LMT-3000S

Installation Guide

LINUDIX Co., Ltd.

Revision History

2002. 12.24   Revision 1.0 is created.

2004. 10.12   Revision 1.1 is updated

2004. 12.01   Revision 1.2 is updated (Product specification is added.)

Document Title: LMT-3000S Installation Guide, Revision 1.2

Comments or suggestions on how to improve this document can be sent to possupport@linudix.com.

FCC WARNING

Note : This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications, However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Caution:

To comply with the limits for an FCC Class B computing device, always use the shielded signal cord supplied with this unit.
The Federal Communications Commission warns that changes or modifications of the unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

FCC RF EXPOSURE COMPLIANCE

This device has been tested for FCC RF exposure and SAR compliance in the host hand-held, hand-operated electronic organizer/PC. To maintain FCC RF exposure compliance, a 1.5 cm of separation distance must be maintained between the front and back of the device and the user's or any bystander's body (excluding hands, wrist, feet and ankles).

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Table of Contents

www.Linudix.com www.Linudix.com www.Linudix.com www.Linudix.com www.Linudix.com www.Linudix.com www.Linudix.com www.Linudix.com

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General Warning Matter

✓ When you use this product after purchase for the first time, let charge to the full a battery and use it. The battery is not charged to the full, when the product is shipment.

✓ You are careful not to be wet to moisture this product. Fatal damage can occur in it.

✓ Please do not use this in high temperature and moisture environment.

✓ Please do not use this in an explosive or a combustibility gas.

✓ Please do not wipe the main body with gasoline or thinner and the same chemical solution.

✓ Please do not remodel or disassembles this product voluntarily.

✓ Please do not keep a battery to firearms adjacency.

A Power Related Warning Matter

✓ Please do not use damaged power cord, plug, and socket.

✓ Please do not touch a power plug in a wet hand.

✓ Please do a warning so that a power cord is not pressed by a heavy thing or not stooped forcibly.

✓ Please certainly use only a designated battery.

✓ Please be careful so that it is not connected each other directly monads in the outside of a battery or a battery charger.

✓ Please do not give a severe shock to a battery charger or a battery, and do not drop them.

Install the LMT-3000S

Step 1: Unpack and Confirm Component

✓ Open the shipping carton and carefully inspect its contents for possible tampering or shipping damage. If a component appears damaged, please immediately notify the shipping company and your *Linudix* distributor or service provider.

✓ Please confirm whether there are the product main body and a component like the following picture.

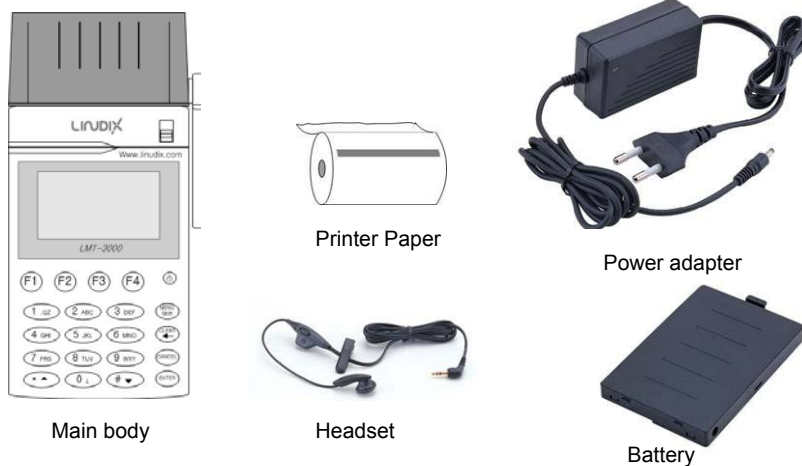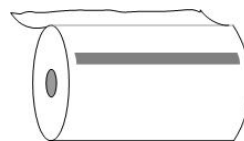Printer Paper

Power adapter

Main body

Headset

Battery

Figure 1. LMT-3000S Product Component

Step 2: Install a Paper Roll in the Printer

✓ A printer paper is provided with a cylindricality of a diameter of 3cm.

✓ If you above raise an opening thing button located in the top of the terminal main body, a printer cover opens.

✓ Please turn over one side of a paper mounting part in state above to have completely opened a printer cover a little, and please insert a paper.

✓ Please be closed till sound passes a printer cover in state to have pulled an edge of a paper a little.

✓ When print cuts a finished later printer paper, if you take a paper as a hand and pull bottom course, you can cut a paper soft.

Step 3: Install/Replace SIM Cards

✓ To unlock a cardholder, slide its locking plate to the unlocked position, shown by the OPEN arrow.

✓ Open the cardholder by pivoting the cover from its connector base.

✓ Remove any previously-installed MSAM card by sliding the card from the cover.

✓ Install an MSAM card by aligning the card and carefully sliding it within the guides on the cover until fully inserted.
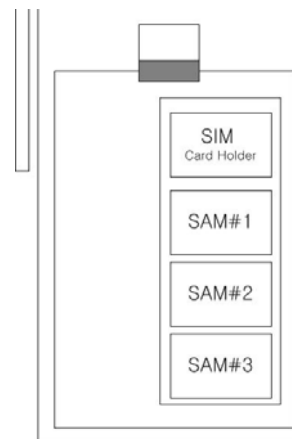
Note: The cardholder connector base has a set of contacts and a notch post on one corner to ensure the SIM card is positioned correctly when the cover is closed. The SIM card has a notch on one corner to ensure it fits into the connector
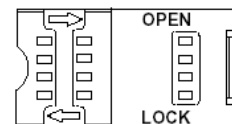
Figure 2. Using a SIM & SAM Card Holder

Step 4: Use the Primary Smart Card Reader

✓ To conduct a transaction, position a smart card and insert it into the smart card reader slot in a smooth, continuous motion until it seats firmly with a "click"

Caution: Leave the smart card in the card reader until the transaction is completed. Premature removal will invalidate the transaction.

When the display indicates the transaction is completed, remove the card.
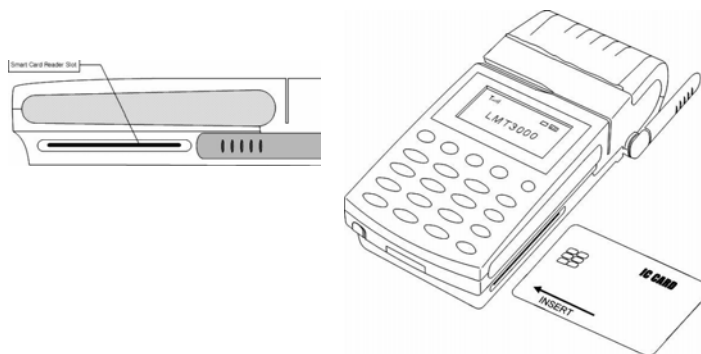
Figure 3. Using the Primary Smart Card Reader

Step 5: Use the Magnetic Card Reader

✓ To conduct a transaction, position a magnetic card and swipe it through the
magnetic card reader, as shown in following figure.
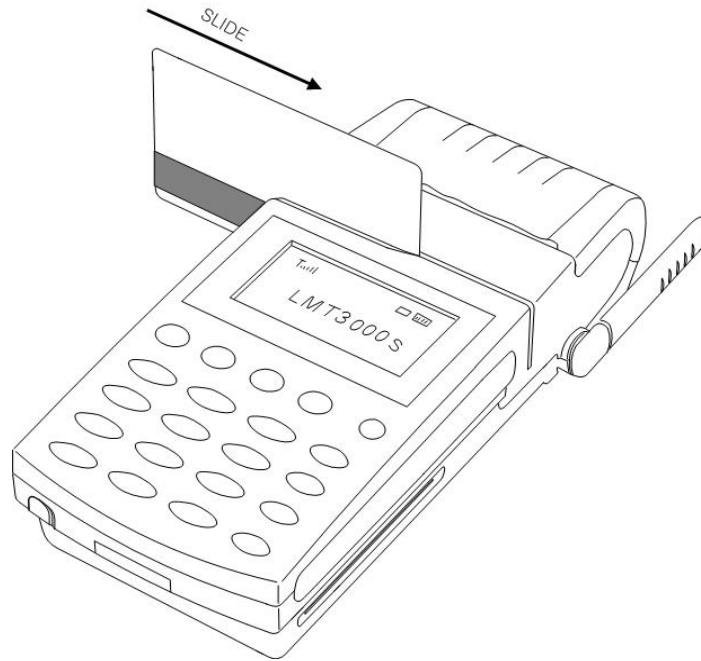
Figure 3. Using the Magnetic Card Reader

Clean the Terminal and Printer

Terminal

- ✓ For dirt, use a clean cloth dampened with water and mild soap. For stubborn stains, use alcohol or an alcohol-based cleaner.

  Caution: Never use thinner, trichloroethylene, or ketone based solvents - they may deteriorate plastic or rubber parts. Do not spray cleaners or other solutions directly onto the keypad or display.

Smart Card Reader

Caution: Do not attempt to clean the smart card reader. Doing so may invalidate your warranty. For smart card reader service, contact your Linudix distributor or service provider.

Printer

- ✓ Every few months, check and thoroughly clean the printer:
- ✓ Be sure the terminal is connected to a power source.
- ✓ Remove the paper roll cover and check it for signs of damage, wear, or warping.
- ✓ Remove the paper.
- ✓ Remove any dirt, dust, or scraps of paper adhering to or lodged in the printer parts.

Troubleshooting

An abnormal action	The expectation cause	A measure article
If a screen is not turned on, even if a power key is pressed,	A battery voltage is bad A battery contact is bad A battery is bad	Please retry after charging a battery. Please Check a battery installation state. It is exchanged with a new battery.
If a screen abnormally looks	Screen luminosity setting is bad A LCD indication device is bad	A screen being bright in a special function re-setting. An A/S request.
If print is not successful	It taking a paper Printer roller is bad Print density setting is bad Printer is bad	Please Check whether a paper is equipped a regular position with. Please Check whether a printer roller is normally equipped. Re-setting please do print density in a special function. An A/S request.
If a card is not read	A card insertion error. Bad card use. A card reader is bad.	A card decoding direction check A card state (scratched, bending, filth) check An A/S request
If a buzzer does not ring	That a buzzer sound is not used is set up Buzzer is bad	Please check buzzer sound setting in a special function An A/S request
If telephone access does not become	A base station communication fail A mobile communication accessed increase Modem accessed inferiority	Please play a retry in other area. Please play a retry soon. An A/s request
If a voice call function does not work	A headset accessed abnormal Headset is bad A call device is abnormal	Please play a headset connection status check Other headset is used, and please talk on the phone An A/S request
If it does not work to charge well	Charging jack contact is bad A charger / battery is bad	Charging jack and a power connection state check An A/S request

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Product Specifications

Description and Model name

Description   : Wireless CAT
Model name   : LMT-3000S
Construction of PCB   : Main PCB / Key & LCD PCB
                                        SIM & SAM PCB / IC card PCB

Main controller specification

CPU

' Part name   : Samsung S3C44B0X
' Description   : 66MHz ARM7TDMI RISC microprocessor

Memory

' Flash memory   : 4Mbytes NOR flash
' SDRAM   : 16Mbytes
' SRAM   : 128kbytes, Back up by lithium rechargeable battery

S/W

' O/S   : Embedded Linux installed on Flash memory

' Loader   : Installed

ETC

' Printer driver   : High current driver
' Buzzer   : Key beep

Peripheral specification

Modem

' Type   :   GSM(GPRS)
                        Sony Ericsson GR48 (850/1900MHz), FCCID: PY76220511
' SIM   :   1 SIM(UIM) socket at behind of battery pack

Antenna Specification

' Frequency Range: 824~849MHz / 1850~1920MHz (Dual Band)
' VSWR : Less than 1.5:1
' Gain : 1.0 dBi
' Impedance : 50 Ohm
' Polarization : Vertical
' Radiation Pattern : Omni-directional

LCD

' Description   : 128 * 64 pixels graphic type
' Aux. function   : Digitally controlled contrast
                          EL back light

MSR

' Description   : Can read Track 1 & 2 simultaneously
                          Read magnetic stripe card at both direction

IC card interface

' I.F.M   : EMV Level 1 Certified Certification
' SAM   : 3 SAM socket at behind of battery pack

Printer

' Description   : Thermal printer
         60mm paper width, 48mm print width
         200dpi resolution

Comm port

' Description   : TTL level UART 1 port
         (RS-232C level is optional)
         for S/W upgrade, test & etc

Battery

' Description   : Lithium ion polymer battery
' Capacity   : 1850mAh nominal
' Nominal voltage : 3.7V
' Operating temp. : Standard charge   : 0 ~ 45℃
             Standard discharge : -20 ~ 60℃
' Dimension   : 98 x 62 x 10 (L x D x H mm)
' Color   : Gray
' Weight   : Max 60g

Charger

' Description   : Charger for Lithium ion polymer battery pack
' Input voltage   : AC 110V ~ 240V 50/60Hz (Min95V/Max264V)
' Charging method : CC-CV mode
' Charging voltage : DC 4.10 ~ 4.25V
' Output current : Normal 1.0A(Peak 1.5A, less than 5 min)
' Status LED   : Power on   : Green LED on
           Charging   : Amber LED on
           Battery disconnected : Green LED on
           After charging : Amber ->Green LED on
           Power off   : LED off
' Dimension   : 81 x 48.5 x 31.5 (L x D x H mm)
' Color   : Black
' Weight   : Max 90g

SDK specification

Prepared Libraries

' Handling peripheral devices(MSR, Printer, etc)
' PC/SC library(Handling IFM)
' Handling GUI, MENU
' Glibc compatible library

Tools

' Compile Environment : Linux or Windows(Cygwin environment)
' Compiler : GCC
' Menu Generator

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' Simulator

Overall specification

Packaging
' Contained item   : LMT-3000S body
                        Battery pack
                        Charger(with PLUG Converter)
' Inner case   : Semi-formed plastic
' Outer Box   : Reinforced paper box

Operating temperature.
' Recommended   :   0 ~ 50℃
' Operable   :   -10~60℃(Tested at each side about 30min)
' Relative humidity :   5% ~ 95%, no condensing

Outline dimensions
' Size   : 178 x 80 x 43 (L x D x H mm)
' Weight   : Max 350g(with battery)

Certifications
' EMV Level 1 Certified
' EMV Level 2 Certified
' IECEE/CB (IEC 60950/EN 60950) Scheme Certified (Safety)
' FCC Part15B, Part22/24

Appearance

LMT-3000S body

Battery & Charger

Linudix Service and Support

- ✓ For LMT-3000S terminal problems, contact your local Linudix representative or service provider.
- ✓ For LMT-3000S product service and repair information:
  - http://www.linudix.com