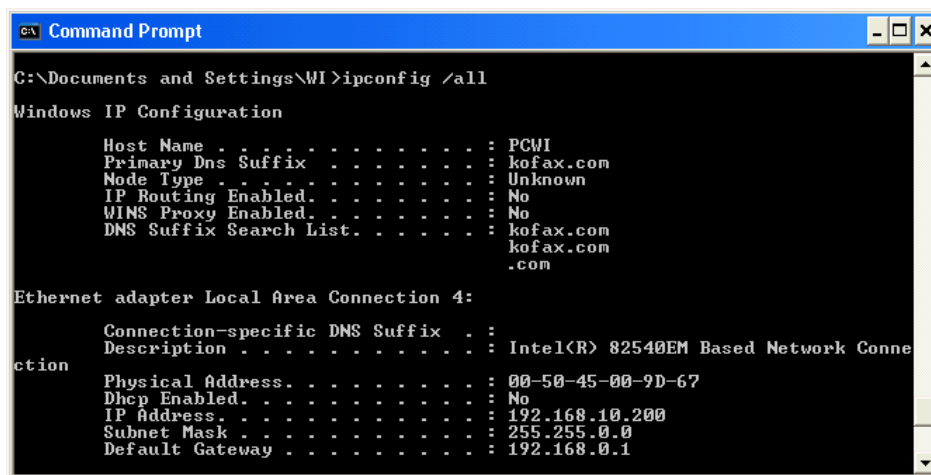
If you use a crossover cable, setup your LAN-Port with the following IP settings (via router you may leave your previous settings):



Open a windows command prompt (Start-Run-CMD)



Enter: ipconfig /all



Use a free IP address for reconfiguration of the Mod350. Use the same Netclass.

```

c:\ Command Prompt
Physical Address . . . . . : 00-50-45-00-9D-67
Dhcp Enabled . . . . . : No
IP Address . . . . . : 192.168.10.200
Subnet Mask . . . . . : 255.255.0.0
Default Gateway . . . . . : 192.168.0.1

Ethernet adapter Local Area Connection 5:
Connection-specific DNS Suffix . : kofax.com
Description . . . . . : Intel(R) 82540EM Based Network Connection #2
Physical Address . . . . . : 00-50-45-00-9D-66
Dhcp Enabled . . . . . : Yes
Autoconfiguration Enabled . . . . . : Yes
IP Address . . . . . : 10.15.168.14
Subnet Mask . . . . . : 255.255.0.0
Default Gateway . . . . . : 10.15.0.1
DHCP Server . . . . . : 10.1.0.20
DNS Servers . . . . . : 10.1.0.21
                        10.1.0.30
                        10.1.0.20
Lease Obtained . . . . . : Donnerstag, 21. Juni 2007 07:53:21
Lease Expires . . . . . : Freitag, 22. Juni 2007 07:53:21

C:\Documents and Settings\WI>arp -s 192.168.10.201 00-20-4a-84-cd-d0
    
```

Try to open Telnet connection with Port 1 (will fail)

```

c:\ Command Prompt
IP Address . . . . . : 192.168.10.200
Subnet Mask . . . . . : 255.255.0.0
Default Gateway . . . . . : 192.168.0.1

Ethernet adapter Local Area Connection 5:
Connection-specific DNS Suffix . : kofax.com
Description . . . . . : Intel(R) 82540EM Based Network Connection #2
Physical Address . . . . . : 00-50-45-00-9D-66
Dhcp Enabled . . . . . : Yes
Autoconfiguration Enabled . . . . . : Yes
IP Address . . . . . : 10.15.168.14
Subnet Mask . . . . . : 255.255.0.0
Default Gateway . . . . . : 10.15.0.1
DHCP Server . . . . . : 10.1.0.20
DNS Servers . . . . . : 10.1.0.21
                        10.1.0.30
                        10.1.0.20
Lease Obtained . . . . . : Donnerstag, 21. Juni 2007 07:53:21
Lease Expires . . . . . : Freitag, 22. Juni 2007 07:53:21

C:\Documents and Settings\WI>arp -s 192.168.10.201 00-20-4a-84-cd-d0
C:\Documents and Settings\WI>telnet 192.168.10.201 1
    
```

Open Telnet connection with Port 9999

```

c:\ Command Prompt
Ethernet adapter Local Area Connection 5:

    Connection-specific DNS Suffix  . : kofax.com
    Description . . . . . : Intel(R) 82540EM Based Network Connection #2
    Physical Address. . . . . : 00-50-45-00-9D-66
    Dhcp Enabled. . . . . : Yes
    Autoconfiguration Enabled . . . . : Yes
    IP Address. . . . . : 10.15.168.14
    Subnet Mask . . . . . : 255.255.0.0
    Default Gateway . . . . . : 10.15.0.1
    DHCP Server . . . . . : 10.1.0.20
    DNS Servers . . . . . : 10.1.0.21
                            10.1.0.30
                            10.1.0.20
    Lease Obtained. . . . . : Donnerstag, 21. Juni 2007 07:53:21
    Lease Expires . . . . . : Freitag, 22. Juni 2007 07:53:21

C:\Documents and Settings\WI>arp -s 192.168.10.201 00-20-4a-84-cd-d0
C:\Documents and Settings\WI>telnet 192.168.10.201 1
Connecting To 192.168.10.201...Could not open connection to the host, on port 1:
Connect failed
C:\Documents and Settings\WI>telnet 192.168.10.201 9999
    
```

Press Enter for setup within 2 seconds and proceed with Telnet setup procedure (see [Telnet Setup](#)).

## LEDs



POWER LED: GSM-module powered on

GSM LED:

LED mode	Operating status
Off	GSM module is off or run in SLEEP, Alarm or Charge-only mode
600 ms On / 600ms Off	No SIM card inserted or no PIN entered, or network search in progress, or ongoing user authentication, or network login in progress.
75 ms On / 3 s Off	Logged to network (monitoring control channels and user interactions). No call in progress.
75 ms on / 75 ms Off / 75 ms On / 3 s Off	One or more GPRS contexts activated.
Flashing	Indicates GPRS data transfer: When a GPRS transfer is in progress, the LED goes on within 1 second after data packets were exchanged. Flash duration is approximately 0.5 s.
On	Depending on type of call:Voice call: Connected to remote party. Data call: Connected to remote party or exchange of parameters while setting up or disconnecting a call.

LAN LED's:

Link LED Left Side		Activity LED Right Side	
Color	Meaning	Color	Meaning
Off	No Link	Off	No Activity
Amber	10 Mbps	Amber	Half Duplex
Green	100 Mbps	Green	Full Duplex

## Chapter 4

# Specific Registry Keys

Set the following Windows registry keys/values:

- **GsmBoxType:** 4
- **GsmBoxAddress:** IP address of GSM box
- **GsmBoxPort:** 5004
- **GsmBoxResetPort:** 0



## Chapter 5

# Further Documents

- Kofax GSM Solution
- Technical Manual for TC/LINK-WM and TC/LINK-MD

## Chapter 6

# Approvals

The GSM-Module (Siemens mc55 or optional mc56) have worldwide approvals for GSM. In some countries it is necessary to have the approval not only for the GSM-module but also for the whole device (including antenna). Please check legal situation before using this device.

Safety and EMC approvals for Model 350 are available on demand from Kofax.

## Chapter 7

# Restrictions

Model 350 is just intended for SMS transmission/reception. Use Model 305-GSM in case of fax or voice transmission via GSM.