# **TK700 Series User's Manual**

### Forth Edition, March, 2011

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# TK700 Series User's Manual

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## **Release Notes**

2011. 3. 24: Add description for function:

- 1. WOL (Wakeup Over LAN) at "Networks"  $\rightarrow$  "LAN";
- 2. SMS control (reboot/show status) at "Service"  $\rightarrow$  "SMS";
- 3. "User+X.509" mode for OpenVPN client;

Add Notice:

1. WAN/LAN settings: don't set the WAN/LAN IP as 192.168.3.1 (the default IP of DMZ port);

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# Introduction to TK700 Series

- ♦ Overview
- Product Models
- Product Features & Specifications
- Package Checklist

## 1.1 Overview



TK700 Series industrial grade routers provide users with stable and high speed connection between remote devices and customer's center via 2.5G/3G networks. They allow wide voltage power supply (9-48V DC), large range operating temperature from -25°C to 70°C (-10 ~ 158F)/ humidity: 95% RH, and fully satisfy various EMC verifications, which ensure stability and reliability under harsh industrial conditions. The TK700 can be placed on a desktop or DIN-mounted.

TK700 Series products support VPN (IPSec/PPTP/ L2TP/GRE/SSL VPN), which create high-security links between remote equipment and customer's center.

In Addition, TK700 Series products support the Device Manager remote device manage platform, which realizes remote operation including remote control, remote monitor, parameters configure, firmware upgrade, log/alarm management, information statistics/display, batch configuration/update and etc.

## **Important Safety Information**

## This product is not intended for use in the following circumstances

- Area(s) where radio transmission equipment (such as cell phone) are not permitted.
- Hospitals, health care facilities and area(s) where cell phones are restricted by law.
- Gas stations, fuel storage and places where chemical are stored.
- Chemical plants or places with potential explosion hazard.
- Any metal surface that may weaken the radio signal level.

## **RF** safety distance

- For GPRS router, the compliance boundary distance is r=0.26m for GSM 900MHz and r=0.13m for DCS 1800 MHz.
- For HSUPA router, the compliance boundary distance is r=0.26m for GSM 900MHz and
- r=0.13m for DCS 1800 MHz, r=.0.094 for WCDMA 900MHz, r=0.063 for WCDMA 2100MHz.

### Warning

This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

## WEEE Notice

The Directive on Waste Electrical and Electronic Equipment (WEEE), which entered into force as European law on 13th February 2003, resulted in a major change in the treatment of electrical equipment at end-of-life.

The purpose of this Directive is, as a first priority, the prevention of WEEE, and in addition, to promote the reuse, recycling and other forms of recovery of such wastes so as to reduce disposal.

The WEEE logo (shown at the left) on the product or on its box indicates that this product must not be disposed of or dumped with your other household waste. You are liable to dispose of all your electronic or electrical waste equipment by relocating over to the specified collection point for recycling of such hazardous waste. Isolated collection and proper recovery of your electronic and electrical waste equipment at the time of disposal will allow us to help conserving natural resources. Moreover, proper recycling of the electronic and electrical waste equipment will ensure safety of human health and environment.



For more information about electronic and electrical waste equipment disposal, recovery, and collection points, please contact your local city centre, household waste disposal service, shop from where you purchased the equipment, or manufacturer of the equipment.

# 1.2 Package Checklist

We put each TK 700 cellular router in a box with standard accessories. Additionally, there're optional accessories can be ordered. When you receive our package, please check carefully, and if there're items missing or appearing to be damaged, please contact with your Welotec sales representative.

Items in package include:

Standard Accessories:

Accessories	Description
TK700 Series Wireless Router	1
Cable	1 Cross line,CAT-5,1.5M
Antenna	5m Cellular Antenna
Power Supply	
	Power Adapter, 100-265V AC in, 12V DC out (included in TK7xx)
a lie	Power plug, European Standard (included in TK7xx)

# 1.3 Product Features

#### 1.3.1 Interfaces

#### WAN

Cellular WAN:

Band Options:

HSUPA /HSDPA/WCDMA 850/900/1900/2100MHz GSM/GPRS/EDGE 850/900/1800/1900MHz

#### **Ethernet WAN:**

Ethernet: 10/100 Mbps, RJ45 connector, Auto MDI/MDIX Magnetic Isolation Protection: 1.5 KV built-in

#### LAN

TK701: Number of Ports: 1 Ethernet: 10/100 Mbps, RJ45 connector, Auto MDI/MDIX Magnetic Isolation Protection: 1.5 KV built-in

#### TK704:

Number of Ports: 4 Ethernet: 10/100 Mbps, RJ45 connector, auto MDI/MDIX Magnetic Isolation Protection: 1.5 KV built-in

#### Serial

A. Serial Type: RS232/485
B. Data bit: 5/6/7/8
C. Stop bit: 1/2
D. Check bit: N/O/D
E. Baud rate: 1,200bit/s~ 115,200bit/s

#### **SIM Interface**

SIM Control: 3 V

#### 1.3.2 Functions

#### PPP

Supported VPDN/APN, fast access to virtual private dial-up network (VPDN) provided by mobile operator, ensure high-security data transmission.

Support PPPoE (Point to Point Protocol over Ethernet) Protocol.

Support CHAP/PAP/MS-CHAP/MS-CHAP V2 authorization

Support Connection Detection, auto-recovery, auto-link, ensure reliable communication.

Support On-demand connection, SMS Activity

#### Dynamic IP

Support DHCP, applied as Server/Client

#### Dynamic DNS

Support Dynamic DNS-IP Binding

#### Flux Management

Support rate limiting,

#### **Firewall Function**

Package filtering

Port Mapping

Virtual Address Mapping

DMZ zone

MAC addresses binding.

#### **Route function**

Support Static Routing Table

#### VPN

IPSec VPN L2TP VPN PPTP VPN GRE

OpenVPN Link Backup

## VRRP

Support VRRP protocols, realizing immediate link backup

#### Hot Link Backup

Support Wireless Hot Link Backup for cable link via only one device

#### **DNS Forwarding**

Support DNS Forwarding, support DNS record

#### Network tools

Support Ping, Trace Route and Telnet

#### Wakeup Over LAN (WOL)

Support Wakeup over LAN, to wakeup industrial PC over Eth. after receives SMS.

#### RSSI + Cell ID Display

#### 1.3.3 Environmental Limits

Operating Temperature: -25 to 70°C (-10 to 158°F) Operating Humidity: 5 to 95% RH Storage Temperature: -40 to 85°C (-40 to 167°F)

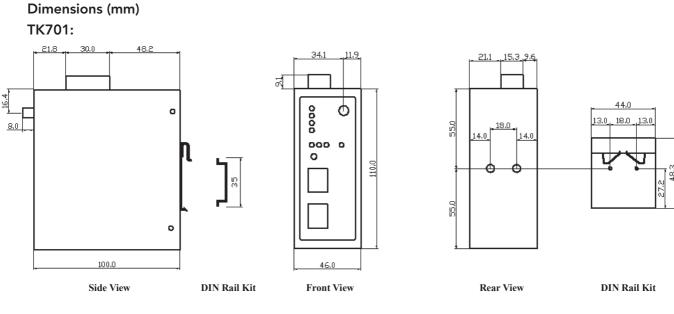
#### **1.3.4 Power Requirements**

Power Inputs: 1 terminal block, including power jack and serial. Input Voltage: 9 to 48 VDC

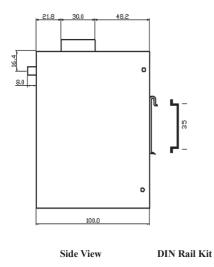
#### **1.3.5 Physical Characteristics**

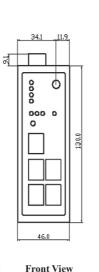
Weight: 490g

Housing: Steel, providing IP30 protection

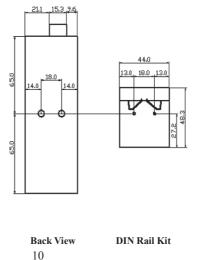








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#### **1.3.6 Advanced Industrial Features**

#### **Physical Characteristics**

Housing: Metal, IP30

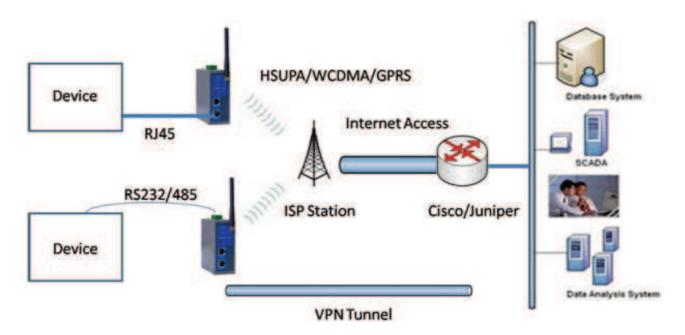
#### **EMC** Features

ESD: EN61000-4-2, level 4 Surge: EN61000-4-5, Level 3 Electric Fast Transient/burst: EN61000-4-4, Level 4 RF Electromagnetic Field Immunity: EN61000-4-3, Level 3 RF conducted interference: EN61000-4-6, Level 3 Damped oscillation Immunity: EN61000-4-12, Level 3 Power-frequency electromagnetic fields Immunity: EN61000-4-8, Level 5 Anti-shock: IEC60068-2-27 Drop: IEC60068-2-32 Vibration: IEC60068-2-6

# **II** Quick Installation Guide

- Typical Application
- Panel Layout
- Quick Connect to Internet
- ◆ Quick IPSec VPN Configuration
- Reset to Factory Defaults

## 2.1 Typical Application



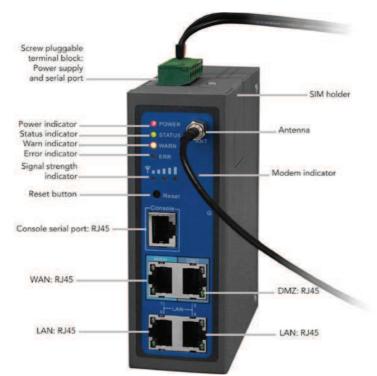
TK700 Series can be used to connect your device (with RS232/485/Ethernet Interface) to internet via GPRS/HSUPA cellular. Meanwhile, to ensure the security and access, TK700 Series support VPN, enabling remote access and secure data transmission through internet.

# 2.2 Panel Layout

TK701:



#### TK704:

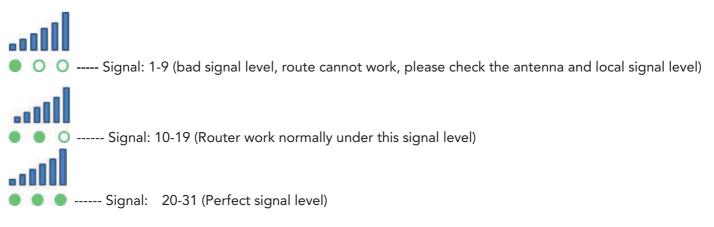


Interface	Description
Power Interface	Access 9-48 V DC Power Supply
Serial	Access to the serial line, realizing
Ethernet Ports	One 10/100Base-TX RJ45 Port TK701X
Ethemet Ports	Four 10/100Base-TX RJ45 Ports, TK704X
ANTENNA	2.5G/3G antenna
SIM Card Connector	Put SIM card

#### **Description of LED**

Legend: On	Off〇	Blink 🖉					
	Power Status Warn Error		Power Status Warn Error		Power Status Warn Error	000	
	Power or	ı	Start to ru	un firmware	Begin d	ial to Interr	net
	Power Status Warn Error	000	Power Status Warn Error		Power Status Warn Error		
	Connect t	o internet	Upgradi	ng firmware	Restore	factory de	fault

#### **Signal Status LED Description**



## 2.3 Quick Connection to Internet

#### 2.3.1 Insert SIM Card



Open TK Router SIM/UIM card case at the button, insert the SIM card and close the case.

#### 2.3.2 Antenna Installation

After install the TK700, connect the interface of enhanced antenna and the interface of skin antenna and screw closely. Put the amplifier of enhanced antenna to where there receives good signal.

Attention: The position and angle may influence the quality of signal.

#### 2.3.3 Power Supply

Link the power supply in the product package with TK Router, watch where the TK Router Power LED on the panel is light up. If not, please connect with Welotec for technical supports. You can configure TK700 after the Power LED lights up.

#### 2.3.4 Connect

Link the TK700 with PC:

- (1) Using the cable to link TK700 with PC;
- (2) After the connection, you can see one LED of RJ45 Interface turns green and the other flashes.

#### 2.3.5 First Connect TK Router with Your PC

TK700 Router can auto-distribute IP address for PC. Please set the PC to automatically obtain IP address via DHCP. (Based on the Windows operation system):

- 1) Open "Control Panel", double click "Network Connections" icon, and enter "Network Connections" Screen.
- 2) Double click "Local Area Connection", enter "Local Area Connection Status" screen:

c	
c	Section States
	onnected
	00:18:12
	1.0 Gbps
sent 🗐 🔭 1	Received
33,920	107,297
E	Sent — 🛐 – F

3) Click "Properties", enter "Local Area Connection Properties" screen

	Advanced			
Connec	t using:			
199 \ 1	Mware Accelera	ated AMD PCNet	Ad <u>C</u> onf	igure
This c <u>a</u>	nnection uses the	e following items:		
	QoS Packet So Internet Protoc	ol (TCP/IP)		7-2-
-	nstall	Uninstall	Prop	erties
wide	smission Control I area network pro	Protocol/Internet otocol that provid onnected network	les communicati	
111. 394.08	and the second second second	ition area when c connection has lii		ectivity

Choose "Internet Protocol (TCP/IP)", click "properties" button, ensure your PC can obtain IP and DNS address automatically. (Or you can set your PC in the subnet: 192.168.2.0/24, for example, set IP: 192.168.2.10, Net Mask: 255.255.255.0, Default Gateway: 192.168.2.1)

nternet	Protocol (TCP/IP) Properties	?
General	Alternate Configuration	
this cap	n get IP settings assigned automatically if your net ability. Otherwise, you need to ask your network a ropriate IP settings.	
💿 OI	tain an IP address automatically	
OU	e the following IP address:	
IP ad	dress.	
Subr	et mask:	
Defa	ult gateway:	
() Ot	tain DNS server address automatically	
OU	e the following DNS server addresses:	
Prefe	rred DNS server.	
Alten	nate DNS server	
		Advanced
	OK	Cancel

Click "OK", TK Router will allocate an IP address: 192.168.2.X, and a gateway: 192.168.2.1(the default address of TK700).

After configure TCP/IP protocols, you can use ping command to check whether the link between PC and Router is built correctly. There is an example to execute Ping command under Windows XP as below:

Ping 192.168.2.1

If the screen shows:

Microsoft Windows [Version 6.1.7600] Copyright (c) 2009 Microsoft Corporation. Alle Rechte vorbehalten.
C:\Users\TobiasK>ping 192.168.2.1
Ping wird ausgeführt für 192.168.2.1 mit 32 Bytes Daten: Antwort von 192.168.2.1: Bytes=32 Zeit=1ms TTL=64 Antwort von 192.168.2.1: Bytes=32 Zeit<1ms TTL=64 Antwort von 192.168.2.1: Bytes=32 Zeit<1ms TTL=64 Antwort von 192.168.2.1: Bytes=32 Zeit<1ms TTL=64
Ping-Statistik für 192.168.2.1: Pakete: Gesendet = 4, Empfangen = 4, Verloren = 0 (0% Verlust).
Ca. Żeitangaben in Millisek.: Minimum = Oms, Maximum = 1ms, Mittelwert = Oms
C:\Users\TobiasK>_

Then the link between the PC and Router is correct connected. Else if it shows:

Microsoft Windows [Version 6.1.7600] Copyright <c> 2009 Microsoft Corporation. Alle Rechte vorbehalten. C:\Users\TobiasK>ping 192.168.2.1 Ping wird ausgeführt für 192.168.2.1 mit 32 Bytes Daten: PING: Fehler bei der Übertragung. Allgemeiner Fehler. Ping-Statistik für 192.168.2.1: Pakete: Gesendet = 4, Empfangen = 0, Verloren = 4 <100% Verlust>.

Then the connection seems not build, and you need to check thoroughly following the former instructions.

#### 2.3.6 Start to configure your TK Router 700(Optional)

After you have finished the former steps, you can configure the Router:

 Open IE browser, input the default IP address of the Router: <u>http://192.168.2.1</u>, you can see the login web below:

Username		
Password		

Input "username" (default: adm) and the "password" (default: 123456), and then click "login" to enter the operation screen.

2) Change the IP configuration:

Attention: After configuration, please click "apply" to activate your configuration.

If you want to set your own IP of TK Router 700, please follow the instructions below:

## welorec

System	Network	Services	Firewall	QoS	VPN	Tools	Status
			System	n Status			
Name		Router					
Serial Number		RW7941005	119806				
Description		TK7 series					
Current Versio	m	1.3.4./2101					
Current Bootlo	oder Version	1.1.6./1742					
Router Time		2011-05-16	15.22.19				
PC Time		2011-05-16	15:17:00 Sy	nc Time			
Up time		0 day, 00:04	112				
CPU Load (1/1	57.15 mina)	0.07/0.04/	0.01				
Memory consu Total/Free	umption	13.35MB / 3	184.00KB (23	30%)			

3 Seconds + Stop

Click "Network"=>"LAN", change the IP address to 192.168.1.254:

System	Network	Services	Firewall	QoS	VPN	Tools	Status
			LA	N			
MAC Address		00.04.25.00 /	A2:D4 D	efault			
IP Address		192.168.1.25	4				
Netmask		255.255.255	0				
MTU		Default 👻	1500				
Detection host		0.0.0.0					
WOL MAC Add	ess		De	vice List			

3) Click "Apply", then you will see:



Now the IP address of TK700 has been reset, and in order to enter the configuration web, you need set your PC in the same subnet, for example: 192.168.1.10/24 then input the changed IP address (192.168.1.254) in your IE Browser.

#### 2.3.7 Connect TK Router with Internet

Following the configuration steps below to enable TK700 to connect with the internet. Click "Network"=>"Dialup", enter dialup configuration web:

System Ne	twork Service	s Fire	wall C	20S	VPN	Tools	Status
			Dialup				
Enable							
Time schedule	ALL +	Schedule M	anagement				
SHARED							
Network Provider (ISP	) Custom	1	<ul> <li>Manage</li> </ul>				
APN	internet	t-d1.de					
Access Number	*99***1#	ŧ					
Username	tm						
Password							
Network Select Type	Auto	•					
Band	ALL						
Static IP							
Connection Mode	Always	Online					
Redial Interval	30	Seconds					
Show Advanced Op	tions						

Please check the APN, Dialup Number, Username and Password:

Dialup Number, Username and Password are provided by local mobile operator. You can contact them for more details.

After correct configuration, TK Router 700 can now connect with Internet. Open IE Browser, input <u>www.welotec.com</u>, you can see the Welotec web as below:

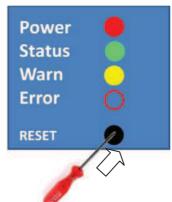


## 2.4 Reset to Factory Defaults

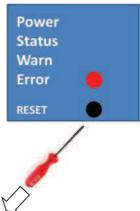
#### 2.4.1 Hardware Method



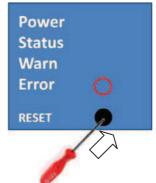
1) Push RESET button while powering on TK700:



2) When you see ERROR LED turns on (about 10 seconds after powering on), stop push RESET button:



3) After a few seconds, the ERROR LED then turns off, now push RESET button again:



4) Then you will see ERROR and STATUS blinking, which means reset to factory defaults successfully!



Factory default settings: IP: 192.168.2.1 Net Mask: 255.255.255.0 Serial parameter: 19200-8-N-1

#### 2.4.2 Web Method

1) Login the web interface of TK700, select "System"  $\rightarrow$  "Config Management":

outer Config	guration			anagement		
		Du	rchsuchen	Import	Backup	
Restore defa	ult configuration					
twork Prov	inter (ISP)					

2) Click "Restore default configuration" to Reset TK700.

# III Advanced Configuration

Configuration on Web

# 3.1 Configuration on Web

TK Router must be correctly configured before use. This Chapter will show you how to configure via Web.

#### 3.1.1 Preparation

Firstly, connect your devices with TK700 by cable or HUB (switch), then set the IP of PC and TK700 in the same subnet, for example: Set PC IP to 192.168.2.50, net mask: 255.255.255.0, gateway (default IP of TK700: 192.168.2.1):

e Edit View Favorites Tools Advanced Help	
Back 🔹 🕥 · 🏂 🔎 Search 🜔 Folders 🔳	
Iress 💽 Network Connections	
Local Area Connection Properties 🛛 💽 🔀	Internet Protocol (TCP/IP) Properties
General Advanced	General
Connect using:  Whware Accelerated AMD PCNet Ad  Configure	You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.
This connection uses the following items:	Obtain an IP address automatically         Ise the following IP address:         IP address:         192 . 169 . 2 . 50         Subnet mask:         255 . 255 . 0
Install Uninstall Properties Description Transmission Control Protocol/Internet Protocol. The default wide area network protocol that provides communication across diverse interconnected networks. Show icon in notification area when connected	Default gateway:       192.168.2.1         Obtain DNS server address automatically         Itse the following DNS server addresses:         Preferred DNS server:       202.106.0.20         Alternate DNS server:
Notify me when this connection has limited or no connectivity      OK Cancel	Advanced OK Cancel

Open IE browser, input the IP address of TK700: <u>http://192.168.2.1</u> (default IP of TK700).

Then you'll see the Login Web below, you need to login as Administrator. Input the username and password (default: adm/123456).

Router Log	gin
Username	
Password	
	Login

Click "Login" to enter configure web:

WE	LOI	ec.						Help			
System	Network	Services	Firewall	QoS	VPN	VPN Tools	Status	Welcome to use! More Help			
-,								Copyright @1969-2011, Welcte GmbH			
			System	Status							
Name		Router									
Serial Number	r.	RW7941005	5119806								
Description		TK7 series									
Current Versio	on i	1.3.4.(2101									
Current Bootk	oader Version	1.1.6.11742									
Router Time		2011-05-16	15:22:19								
PC Time		2011-05-16	15:17:00 Sy	nc Time							
Up time		0 day, 00.0-	1:12								
CPU Load (17	5715 mma)	0.07 / 0.04									
Memory const Total/Free	umption	13.35MB / 3	,184.00KB (23	30%)							
					200	3 Seconds	<ul> <li>Stop</li> </ul>				

#### 3.1.2 System

System settings include the 9 settings: Basic Setup, Time, Serial Port, Admin Access, System Log, Config Management, Update, Reboot and Logout.

#### (1) Basic Setup

System	Network	Services	Firewall	QoS	VPN	Tools	Status
			Basic	Setup			
Language		English -					
Bogtnase		Router					

Apply Cancel

Parameters Name	Description	Default	Example	
Language	Choose language of configuration web	Chinese	English	
Router Name	Set name of TK Router	Router	My TK Router	
Host Name	Name the device/PC linked with TK700	Router	My TK Router	

#### (2) Time

System	Network	Services	Firewall	QoS	VPN	Tools	Status
			m	me			
Router Time		2011-05-16	16.08.02				
PC Time		2011-05-16	16 08 02 Sy	nc Time			
Timezone		UTC+01:00	France, German		8	•	
Auto Daylight	Savings Time						
Auto Update Tir	ne	On startup	•				
NTP Time Servers		114.80.81.1					
and the out		pool.ntp.org					

Name	Description	Default
Router Time	Display router time	1970-1-1 8:00:00
PC Time	Display PC time (or the time of device linked	
	with router)	
Time Zone	Set time zone	Custom
Custom TZ string	Set the string of time zone of Router	CST-8
Auto Update Time	Time Update Interval	Disabled
NTP Time Servers (after enable	Setting for NTP Time server. (Three at the most)	pool.ntp.org
the Auto Update Time)		

#### (3) Serial Port

System	Network	Services	Firewall	QoS	VPN	Tools	Status
			Seria	al Port			
Baudrate		19200 👻					
Data Bits		8 🔻					
Parity		None -					
Stop Bit		1 -					
Hardware Flow	Control						
Software Flow C	Control						

Apply Cancel

Name	Description	Default
Baud Rate	Serial baud rate	19200
Data Bit	Serial data bits	8
Parity	Set parity bit of serial data.	None
Stop Bit	Set stop bit of serial data.	1
Hardware Flow Control	Enable Hardware Flow Control	Disable
Software Flow Control	Enable Software Flow Control	Disable

#### (4) Admin Access

Syst	tem Ne	twork S	Services	Firewal	QoS	VPN	Tools	Status
Jserna	me / Passwor	d		Ad	min Access			
Usema	amo	-	adm					
	issword	-	adin					
	assarord							
100	n New Passwor	2						
Commen	II IVEW Passwor							
Manage	ement							
Enable	Service Type	Service Port	Local	Remote	Allowed addresses ( (Optional)	fom WAN D	hescription	
	HTTP	80			(			
	HTTPS	443						
1	TELNET	23						
	SSHD	22		1				
1	Console							
	uthentication							
user A	uchentication							
Authen	tication Type	1	Local	•				
Non-pri	ivileged user	5						
Userna	me Pass	word						
1								

Name		Description	Default		
		Username/Password			
Username	Username fo	r configuration web login	adm		
Old Password	To change th	e password, you need to input the old one	123456		
New Password	Input new pa	issword			
Confirm New Password	Input the nev	v password again			
	•	Management			
		HTTP/HTTPS/TELNET/SSHD/Console			
Enable	Select to ena	ble	Enable		
Service Type	HTTP/HTTPS	/TELNET/SSHD/Console	80/443/23/22/Blank		
Local Access	Enable—allo	w manage Router by LAN(e.g.: HTTP)	Enable		
	Disable—for	bid manage Router by LAN.			
Remote Access	Enable—allow	to manage TK700 by WAN. (e.g.: HTTP)	Enable		
	Disable—for	bid to manage TK700 by WAN. (e.g.: HTTP)			
Allowed Access from	Set the range	e of allowed IP address for WAN	Control services server can be set		
WAN (Optional)	(HTTP/HTTP:	S/TELNET/SSHD)	at this time, for example		
			192.168.2.1/30 or		
			192.168.2.1-192.168.2.10		
Description	Describe the	parameters of management (non-influence to TK700)			
		Other Parameters			
Log Timeout	Set the Log T	Fimeout, configuration web will be disconnected after timeout	500 seconds		

#### (5) System Log

System	Network	Services	Firewall	QoS	VPN	Tools	Status
			Syste	im Log			
Log to Remote	System						
IP Address / I	Port(UDP)	192.168.100.	1 514				
Log to Console	20.6 200						
Apply	Cancel						
Na	ame		Descr	iption		Defa	ult
Log to Remote Sy	Log to Remote System			Enable remote log server			
IP address/Port (U	IDP)	Set t	ne IP and P	ort of remo	te log Port	: 514	
		server					

#### (6) Config Management

System	Network	Services	Firewall	QoS	VPN	Tools	Status
Router Config	juration			lanagement			
		Du	rchsuchen	Import	Backup		
Restore defa	ult configuration						
letwork Prov	ider (ISP)						
		Du	rchsuchen_	Import	Backup		
	Name			-	escription		

Name	Description
Router Configuration	Import/Backup configuration file
Restore default configuration	Click to reset TK700 (to enable RESET, you need to reboot TK700)
Network Provider (ISP)	Used to configure the APN, username, password and other parameters of major
	operators

#### (7) System Upgrade

System	Network	Services	Firewall	QoS	VPN	Tools	Status
			Upg	rade			
Select the file I	to use			1.1			
			Durchsu	chenUpg	rade		
	n : 1.3.4.r2101 ader Version : 1	1.6.11742					

If need to upgrade system, click "System"=>"System upgrade" to enter update page, then follow the steps below:

Click "Browse", choose the upgrade file;

hoose file				2
Look in:	1000	ents	3 🖉 🖻 🛄 -	
My Recent	My Music My Pictures			
Documents				
Desktop				
My Documents				
My Computer				
My Network Places	File name:	update.bin		Open
1 13005	Files of type:	All Files (*.*)	-	Cancel

Click "update", and then click "sure" to begin update as it shows below.

## Upgrading firmware... It will take about 1-5 minutes depending on network. Please wait and don't interrupt!

0:14

Upgrade firmware succeed, and click "reboot" to restart TK700.

#### (8) Reboot

If you need to reboot system, please click "System"=>"Reboot", Then click "OK" to restart system.



#### (9) Logout

If you need to logout system, click "System"=>"Logout", and then click "OK".

Microsoft Intern	et Explorer 🔯				
Confirm	Logout ?				
OK Cancel					

#### 3.1.3 Network

Network settings include configurations of Dialup, LAN, DNS, DDNS, Static Route, and etc.

#### (1) Dialup

		Dia	lup		
Enable					
Time schedule	ALL + Sch	edule Manager	ment		
SHARED					
Network Provider (ISP)	Custom	▼ Ma	nage		
APN	internet.t-d1.c	de			
Access Number	*99***1#				
Username	tm				
Password	••				
Network Select Type	Auto -				
Band	ALL				
Static IP					
Connection Mode	Always Onlin	ne 💌			
Redial Interval	30 S	econds			
Show Advanced Options	V				
Initial Commands					
PIN Code					
RSSI Poli Interval	120 5	Seconds			
Dial Timeout	120	ieconds			
MTU	1500				
MRU	1500				
TX Queue Length	64				
Authentication Type	Auto -				
Enable IP head compression					
Use default asyncmap					
Use Peer DNS					
Link Detection interval	55	Seconds(0. di	sable)		
Link Detection Max Retries	3				
Debug					
Expert Options	nomppe no	mppc nodeflat	e nobsdcomp r	novj novjecomp	
ICMP Detection Server					
ICMP Detection Interval	30	Seconds			
ICMP Detection Timeout	5	Seconds			
ICMP Detection Retries	5				

Name	Description	Default
Enable	Enable PPP dialup	Enable
Time Schedule	Set time for online and offline	ALL
SHARED	Enabled—device linked with Router <b>Can</b> access to internet.	Enable
	Disable—device Can NOT access to internet via Router.	
ISP	Select local ISP, if not listed here, please select "Customer"	Customer
Network Select Type	Choose mobile network type	HSDPA (or GPRS)
APN	APN parameters provided by Local ISP	cmnet/uninet
Access Number	Dialup parameters provided by Local ISP	"*99#""*99***1#" or
		#777
Username	Dialup parameters provided by Local ISP	"gprs" or "CDMA"
Password	Dialup parameters provided by Local ISP	"gprs" or "CDMA"
Static IP	Enable Static IP if your SIM card can get static IP address	Disable
Connection Mode	Optional Always Online,	Always Online

Redial Interval	When Dial fails, TK Router will redial after the interval	30 seconds
Show Advanced Options	Enable configure advanced options	Disabled
Initial Commands	Used for advanced parameters	Blank
Dial Timeout	Set dial timeout (TK700 will reboot after timeout)	120 seconds
MTU	Set max transmit unit	1500
MRU	Set max receive unit	1500
TX Queue Length	Set length of transmit queue	3
Enable IP header compression	Enable IP header compression	Disabled
Use default asyncmap	Enable default asyncmap, PPP advanced option	Disabled
Using Peer DNS	Click Enable to accept the peer DNS	Enabled
Link Detection Interval	Set Link Detection Interval	30 seconds
Link Detection Max Retries	Set the max retries if link detection failed	3
Debug	Enable debug mode	Enable
Expert Option	Provide extra PPP parameters, normally user needn't set this.	Blank
ICMP Detection Server	Set ICMP Detection Server, blank represents none	Blank
ICMP Detection Interval	Set ICMP Detection Interval	30 seconds
ICMP Detection Timeout	Set ICMP Detection Timeout (TK700 will reboot if ICMP time out)	5 seconds
ICMP Detection Max Retries	Set the max number of retries if ICMP failed	5

Dialup----Time Schedule Management:

System Network Services Firewall QoS VPN Tools Status

Schedule Management

 Name
 Sunday
 Yeesday
 Wednesday
 Trituraday
 Friday
 Saturday
 Time Range 1
 Time Range 2
 Time Range 3
 Description

 schedule\_1
 Image: Price Pric

Apply Can	icel	
Name	Description	Default
Name	Name the schedule	schedule 1
Sunday		Blank
Monday		Enable
Tuesday		Enable
Wednesday		Enable
Thursday		Enable
Friday		Enable
Saturday		Blank
Time Range 1	Set Time Range 1	9:00-12:00
Time Range 2	Set Time Range 2	14:00-18:00
Time Range 3	Set Time Range 3	0:00-0:00
Description	Describe configuration	Blank

#### (2) WAN (for TK704 only)

System	Network	Services	Firewall	QoS	VPN	Tools	Status
			Ŵ	AN			
Type		Dynamic Ad	Idress (DHCP)	•			
SHARED		Static IP Dynamic Ad	Idress (DHCP)				
MAC Address		ADSL Dialu Disabled		ault Clone			
MTU		Default -	1500				

Show Advanced Options

#### This page is to set the type of WAN port:

Name	Description	Default
Туре	Static IP;	Disabled
	Dynamic Address(DHCP);	
	ADSL Dialup(PPPoE);	
	Disabled	

Attention: There can only be one WAN type at one time, enabling one type WAN will disabled another. **WAN—Static IP** 

System	Network	Services	Firewall	QoS	VPN	Tools	Status
			W	UN .			
Type		Static IP		-			
SHARED							
MAC Address		00:04:25:00:9	F:A2 De	afault Clone			
P Address		192.168.1.29					
Netmask		255.255.255.	)				
Gateway		192.168.1.1					
мти		Default +	1500				
	1223						
Show Advan	ced Options						
Show Advan			scription				

#### Notice: please **DO NOT** set WAN address as: 192.168.3.x (an IP for DMZ port).

Name	Description	Default
Туре	Static IP	
SHARED	Enabled—the local device linked with Router can get access	Enable
	to internet.	
	Disable—the local device can't get access to internet via	
	Router.	
MAC Address	Set MAC Address	
IP Address	Set WAN port IP	192.168.1.29
Net Mask	Set WAN port Net Mask	255.255.255.0
Gateway	Set WAN Gateway	192.168.1.1
MTU	Set Max Transmission Unit, optional between default and	1500
	manual	
	Multi-IP Settings(can set 8 additional IP address at the most)	
IP address	Set the additional IP address of LAN	Blank
Net Mask	Set Net Mask	Blank
Description	Describe the settings	Blank

### WAN—Dynamic Address (DHCP)

System	Network	Services	Firewall	Q	oS	VPN	Tools	Status
			w	AN				
Туре		Dynamic Address (DHCP)] -						
SHARED								
MAC Address		00:04:25:00:9F:A2 Default Clone						
MTU		Default -						

Show Advanced Options

Apply	Cancel

Name	Description	Default
Туре	Dynamic Address (DHCP)	
SHARED	Enabled—the local device linked with Router can get access	Enable
	Disable—the local device can't get access to internet via	
	Router.	
MAC Address	Set MAC Address	
MTU	Set Max transmission unit, optional between default and	1500
	manual	

#### WAN --ADSL

System Network	Services	Firewall	QoS	VPN	Tools	Status
		1	WAN			
Туре	ADSL D	alup (PPPoE)	₹.)			
SHARED						
MAC Address	00:04:25:	00:9F:A2	Default Clone	]		
MTU	Default	★ 1492				
ADSL Dialup (PPPoE) Settings						
Usemame	-					
Password						
Static IP						
Connection Mode	Always (	Dnline 🔹				
Show Advanced Options						
Service Name						
TX Queue Length	3					
Enable IP head compression						
Use Peer DNS						
Link Detection Interval	55	Seconds				
Link Detection Max Retries	10					
Debug						
Expert Options						
ICMP Detection Server						
ICMP Detection Interval	30	Seconds				
ICMP Detection Timeout	3	Seconds				
ICMP Detection Retries	3	and the second				

Apply Cancel

Name	Description	Default
Туре	ADSL Dialup (PPPoE)	
SHARED	Enabled—the local device linked with Router can get access to	Enable
	internet.	
	Disable—the local device can't get access to internet via Router.	
MAC Address	Set MAC Address	
MTU	Set Max Transmission Unit, optional between default and manual	1500
	ADSL Dialup (PPPoE) Settings	
Username	Set username for dialing up	Blank
Password	Set password for dialing up	Blank
Static IP	Enable Static IP	Disabled
IP address	Static IP Address	Blank
Peer IP	Set Peer IP	Blank
Connection Mode	Set connection mode (Connect on Demand/Always Online/ Manual)	Always Online
	Advanced Options	
Show advanced options	Enable advanced configuration	Disabled
Service Name	Name the service	Blank
TX Queue Length	Set TX Queue Length	3
Enable IP head compression	Click to enable IP head compression	Disabled
User Peer DNS	Enable User Peer DNS	Disabled
Link Detection Interval	Set link detection interval	55 seconds
Link Detection Max Retries	Set link detection max retries	10 (times)
Debug	Select to enable debug-mode	Disabled
Expert Options	Set expert parameters	Blank
ICMP Detection Server	Set ICMP Detection Server	Blank
ICMP Detection Time	Set ICMP Detection Time	30
ICMP Detection Timeout	Set ICMP Detection Timeout	3
ICMP Detection Max Reties	Set ICMP Detection Max Reties	3

#### (3) Link Backup (for TK704 only)

System	Network	Services	Firewall	QoS	VPN	Tools	Status
			Link B	ackup			
Enable							
Main Link		WAN +					
ICMP Detect	on Server						
ICMP Detect	ion interval	10	Seconds				
ICMP Delect	on Timeout	3	Seconds				
ICMP Detect	on Retries	3					
Backup Link		WAN -					

Link Backup, to realize link backup between Cellular WAN and Ethernet WAN, when one fails, TK700 will try the other

Name	Description	Default
Enable	Enable Link Backup service	Disabled
Main Link	TK Router will choose this for normal WAN connection	WAN (Ethernet WAN)
ICMP Detection Server	ICMP can ensure a link to certain destination	
ICMP Detection Interval	Time interval between ICMP packages	10
ICMP Detection Timeout	Timeout for each ICMP package	3 (seconds)
ICMP Detection Max	After the retries if no ICMP succeed, dialup will try the backup	3
Retries	link	
Backup Link	Select the backup link	WAN

#### (4) LAN

System	Network	Services	Firewall	QoS	VPN	Tools	Status
				LAN			
MAC Address		00:04:25:00:	9F:A2	Default			
P Address		192.168.2.1					
Netmask		255.255.255	.0				
NTU		Default +	1500				
Detection host		0.0.0.0					
NOL MAC Add	tress			Device List			
luiti-IP Settin	gs						
IP Address	Netmask	D	escription				
							A

#### Notice: please **DO NOT** set LAN address as: 192.168.3.x (an IP for DMZ port).

Name	Description	Default
MAC Address	The MAC address in LAN	00:10:A1:86:95:02 (Provided by Welotec) , for manufactures
IP Address	Set IP Address in LAN	192.168.2.1 (If Changed, you need to input the new address
		for entering the configuration web)
Net Mask	Set Net Mask of LAN	255.255.255.0
MTU	Set MTU length, optional between Default and	1500
	Manual	
Detection Host	Set Detection Host Address	0.0.0.0
WOL MAC Address	Set the MAC of PC in the LAN of router, for Wakeup	Blank
	Over LAN (WOL) function, you should also set	
	"Networks" $ ightarrow$ "Dialup" and change dialup mode	
	into "Trigger by SMS".	
	Multi-IP Settings (Support additional 8 I	P addresses at the most)
IP Address	Set additional IP Address of LAN	Blank
Description	Description about this IP address	Blank

#### (5) DMZ Port (for TK704 only)

Configure this page after select WAN-DMZ-LAN mode in Port Mode page.

Netmask 255.255.255.0 MTU Default = 1500	System	Network	Services	Firewall	QoS	VPN	Tools	Status
P Address         192.168.3.1           Netmask         255.255.255.0           MTU         Default < 1500				DMZ	Port			
Netmask 255.255.255.0 MTU Default - 1500	MAC Address		00.04.25.00	FA2 D	efault			
MTU Default   1500	IP Address		192.168.3.1					
MTU Default - 1500 Aulti-IP Settings	Netmask		255.255.255	0				
Aulti-IP Settings	MTU		Default 👻	1500				
autor seconds	Aulti.ID Cattin	105						
		Contraction	12					
IP Address Netmask Description	SP Address	Retmask	D	escription				

Apply Cancel

Name	Description	Default				
MAC Address	Set MAC address of DMZ port	(Provided by				
		Manufacture:				
		Welotec)				
IP Address	Set IP Address of DMZ port	192.168.3.1				
Net Mask	Set Net Mask of DMZ port	255.255.255.0				
MTU	Optional between Default & Manual	Default (1500)				
Multi-IP Settings (8 additional IP address at the most)						
IP Address	Set additional IP address for DMZ port	Blank				
Net Mask	Set Net Mask	Blank				
Description	Description of additional IP address	Blank				

#### (6) Port Mode (for TK704 only)

System	Network	Services	Firewall	QoS	VPN	Tools	Status
			Port	Mode			
Port Mode		WAN-DMZ-	LAN -				
		LAN WAN-LAN					
Apply	Cancel	WAN-DMZ-	LAN				

Notice: please **DO NOT** set WAN IP/LAN IP/DMZ IP the same; it will disable your link to internet!

Name	Descriptions	Default
Port Mode	LAN (four LAN ports)	WAN-DMZ-LAN
	WAN-LAN (3 LAN ports and 1 WAN port)	
	WAN-DMZ-LAN (1 WAN port, 1 DMZ port and 2 LAN ports)	

### (7) DNS

System	Network	Services	Firewall	QoS	VPN	Tools	Status
			D	15			
Primary DNS		0.0.0.0					
Secondary DN	s	0.0.0.0					
Apply	Cancel						
	Name		Descr	iption		Defaul	t
Primary DNS Set Primary DN		rimary DNS		Blank			

### (8) DDNS (Dynamic DNS)

	System	Network	Services	Firewall	QoS	VPN	Tools	Status	
	ynamic DNS ==0	WAN		DD	NS				-
	Current Address Service Type		192.168.111 Disabled	.100					
	Apply	Cancel							
	Name			Descr	iption			Default	
Current Addr	ess		Show th	e current IP	address		Blank		
Service Type			Select D	DNS Provid	ler		Disabled		
	System	Network	Services	Firewall	QoS	VPN	Tools	Status	
	Dynamic DNS	==> WAN		DD	NS				
	Current Addre Service Type URL Username Password Hostname Wildcard MX Backup MX Force Update Last Update Last Respons	0	192.160.11 DynDNS - I http://www.c test test						
	Name			D	escriptio	on		Defa	ult
Service Type			DynDNS	6 - Dynamic					
URL			http://w	ww.dyndns.	.com/				-

URL	http://www.dyndns.com/	
Username	Registered username for DDNS	
Password	Registered password for DDNS	
Hostname	Registered hostname for DDNS	

### (9) Static Route

System	Network	Services	Firewall	Qo	S	VPN	Tools	Status
			Stati	ic Route				
Destination	Netmask	Gateway		interface		Description		
0.0.0.0	255.255.255.0	0.0.0.0		LAN		1		
								Add

Apply Cancel

Name	Description	Default
Destination	Set IP address of destination	Blank
Net Mask	Set subnet Mask of destination	255.255.255.0
Gateway	Set the gateway of destination	Blank
Interface	Optional LAN/WAN port access to destination	Blank
Description	Describe static route	Blank

### 3.1.4 Service

Service settings include DHCP Service, DNS Forwarding, VRRP and other related parameters.

### (1) DHCP Service

System	Network	Services	Firewall	QoS	VPN	Tools	Status
			DHCP	Service			
Enable OHCP		12					
IP Pool Starting A	ddress	192.168.2.2					
IP Pool Ending Ad	idress	192.168.2.10	0				
Lease		60	Minutes				
DNS		192 168 2 1			Edit		
Windows Name S	erver (WINS)	0.0.0.0					
Static DHCP							
MAC Address	IP Address	Hot	st				
00 00 00 00 00 00	192 168 2 2						
							Add
							Add
Apply	Cancel						

Name	Description	Default
Enable DHCP	Click to enable DHCP	Enable
IP Pool Starting Address	Set the starting IP address of DHCP	192.168.2.2
	pool	
IP Pool Ending Address	Set the ending IP address of DHCP	192.168.2.100
	pool	
Lease	Set the valid time lease of IP address	60 minutes
	obtained by DHCP	
DNS	Set DNS Server	192.168.2.1
Windows Name Server	Set WINS	Blank
(WINS)		
Static DH0	CP (can set 20 designated IP address at the	e most)
MAC Address	Set the MAC address of a designated	Blank
	IP address	
IP address	Set the static IP address	192.168.2.2
Host	Set the hostname	Blank

### (2) DNS Relay

			DNS	Relay		
Enable DNS R	letay					
tatic (IP addr	ress <=> Domai	in Name] Pairin	9			
tatic (IP addr IP Address	ress <=> Domai Host	in Name] Pairin Descrit				

### Apply Cancel

Name	Description	Default				
Enable DNS Relay	Click to enable DNS Relay	Enable (after enable DHCP)				
D	Designate IP address<=>DNS couples (20 at the most)					
IP Address	Set IP address <=> DNS couples	Blank				
Host	Set the name of IP address <=> DNS couples	Blank				
Description	Describe IP address <=> DNS couples	Blank				

### (3) VRRP

System	Network	Services	Firewall	QoS	VPN	Tools	Status
			VR	RP			
Enable							
Group ID		1 🔫					
Priority		10 🔹					
Advertisement	Interval	60 + Set	conds				
Virtual IP							
Authentication	Type	none					

### Apply Cancel

Name	Description	Default
Enable	Select to enable VRRP	Disable
Group ID	Select group id of routers (range	1
	1-255)	
Priority	Select priority for router (range	10 (bigger number stands for higher
	1—254)	priority)
Advertisement Interval	Set ad interval	60 sec
Virtual IP	Set Virtual IP	Blank
Authentication Type	Optional: None/Password type	None

### (4) Device Manager

System	Network	Services	Firewall	QoS	VPN	Tools	Status
			Device I	Manager			
Mode		SMS & IP	•				
Vendor		Default •					
Device ID		794119806					
Server							
Port		9000					
Login Retries		3					
Heartbeat Inte	rval	120	Seconds				
Packet Receiv	ing Timeout	30	Seconds				
Packet Transn	nit Retries	3					
Query SMS Int	erval	24	hours				
Trust phone lis	st						

Na	ame			Descr	ription			D	efault
Mode			Disabled/	Only SMS	S/SMS+IP	)	Disab	le	
	System	Network	Services	Firewall	QoS	VPN	Tools	Status	
				Device	Manager				
	Mode		Only SMS	-					
	Query SMS Inter	rval	24	hours					
	Trust phone list								
	Apply	Cancel							

Apply	Cancel
1. ppi	

Name	Description	Default
Mode	Only SMS	
Query SMS Interval	Set how long to check SMS	24 hours
Trust Phone List	Add trust Cell Phone List	

System	Network	Services	Firewall	QoS	VPN	Tools	Status
			Device I	Manager			
Mode		SMS & IP	7				
Vendor		Default -					
Device ID		794119806					
Server							
Port		9000	1				
Login Retries		3	1				
Heartbeat Interv	201	120	Seconds				
Packet Receivin	g Timeout	30	Seconds				
Packet Transmit	Retnes	3					
Query SMS Inter	rval	24	hours				
Trust phone list							

### Apply Cancel

Name	Description	Default
Mode	SMS+IP Mode	
Vendor	Set Vendor Name	Default
Device ID	Set Device ID	
Server	Set Device Manager Server IP	
Port	Set Port For DM	9000
Login Retries	Set login retries	3
Heartbeat Interval	Set interval of heartbeat	120
Packet Receiving Timeout	Set packet receiving timeout	30
Packet Transmit Retries	Set packet transmit reties	3
Query SMS Interval	Set how long to check SMS	24
Trust phone list	Set trust cell phone list	

System	Network	Services	Firewall	QoS	VPN	Tools	Status
			D	TU			
Enable							
DTU Protocol		Transparen	t •				
Protocol		UDP -					
Mode		Client -					
Frame Interval		100 ms	econds				
Serial Buffer Fr	ames	4					
Multi-Server Po	licy	Parallel +					
Min Reconnect	interval	15 Se	conds				
Max Reconnect	interval	180 Se	conds				
DTUID			6946.00	1 C			
Source IP							
Aulti Server							
Server Address				Server Port			
							Add

Name	Description	Default
Enable	Click to enable DTU	Disable
DTU Protocol	Set DTU protocol, Please see more in related Quick	Transparent
	Guide	
Protocol	Optional between TCP/UDP	UDP
Work Mode	Set DTU as client or server	Client
DTU ID	Set ID of DTU	Blank
Multi Server	Set the IP address and Port of server to receive data.	Blank

### (6) SMS

		s	MS		
Enable					
Status Query	show status	(Engl	sh Only)		
Reboot	reboot	10 month	at Cast		
SMS Access Default Polic	Block	(Engi	sh Only)		
SMS Access		(Engi	Description		
SMS Access Default Polic	Block	(engi	Description		

Name	Description	Default
Enable	Click to enable SMS control	Disable
Status Query	Set Status Query SMS, and you can see status of	
	router by send SMS (e.g.: show status).	
Reboot	Let the router reboot	
SMS Access Control		
Default Policy	Block or Accept control SMS from certain Phone	Block
Phone List	Include phone numbers accepted or blocked to	
	send SMS to router	

# Notice: before using this function, please notice you have a SIM card with SMS function in the router, else, please contact local mobile operator.

SMS you will get in your mobile phone: Host: (SN); Uptime: (the uptime of router for this time of reboot); State: (Online/Offline) (Cellular WAN IP) LAN: (Up) (LAN IP)

### (7) LLDP (Link Layer Discovery Protocol)

System	Network	Services	Firewall	QoS	VPN	Tools	Status
			u	DP			
Enable Tx Interval		60 Se	conds				
Ap	oply Cancel						
Ap			C	Descriptio	on		Default
		Click to	C enable LLD		on		Default Disable

### 3.1.5 Firewall

This page is to set parameters concerned with firewall.

#### (1) Basic Configuration

System	Network	Services	Firewall	QoS	VPN	Tools	Status
			Ba	sic			
Default Filter P	Policy	Accept •					
Block Anonym Requests (pin)							
Filter Multicast							
Defend DoS A	flack						

Apply Cancel		
Name	Description	Default
Default Filter Policy	Optional between Accept /Refused	Accept
Block Anonymous WAN Request (ping)	Click to enable filer ping request	Disable
Filter Multicast	Click to enable filter multicast	Enable
Defend DoS Attack	Click to enable Defend DoS Attack	Enable

#### (2) Filtering

					Filtering				
Enable	Proto		Source	Source Por	1 Destination	Destination Port	Action	Log	Description
V	ALL	•	0.0.0.0/0				Accept -		
									Add

Name	Description	Default
Enable	Click to enable filtering	Blank
Protocol	Optional among TCP/UDP/ICMP	All
Source IP address	Set Source IP address	Blank
Source Port	Set Source Port	Blank
Destination IP	Set destination IP	Blank
Destination Port	Set destination port	Blank
Action	Accept/Deny	Accept
Log	Click to enable login	Disable
Description	Describe your configuration	Blank

### (3) Port Mapping

					Port Mapping				
Enable	Proto		Source	Service Port	Internal Address	Internal Port	Log	External Address(Optional)	Description
7	TCP	•	0.0.0.0/0	8080		8080			
									Add

Name	Description	Default
Enable	Click Enable Port Mapping	Disable
Source	To fill with source IP	0.0.0/0
Service Port	Fill the port of service	8080
Internal Address	Set the internal IP for mapping	Blank
Internal Port	Set the Port mapping to internal	8080
Log	Click to enable log about port mapping.	Disable
Description	Describe meanings of each mapping	Blank

### (4) Virtual IP Mapping

				Virtu	al IP Mappin	9		
Intual IP (	or Router		-					
iource IP			-			1		
nable Vir	val IP	Real IP	Log		Description			
7								
								Add
								Ad

An internal PC's IP can match to a virtual IP, and external network can access to internal PC via this virtual IP address.

Name	Description	Default
Virtual IP for Router	Set Virtual IP for Router	Blank
Source IP Range	Set range of source IP address	Blank
Virtual IP	Set virtual IP	Blank
Real IP	Set real IP	Blank
Log	Enable logging concerned with virtual	Disable
	IP	
Description	Describe this configuration	Blank

### (5) DMZ (All Port Mapping)

DM2	
Enable DMZ V DMZ Host	
Source Address Range (Optional Example: "1.1.1,1", " 2.2.2.2")	1.1.1.0/24", "1.1.1.1.1 -

Mapping all the ports and then external PC can get access to all the ports of internal device behind

### TK700.

### Attention: this function cannot help to map the admin port of TK700 (e.g.: 80 TCP) to the device's

### port.

Name	Description	Default
Enable DMZ	Click to Enable DMZ	Disable
DMZ Host	Set host IP of DMZ	Blank
Source Address Range	Set IP address with restrict IP access	Blank

### (6) MAC-IP Bundling

			MAC-IP E	Bundling		
MAC Address	IP Address	Des	cription			
00:00:00:00:00:00	192.168.2.2					
						Add

When firewall denies all access to the external network, only PC with MAC-IP Bundling can access to external network

Name	Description	Default
MAC Address	Set Bundling Mac address	Blank
IP Address	Set Bundling IP address	192.168.2.2
Description	Describe this configuration	Blank

### 3.1.6 QoS

System	Network	Services	Firewall	QoS	VPN	Tools	Status
			Bandwidt	th Control			
Enable Outbound Lim	F May BM	100000					
Inbound Limit		100000	kbible				
Apply	Cancel						
Name			Descr	iption			Default
		Click t	o enable	•	D	isable	

Enable	Click to enable	Disable
Outbound Limit Max	Set the limit speed of out- bound	100000kbit/s
Bandwidth	bandwidth	
Inbound Limit Max	Set the limit speed of inbound	100000kbit/s
Bandwidth	bandwidth	

### 3.1.7 VPN

This page introduces the parameters set in TK Router 700's Web.

### (1) IPSec Settings

To build an IPSec VPN Tunnel, you need first set IPSec properties in this page, then turn to IPSec Tunnels to add your VPN:

System	Network	Services	Firewall	QoS	VPN	Tools	Status
			IPSec	Settings			
Enable NAT-T	raversal (NATT)						
Keep alive time NATT	Keep alive time interval of						
Enable Compr	ession						
Debug							
Force NATT							
Dynamic NATT	Port						
Apply	Cancel						
			IPSoc S	ettings			
			II Sec 3	ettings			
Description: 1. Select t	o Enable or Dis	sable NAT			nable, unle	ss you ensure	there is no NAT routers
Description: 1. Select t		sable NAT			nable, unle	ss you ensure	there is no NAT routers
in the ne			T, normally w	ve need to e	nable, unle	ss you ensure	there is no NAT routers
in the ne	etwork. to enable Com		T, normally w Mode or Deb	ve need to e	nable, unle	ss you ensure	there is no NAT routers Default
in the ne 2. Select	etwork. to enable Com	pression N	T, normally w Mode or Deb	ve need to e ug cription	nable, unle	ss you ensure Enable	
in the ne 2. Select Name	etwork. to enable Com	pression N	T, normally w Mode or Deb <b>Des</b> o	ve need to e ug cription	nable, unle	-	
in the ne 2. Select Name Enable NAT Transversa	etwork. to enable Com : I	pression N Click	T, normally w Mode or Deb <b>Des</b> o	ug Cription	nable, unle	-	
in the ne 2. Select Name Enable NAT Transversa (NATT)	etwork. to enable Com : I	Pression N Click	T, normally w Mode or Deb Desc to enable N	ug Cription	nable, unle	Enable	
in the ne 2. Select of Name Enable NAT Transversa (NATT) Keep alive time interva	etwork. to enable Com : I	Click Set li Click	T, normally w Mode or Deb Deso to enable N ve time for N	ug Cription	nable, unle	Enable 60 sec	

### (2) IPSec Tunnels



🔬 5 Seconds 🔹 Stop

Click "Add" and enter the configuration web:

	Network	Services	Firewall	QoS	VPN	Tools	Status
Edit IPSec tuni			IPSec T	unnels			
Show Advanc	ed Options						
<b>Basic Parame</b>	ters						
Tunnel Name		IPSec_tunne	1_2				
Destination A	ddress	0.0.0.0					
Startup Mode	15	Auto Activat	ed 👻				
Restart WAN	when failed						
Negotiation M	lode	Main Mode	*				
IPSec Protoc	ol	ESP ·					
IPSec Mode		Tunnel Mod	e 🔹				
Tunnel Type		Subnet - Sub	onet ·				
Local Subnet		192.168.2.1					
Local Netmas	uK (	255.255.255.	0				
Remote Subr	net .	0.0.0.0					
Remote Netr	ussk	255.255.255.	0				
Phase 1 Para	meters						
IKE Policy		3DES-MD5-	DH2 -				
IKE Lifetime		86400	Second	25			
Local ID Type		IP Address					
Remote ID Ty		IP Address					
Authenticatio		Shared Key					
Кеу			1				
XAUTH Param							
XAUTH Mode							
Phase 2 Para		1000					
IPSec Policy		3DES-MD5-	96 👻				
PSec Lifetm		3600	Second	25			
	ard Serecy(PFS)						
	n Parameters						
DPD Time Int		60	Second	ds(0. disable)			
DPD Timeout		180	Second				
ICMP Detects							
ICMP Delecti							
ICMP Detects		60 S	econds				
ICMP Delecte			econds				
Sere Seres	on Retries	10					

Name	Description	Default	
Show Advanced Options	Click to enable advanced options	Disable	
	Basic Parameters		
Tunnel Name	To name the tunnel	IPSec_tunnel_1	
Destination Address	Set the destination address of IPSec VPN Server	Blank	
Startup Mode	Auto Activate/Trigged by Data/Passive/Manually	Enable	
	Activated		
Negotiation Mode	Optional: Main Mode or	Main Mode	
	Aggressive Mode		
IPSec Mode	Optional: ESP or AH	ESP	
(Enable Advanced options)			
IPSec Mode	Optional: Tunnel Mode or Transport Mode	Tunnel Mode	
(Enable Advanced options)			
Tunnel Type	Optional:	Subnet——Subnet Mode	
	Host—Host, Host—Subnet, Subnet—Host,		
	Subnet——Subnet		
Local Subnet	Set IPSec Local Protected Subnet	192.168.2.1	
Local Subnet Net Mask	Set IPSec Local Protected Subnet Net Mask	255.255.255.0	
Remote Subnet Address	Set IPSec Remote Protected Subnet	Blank	
Remote Subnet Net Mask	Set IPSec Remote Protected Subnet Net Mask	255.255.255.0	
	Phase 1 Parameters		
IKE Policy	Optional: 3DES-MD5-96 or AES-MD5-96	3DES-MD5-96	
IKE Lifetime	Set IKE 的 Lifetime	86400 sec	
Local ID Type	Optional: FQDN, USERFQDN, or IP Address	IP Address	
Local ID (Only for FQDN 和 USERFQDN)	Set the ID according to ID type	Blank	
Remote ID Type	Optional: FQDN,	IP Address	
	USERFQDN, or IP Address		
Remote ID (Only for FQDN and USERFQDN)	Set the ID according to ID type	Blank	
Authentication Type	Optional: Shared Key or Certificate	Shared Key	
Key (While choosing Shared Key	Set IPSec VPN Negotiation Key	Blank	
Authentication Type)			
	Phase 2 Parameters		
IPSec Policy	Optional: 3DES-MD5-96 or AES-MD5-96	3DES-MD5-96	
IPSec Lifetime	Set IPSec Lifetime	3600sec	
Perfect Forward Secrecy (PFS)	Optional: Disable, GROUP1, GROUP2, GROUP5	Disable ((Enable Advanced options)	
	Link Detection Parameters (Enable Advanced option	ns)	
DPD Time Interval	Set DPD Time Interval	60sec	
DPD Timeout	Set DPD Timeout	180sec	
ICMP Detection Server	Set ICMP Detection Server	Blank	
ICMP Detection Local IP	Set ICMP Detection Local IP		
ICMP Detection Interval	Set ICMP Detection Interval	30sec	
ICMP Detection Timeout	Set ICMP Detection Interval	5sec	
ICMP Detection Max Retries	Set ICMP Detection Max Retries	3	

### (3) GRE Tunnels

					GRE Tun	nels				
Enatile	Name	Local virtual	Peer Address	Remote virtual IP	Remote Subnet	Remote Netmask	Key	NAT	Advanced Route	Description
7	tun0	0.0.0.0	0.0.0.0	0.0.0.0	0.0.0.0	255.255.255.0				
										Add

	GRE Tunnels	
Name	Description	Default
Enable	Click Enable	Enable
Tunnel Name	Set GRE Tunnel Name	tun0
Local Virtual IP	Set Local Virtual IP	0.0.0.0
Remote Address	Set Remote Address	0.0.0.0
Remote Virtual IP	Set Remote Virtual IP	0.0.0.0
Remote Subnet Address	Set Remote Subnet Address	0.0.0.0
Remote Subnet Net Mask	Set Remote Subnet Net Mask	255.255.255.0
Кеу	Set Tunnel Key	Blank
NAT	Click Enable NAT Function	Disable
Description	Add Description	Blank

### (4) L2TP Clients

System	Network	Services	Firewall	QoS	VPN	Tools	Status
	228		L2TP (	lients			
Edit L2TP Tuni	nel						
Enable							
Tunnel name		L2TP_tunnel_	1				
L2TP Server							
Usemane							
Password		Ε					
Startup Modes	8	Auto Activate	d 🔹				
Authentication	Type	CHAP +					
Enable Challe	nge Secrets						
Local IP Addre	155						
Remote IP Add	dress						
Remote Subne	et						
Remote Netma	nsk	255.255.255.0	0				
Link Detection	interval	60	Secon	15			
Max Retries fo	r Link Detection	5					
Enable NAT							
MTU		1500					
MRU		1500					
Enable Debug	l'						
Expert Options	s(Expert Only)						

Name	Description	Default
Enable	Click Enable	Enable
Tunnel Name	Set Tunnel Name	L2TP_TUNNEL_1
L2TP Server	SetL2TP Server Address	Blank
Username	Set Server Username	Blank
Password	Set Server Password	Blank
Server Name	Set Server Name	l2tpserver
Startup Modes	Set Startup Modes: Auto Activated,	Auto Activated
	Trigged by Data, Manually Activated	
Authencation Type	Set Authencation Type: CHAP, PAP	СНАР
Enable Challenge secrets	Set to enable Challenge secrets	Disable
Local IP Address	Set Local IP Address	Blank
Remote IP Address	Set Remote IP Address	Blank
Remote Subnet	Set Remote Subnet	Blank
Remote Subnet Net Mask	Set Remote Subnet Net Mask	255.255.255.0
Link Detection Interval	Set Link Detection Interval	60
Max Retries for Link Detection	Set Max Retries for Link Detection	5
Enable NAT	Click Enable NAT	Disable
MTU	Set MTU parameters	1500
MRU	Set MRU parameters	1500
Enable Debug Mode	Click Enable Debug Mode	Disable
Expert Options	Set Expert Options	Blank

### (5) PPTP Clients

System	Network	Services	Firewall	QoS	VPN	Tools	Status
	5 Q		PPTP	lients			
Edit PPTP Tun	nel						
Enable							
Tunnel name		PPTP_TUN	INEL_1				
PPTP Server							
Usemame			1				
Password							
Startup Modes	-	Auto Activa	ted 🝷				
Authentication	Type	Auto	*				
Local IP Addre	55						
Remote IP Add	tress						
Remote Subne	at .						
Remote Netma	tsR	255.255.255	.0				
Link Detection	interval	60	Secon	15			
Max Retries fo	r Link Detection	5					
Enable NAT							
Enable MPPE							
Enable MPPC							
MTU		1500					
MRU.		1500					
Enable Debug							
Expert Options	(Expert Only)					11	

Name	Description	Default
Enable	Click Enable	Enable
Tunnel Name	Set Tunnel Name	PPTP_TUNNEL_1
PPTP Server	Set PPTP Server Address	Blank
Username	Set Server Username	Blank
Password	Set Server's Password	Blank
Startup Mode:	Set Startup Modes: Auto Activated, Trigged by Data, Manually Activated	Auto Activated
Authencation Type	Set Authencation Type: CHAP, PAP, MS-CHAPv1, MS-CHAPv2	Auto
Local IP Address	Set Local IP Address	Blank
Remote IP Address	Set Remote IP Address	Blank
Remote Subnet	Set Remote Subnet	Blank
Remote Subnet Net Mask	Set Remote Subnet Net Mask	255.255.255.0
Link Detection Interval	Set Link Detection Interval	60
Max Retries for Link Detection	Set Max Retries for Link Detection	5
Enable NAT	Click Enable NAT	Blank
Enable MPPE	Click Enable MPPE	Blank
Enable MPPC	Click Enable MPPC	Blank
MTU	Set MTU parameters	1500
MRU	Set MRU parameters	1500
Enable Debug Mode	Click Enable Debug Mode	Blank
Expert Options	For experts only	Blank

### (6) Open VPN Tunnels

In the configuration WEB of 700, select "VPN"=> "Open VPN Tunnels" as below:

System	Network	Services	Firewall	QoS	VPN	Tools	Status
			OpenVPN	Tunnels			
nable Name	ħ	mael Description			Tunnel S	tatus	Conneted Time
	Add	Show Detail S	Itatus				

Click "Add" to add a new Open VPN tunnel:

			OpenVPM	1 Tunnels		
dit OPENVPN Tun						
funnel name		OpenVPN_T_1				
Enable						
lode		Client -				
Protocol		UDP -				
ort		1194				
PENVPN Server			1			
uthentication Type	Ð	User/Password	10 💌			
Usemame		test				
Password						
Remote Subnet Remote Netmask		192.168.8.0 255.255.255.0				
ink Detection inter	val	60	Secon	ds		
nk Detection Time	tuos	300	Secon	ds		
negotiate Interva	i.	86400	Secon	ds		
able NAT able LZO						
ncryption Algorithm	TIS -	Blowfish(128)				
TU		1500				
ax Fragment Size						
ebug Level		Warn -				
erface Type		TUN +				

Name	Description
Tunnel name	Can't be set
Enable	Enable this configuration
Mode	Client or Server
Protocol	UDP or TCP
Port	Import or Export Certificate (CRL)
OPEN VPN Server	OPEN VPN Server's IP or DNS
Authencation Type	(1) None for host to host connection (not available when 700 as server)
	(2) Pre-shared Key for host to host connection (not available when 700 as server)
	(3) User/Password For multi users to access
	CA needed: Client: root CA (ca.crt)
	Server: root CA (ca.crt), public key (pub.crt), private key
	(pri.key)
	(4) X.509 Cert (multi-client) CA mode for multi users to access
	CA needed: Client: root CA (ca.crt), public key (pub.crt), private key
	(pri.key)
	Server: root CA (ca.crt), public key (pub.crt), private key
	(pri.key)
	(5) X.509 CertCA mode for host to host tunnel
	CA needed: Client: root CA (ca.crt), public key (pub.crt), private key
	(pri.key)
	Server: root CA (ca.crt), public key (pub.crt), private key
	(pri.key)
	(7) User+X.509 modeusername + password + CA certificate

	CA needed: Client: root CA (ca.crt), public key (pub.crt), private key (pri.key) Server: root CA (ca.crt), public key (pub.crt), private key (pri.key)
Pre-shared Key	Set shared key or TLS-AUTH static password
Remote Subnet, Remote Net mask	Set the static route of the router, always towards the subnet of its peer
Link Detection Interval, Link Detection Timeout	Always use default
Renegotiate Interval	Always use default
Enable NAT	Set NAT mode, meanwhile it will disable route mode
Enable MPPE	Enable MPPE, always set in server
Enable LZO	Enable LZO compression
Encryption Algorithms	Set encryption algorithms, must match with the server
MTU, Max Fragment Size	Always use default

### (8) Open VPN Advanced

This configuration page is only used for the Open VPN Server.

10000	560 G 660	second de la	A ADDRESS AND A DOUBLE				NOTION: CAR	aren e	need legens to
				Oper	VPN Advanc	ed			
nable	Client-to-Clie	ent (Server	Darra -						
Node (	Only)	<							
Node (	Only)	t Usemame/C			Client IP(4th t 4n+1)	yte must be	Local Static Roat	te Remot	e Static Roet

### Apply Cancel

Name	Description					
Enable Client-to-Client	Enable client access to other clients					
	Client Management					
Tunnel Name	Tunnel Name of the Client					
Username/Common Name	Username (using Username/password mode) or Common Name in CA (CA					
	mode)					
Local Static Route	The client subnet					
Remote Static Route	The server subnet					

Attention: CA can only be produced by customer's PC; TK Router 700 cannot produce CA.

### (9) Certificate Management

System	Network	Services	Firewall	QoS VPI	N Tools	Status
ertificate Ma	inagement		Certificate	Management		
Enable SCEP Certificate Enr Protect Key	(Simple oliment Protocol)					
Protect Key C	onfirm					
		Du	rchsuchen_	Import CA Certificate	Expor	t CA Certificate
		Du	rchsuchen	Import CRL	E	xport CRL
		Du	rchsuchen_	Import Public Key Certifi	cate Export Pu	blic Key Certificate

Name	Description	Default
Enable SCEP	Click Enable	
(Simple Certificate Enrollment		
Protocol)		
Certificate Protected Key	Set Certificate Protected Key	Blank
Certificate Protected Key Confirm	Confirm Certificate Protected Key	Blank
Import/Export CA Certificate	Import or Export (CA) Certificate	Blank
Import/Export Certificate (CRL)	Import or Export Certificate (CRL)	Blank
Import/Export Public Key Certificate	Import or Export Public Key Certificate	Blank
Import/Export Private Key Certificate	Import or Export Private Certificate	Blank

### 3.1.8 Tools

Tools contain PING Detection, Route Trace, Link Speed Test and etc.

### (1) PING

System	Network	Services	Firewall	QoS	VPN	Tools	Statu
			PI	NG			
Host				Ping			
Ping Count		4					
Packet Size		32	Bytes				
Expert Options							

Name	Description	Default
Host	Destination for PING	Blank
Ping Count	Set PING Counts	4 times
Packet Size	Set PING Packet Size	32 Bytes
Expert Options	Advanced parameters	Blank

### (2) Trace Route

System	Network	Services	Firewall	QoS	VPN	Tools	Status
			Trace	route			
Host				Trac	e		
Maximum Hops		20					
Timeout		3 Sec	onds				
Protocol		UDP +					
Expert Options							

Name	Description	Default		
Host	Destination for Trace Route	Blank		
Max Hops	Set Max Hops	20		
Time Out	Set Time Out	3 sec		
Protocol	Optional: ICMP/UDP	UDP		
Expert Options	Advanced parameters	Blank		

### (3) Link Speed Test

System	Network	Services	Firewall	QoS	VPN	Tools	Status
			Link Sp	eed Test			
		Du	rchsuchen.	upload	download		

Test link speed via unload or download

### 3.1.9 Status

Status contains System, Modem, Network Connections, Route Table, Device List and Log.

### (1) System Status

we	Help							
	_		Welcome to use! More Help					
System	Network	Services	Firewall	QoS	VPN	Tools	Status	Copyright @1969-2011. Weloted
			System	Status				GmbH
Name		Router						
Serial Number		RW7941005	5119806					
Description		TK7 series						
Current Version		1.3.4.r2101						
Current Bootloa	der Version	1.1.6.11742						
Router Time		2011-05-16	15 22 19					
PC Time		2011-05-16	15:17:00 Sy	nc Time				
Up time		0 day, 00 04	1.12					
CPU Load (1/5/	15 minė)	0.07/0.04/	0.01					
Memory consum Total/Free	ption	13.35MB / 3	184 00KB (23	30%)				

This page shows the status of system, including Name, Model Type, Current Version and etc.

### (2) Modem Status

System	Network	Services	Firewall	QoS	VPN	Tools	Status
			Mo	dem			
lalup							
Modem Type		Auto detect					
Status		unknown					
Manufacturer							
Product							
Signal Level		. (0)					
Register Statu	5	no registere	đ				
IMEI(ESN) Cod	ie .						
IMSI Code							
Network Type							
PLMN							
LAC							
Cell ID							

This page shows the status of Modem, including the signal level.

### (3) Network Connections

System	Network	Services	Firewall	QoS	VPN	Tools	Status		
WAN			Network Co	onnections					
MAC Address		00.04 25 00	OF AD						
Connection T			dress (DHCP)						
IP Address		192 168 111							
Netmask		255 255 255 0							
Gateway		192 168 111 1							
DNS		192 168 111	4,192,168,111	1.1					
NTU		1500							
Status		Connected							
Connection tir	ne	0 day, 04 20	28						
Remainding L	ease	7 days, 19.3							
Renew R									
I Kellew   N	elease								
Dialup									
Connection T	ype	Disabled							
IP Address		0.0.0							
Netmask		0000							
Gateway		0.00.0							
DNS		0000							
MTU		1500							
Status		Disconnecte	bd -						
Connection tir	ne								
LAN									
MAC Address		00 04 25 00	9F A2						
<b>IP Address</b>		192 168 2 1							
Netmask		255.255.255	5.0						
in internet		1500							
MTU		1000							

This page shows the network connections via WAN or LAN

#### (4) Route Table

System	Network	Services	Firewall	QoS	VPN	Tools	Status
			Route	Table			
Destination	Netmask	Gateway	Metric	Interface			
192 168 3.0	255 255 255 0	0.0.0.0	D	dm20			
192.168.2.0	255 255 255 0	0.0.00	0	Lan0			
192.168.111.0	255 255 255 0	0.0.00	0	wan0			
127,0.0.0	255,0.0.0	0.0.0.0	0	10			
detault	0.0.0	192,168 111 1	0	wan0			

```
3 Seconds Stop
```

This page shows the route table of TK700.

### (5) Device List

System	Network	Services	Firewall	QoS	VPN	Tools	Status
			Device	List			
Interface	MAC Address		IP Address	Host			Lease
Ontw	00:A0:57:10:01:9A		192.168.111.1				
wan0	00:25:B3:99:52:1D		192.168.111.4				
wand	A4:BA:DB:FD:A6:71		192.168.111.102				
wan0	00:25:11:CB:3D:7B		192.168.111.121				

This page shows the devices linked with TK700.

#### (6) Log

				2000			
				Log			
/iew	recent	20	• Lines				
Level	Time	Module	Content				
			Too many logs, old	logs are not displayed.	Please download	log file to check more	e logs!
info .	May 17 13:52:26	pluto(831)	no secrets filename	matched "/etclpsec.se	crets"		
info	May 17 13:52:26	ipsecwatcher[830]	generating IPSec se	crets file			
oto	May 17 13:52:26	ipsecwatcher[830]	ipsec tunnel IPSec_	tunnel_1; dst 0.0.0.0, d	st_id., src_id., ro	ad_warner: 1	
nto	May 17 13:52:26	pluto[831]	loading secrets from	n "/etc/ipsec.secrets"			
nfo	May 17 13:52:26	pluto[831]	discarded CA cert fil	e 'ca.cit', bad size 0 byte	18		
oto	May 17 13:52:26	pluto(831)	discarded crl file 'ca	crl, bad size 0 bytes			
nfo	May 17 13:53:24	InAgent	Sent heartbeat(lost)	0/sent1)			
nto	May 17 13:53:24	InAgent	Recy packet from AP	cmd=0x8003, sensor	0x0, len=32)		
nfo	May 17 13:53:24	InAgent	Recieved a heartbea	at ack			
nto	May 17 13:54:24	InAgent	Sent heartbeat(lost)	0/sent:2)			
nfo	May 17 13:54:24	InAgent	Recy packet from AP	[cmd=0x8003, sensor.	0x0, len=32]		
nfo	May 17 13:54:24	InAgent	Recieved a heartbea	at ack			
nfo	May 17 13:54:48	httpd[1029]	adm login from 192	168.111.102			
nfo l	May 17 13:55:24	InAgent	Sent heartbeat(lost)	0/sent:3)			
nfo	May 17 13:55:24	InAgent	Recy packet from AF	cmd=0x8003, sensor	0x0, len=32]		
ote	May 17 13:55:24	InAgent	Recieved a heartbea	at ack			
nto	May 17 13:56:24	inAgent	Sent heartbeat(lost)	0/sent:4)			
oto	May 17 13:56:24	InAgent	Recy packet from AP	[cmd=0x8003, sensor.	0x0, len=32]		
nto	May 17 13:56:24	InAgent	Recieved a heartbea	af ack			
			Clear Log	Download Log	File Down	load System Diagr	nosing Data

This page shows the log of system, including download log file.

For some situation when there're some problems that can't be diagnosed at the moment, you'll be asked to provide the diagnose log to Welotec engineers, you can click "Download System Diagnosing Data" then send the diagnose log to us.

## 3.2 Support

In case you have problems with the installation and use, please address them to us by e-mail: <u>info@welotec.com</u>.

Subject to alterations without notice.