



Dual SIM Industrial Cellular VPN Router

for GPRS/EDGE/UMTS/HSPA Networks



8E4571 _ 3G Industrial Router VPN Pro

Quick Guide

7D1987 rev. 1.1 07/2017

INDEX

PREFACE	II
SIMPLIFIED UE DECLARATION OF CONFORMITY	II
SAFETY WARNINGS	III
1. INTRODUCTION	1.1
1.1. OVERVIEW	1.1
1.2. PACKING LIST	1.1
1.3. SPECIFICATIONS	1.1
1.4. DIMENSIONS	1.2
2. INSTALLATION	2.1
2.1. LED INDICATORS	2.1
2.2. PIN ASSIGNMENT	2.1
2.3. RESET BUTTON	2.2
2.4. ETHERNET PORT	2.2
2.5. MOUNTING THE ROUTER	2.2
2.6. INSTALL THE SIM CARD	2.2
2.7. CONNECT THE EXTERNAL ANTENNA (SMA TYPE)	2.3
3. CONFIGURATION SETTINGS OVER WEB BROWSER	3.1
3.1. FACTORY DEFAULT SETTINGS	3.1
3.2. CONTROL PANEL	3.1
3.3. STATUS -> SYSTEM	3.2
3.4. STATUS -> NETWORK	3.4
3.5. CONFIGURATION -> CELLULAR WAN	3.4
3.6. CONFIGURATION -> ETHERNET	3.9

For further details on the functionalities, the parameters and the conditions of use, please refer to the complete User's Guide available online on www.digicom.it

INFORMATION TO USERS

according to Art. 26 "Information to Users" - **Legislative Decree 14 March 2014, n. 49 "Actuation of the Directive 2012/19/UE on the waste of electrical and electronic devices (RAEE)."**



The symbol of a crossed waste container marked on the apparatus or on its package indicates that at the end of its useful life the product must be collected separately from other waste materials.

The user must therefore take the apparatus which has reached the end of its useful life to appropriate separate collection centres for electronic and electro-technical waste materials, or deliver it back to the reseller when purchasing a new apparatus of an equivalent type for a domestic unit, giving one piece in for one piece out, according to Art. 11, paragraph 3 of the above mentioned Legislative Decree.

Furthermore, as per Art.11, paragraph 3 of the above mentioned Legislative Decree it is possible, in the sale point, the free insertion of recyclable materials into appropriate receptacle, without any purchasing obligation for the very small size RAEE, coming from domestic units. Suitable separate waste collection for then sending the cast-off apparatus for recycling, treatment and environmentally friendly disposal, contributes towards preventing any possible negative effects on the environment and on health and encourages recycling of the materials the apparatus is made up of.

Unauthorised disposal of the product by the user will lead to payment of the administrative sanctions in force in the country where it is put on the market.

All rights reserved; no part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, otherwise, without the prior written permission of Digicom S.p.A. The contents of this booklet may be modified without notice. Every possible care has been taken in testing and putting together all the documentation contained in this booklet, however Digicom S.p.A. can not take any responsibility brought by the use of this booklet.

PREFACE

In order to guarantee your safety and a correct functioning, be sure to follow these safety warnings. The whole set (with cables included) must be installed in a place lacking of or distant from:

- Dust, humidity, high temperatures and direct exposure to sunlight.
- Heat irradiating objects, which may damage your device or cause any other problem.
- Objects producing a high electromagnetic field (Hi-Fi speakers, etc.).
- Corrosive liquids or chemical substances.

ENVIRONMENTAL CONDITIONS

Environment temperature: from -25° C to +70°C Relative humidity: from 5% to 95% RH

CLEANING INFORMATION

Use a soft dry cloth and avoid any solvents or abrasive materials.

SHOCKS OR VIBRATIONS

Caution against shocks or vibrations.

SIMPLIFIED UE DECLARATION OF CONFORMITY

The manufacturer, Digicom S.p.A., declares that this radio equipment **Dual SIM Industrial Cellular VPN Router** is compliant with Directive 2014/53/UE.

The complete text of UE Declaration of Conformity is available at following internet address: www.digicom.it

ASSISTANCE AND CONTACTS

Most of questions can be answered by looking up in the Support > F.A.Q. section of our website at www.digicom.it.

If you can't find the answer you're looking for, please contact our Technical Support at support@digicom.it

SAFETY WARNINGS

Read these instructions and norms carefully before powering the device. Violation of such norms may be illegal and cause hazard situations. For any of the described situations please refer to the specific instructions and norms.

The device is a low power radio transmitter and receiver. When it is ON, it sends and receives radio frequency (RF) signals.

The device produces magnetic fields. Do not place it next to magnetic supports such as floppy disks, tapes, etc.

Operating your device close to other electrical and electronic equipment - such as a television, phone, radio or a personal computer - may cause interferences.



INTERFERENCES

The device, like all other wireless devices, is subject to interferences that may reduce its performances.



ROAD SAFETY

Do not use your device while driving. In case of use on cars, you must check that the electronic equipment is shielded against RF signals. Do not place the device in the air bag deployment area.



AIRCRAFT SAFETY

Switch off your device when on board aircrafts by disconnecting the power supply and deactivating the internal backup battery. Using GSM devices on aircrafts is illegal.



HOSPITAL SAFETY

Do not use the device near health equipment, especially pacemakers and hearing aids, in order to avoid potential interferences. Take care when utilizing the device inside hospitals and medical centres, which make use of equipment that could be sensitive to external RF signals. Switch it off when use is expressly forbidden.



EXPLOSIVE MATERIALS

Do not use the device in refuelling points, near fuel or chemicals. Do not use the device where blasting is in progress. Observe restrictions and follow any specific regulation or instruction.



INSTRUCTIONS FOR USE

Do not use this device in direct contact with the human body and keep a minimum distance of 20 cm from it and from the antenna. Use approved accessories only. Consult the user's manual of eventual other equipment connected to this device. Do not connect incompatible products.

WARRANTY CLAUSES

- The product is under warranty for a period of 24 (twenty-four) months from the date of purchase. Digicom undertakes to remedy any defects, lack of quality or non-conformity of the product as stated in the sale contract (and generally in the information on the products) with the repair or the replacement of the product without charging any expense for the labor and for the material.
- The warranty is effective only in case the request for repair under warranty comes with the valid proof of the purchase (receipt or invoice).
The broken product must be delivered in the original package with all the accessories.
- The serial number on the product must not be cancelled or erased in any way; failing this condition the purchaser's right to claim for the warranty will be forfeited.
- The warranty is not applicable in case of damages caused by negligence, improper installation/use/care, tampering, modifications of the product or of the serial number, damages due to accidental causes or to the negligence of the customer, particularly referred to the external parts.
Furthermore the warranty is not applicable in case of fault due to wrong connections (i.e. a voltage different from the one indicated on the product) or due to a sudden change in the network voltage to which the product is connected, as well as in case of fault caused by infiltration of liquids, fire, inductive/electrostatic discharges or discharges caused by lightnings, overvoltage or other phenomenon not depending on the device.
- The parts of the product subject to wear and tear are not covered by the warranty, like the battery when supplied, the connection cables, the connectors, the external parts and the plastic support, unless they present a factory defect.
- Periodical controls, software updates, settings and maintenance are not under warranty.
- When the warranty period expires, the replaced parts, the expenses for labor and transportation will be invoiced according to the current rates.
- The warranty of Digicom products must be required directly to the Reseller/Company or to the Distributor where the product has been purchased.

1. INTRODUCTION

Congratulations for choosing Digicom product.

Digicom S.p.A. 3G Industrial Router VPN Pro is a rugged cellular router offering state-of-the-art mobile connectivity for machine to machine (M2M) applications.



1.1. OVERVIEW

- Dual SIM redundancy for continuous cellular connections, supports 2G/3G/4G.
- VPN tunnel: IPSec/OpenVPN/PPTP/L2TP/GRE.
- Supports Modbus gateway (Modbus RTU/ASCII to Modbus TCP).
- Auto reboot via SMS/Caller ID/Timing.
- Flexible Management methods: Web/CLI/SNMP.
- Firmware upgrade via Web/CLI/USB/SMS.
- Various interfaces: RS232/RS485 /USB/Ethernet.
- Wide range input voltages from 9 to 26 VDC and extreme operating temperature.
- The metal enclosure can be mounted on a DIN-rail or on the wall.

1.2. PACKING LIST

Check your package to make sure it contains the following items:

- Digicom S.p.A. 3G Industrial Router VPN Pro router x 1
- 3-pin pluggable terminal block with lock for power connector x 1
- This Quick Guide x 1
- SMA antenna with 3 mt cable (Stubby antenna or Magnet antenna optional) x 1
- Ethernet cable x 1
- 35mm Din-Rail mounting kit
- AC/DC Power Supply Adapter (12VDC, 1 A) x 1



1.3. SPECIFICATIONS

Cellular Interface

3G/2G Module

- UMTS/HSDPA/HSUPA Quad-Band:
 - Band 5 (850 MHz)
 - Band 8 (900 MHz)
 - Band 2 (1900 MHz)
 - Band 1 (2100 MHz)
- GSM/GPRS/EDGE Quad-Band:
 - GSM 850 MHz - E-GSM 900 MHz - DCS 1800 MHz - PCS 1900 MHz
- UMTS/HSDPA/HSUPA Power Class:
 - Power Class 3 (24 dBm) for UMTS/HSDPA/HSUPA mode
- GSM/GPRS Power Class
 - Power Class 4 (33 dBm) for GSM/E-GSM bands
 - Power Class 1 (30 dBm) for DCS/PCS bands
- EDGE Power Class
 - Power Class E2 (27 dBm) for GSM/E-GSM bands
 - Power Class E2 (26 dBm) for DCS/PCS bands
- SIM: 2 x (3V & 1.8V)
- Antenna Interface: SMA Female

Ethernet Interface

- Number of Ports: 1 x 10/100 Mbps
- Magnet Isolation Protection: 1.5KV

Serial Interface

- Number of Ports: 1 x RS-232 and 1 x RS-485
- ESD Protection: $\pm 15\text{KV}$
- Parameters: 8E1, 8O1, 8N1, 8N2, 7E2, 7O2, 7N2, 7E1
- Baud Rate: 300bps to 230400bps
- RS-232: Tx/D, Rx/D, RTS, CTS, GND
- RS-485: Data+ (A), Data- (B), GND
- Interface: DB9 Female

System

- LED Indicators: RUN, PPP, USB, 3 x RSSI
- Built-in RTC, Watchdog, Timer
- Expansion: 1 x USB 2.0 host up to 480 Mbps

Software

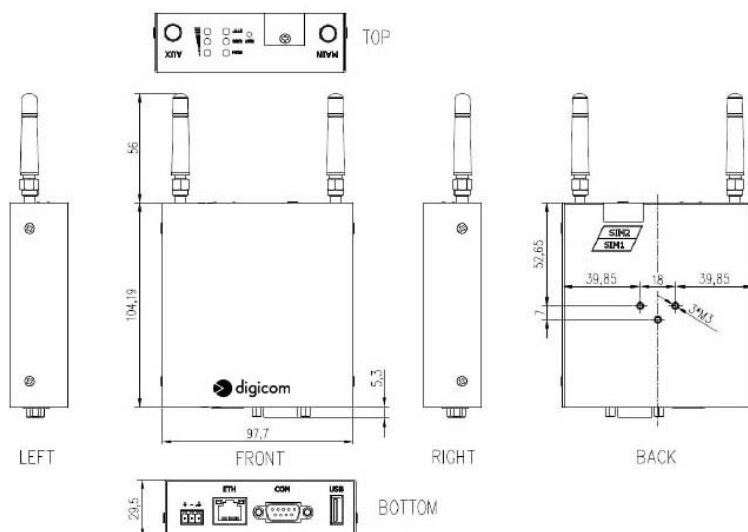
- Network protocols: PPP, PPPoE, TCP, UDP, DHCP, ICMP, NAT, DMZ, RIP v1/v2, OSPF, DDNS, VRRP, HTTP, HTTPS, DNS, ARP, QoS, SNMP, Telnet, etc
- VPN tunnel: IPSec/OpenVPN/PPTP/L2TP/GRE
- Firewall: SPI, anti-DoS, Filter, Access Control
- Management: Web, CLI, SNMP v1/v2/v3, SMS,
- Serial Port: TCP client/server, UDP, Modbus RTU/ASCII to Modbus TCP, Virtual COM (COM port redirector)
- Centralized M2M management platform

Power Supply and Consumption

- Power Supply Interface: 3.5mm terminal block
- Input Voltage: 9 to 26 VDC
- Power Consumption: Idle: 100 mA @ 12 V
- Data Link: 1 A (peak) @ 12 V

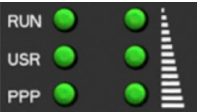
Physical Characteristics

- Housing & Weight: Metal, 300g
- Dimension: (L x W x H): 105 x 100 x 30mm
- Installation: 35mm Din-Rail or wall mounting or desktop

1.4. DIMENSIONS

2. INSTALLATION

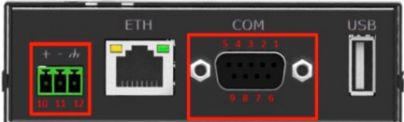
2.1. LED INDICATORS



NAME	COLOR	STATUS	FUNCTION
RUN	Green	Blinking	Router is ready
		On	Router is starting
		Off	Router is power off
USR	Green	On/Blinking	VPN tunnel/PPPoE/DynDNS/GPS is up
		Off	VPN tunnel/PPPoE/DynDNS/GPS is down
PPP	Green	Blinking	Null
		On	PPP connection is up
		Off	PPP connection is down

RSSI LEDS (SIGNAL LEVEL)	FUNCTION
None	No signal or SIM card not installed properly
1 bar (Only the first LED is on)	Signal level: 1-10 (Poor signal level)
2 bars (The first and the second LED are on)	Signal level: 11-20 (Average signal level)
3 bars (All the RSSI LEDs are on)	Signal level: 21-31 (Good signal level)

2.2. PIN ASSIGNMENT



PIN	POWER
10	Positive (+)
11	Negative (-)
12	GND (Ground)

DB9 Female Connector

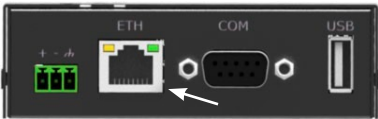
PIN	DEBUG	RS232	RS485 (2-WIRE)	DIRECTION
1			Data+ (A)	-
2		RXD		3G Ind. Pro > Device
3		TXD		Device > 3G Ind. Pro
4	DRXS			Device > 3G Ind. Pro
5	GND	GND		-
6			Data- (B)	-
7		RTS		Device > 3G Ind. Pro
8		CTS		3G Ind. Pro > Device
9	DTXD			3G Ind. Pro > Device

2.3. RESET BUTTON



FUNCTION	OPERATION
Reboot	Push the button for 5 seconds under working status
Restore to factory default setting	Push the button for 60 seconds once you power on the router until all the three LEDs at the left side (RUN, PPP, USR) blink at the same time for 5 times

2.4. ETHERNET PORT



The Ethernet port has two LED indicators (please check the following picture). The yellow one is **Speed indicator** and the green one is **Link indicator**. There are three status of each indicator. Please refer to the form below.

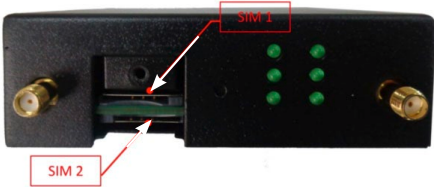
INDICATOR	STATUS	DESCRIPTION
Speed Indicator	Off	10 Mbps mode
	On	100 Mbps mode
Link Indicator	Off	Connection is down
	On	Connection is up
	Blink	Data is being transmitted

2.5. MOUNTING THE ROUTER



Mount the router on a DIN rail with 3 M3 screws.

2.6. INSTALL THE SIM CARD



Inserting SIM Card

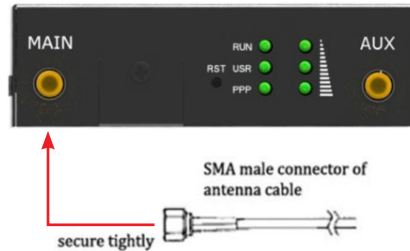
1. Make sure power supply is disconnected.
2. Use a screwdriver to unscrew the screw on the cover, and then remove the cover, you could find the SIM Card slots.
3. Insert the SIM card, and you need press the card with your fingers until you hear "a cracking sound". Then use a screwdriver to screw the cover.

Removing SIM Card

1. Make sure router is power off.
2. Press the card until you hear “a cracking sound”, when the card will pop up to be pulled out.

Note:

1. Don't forget screw the cover for again-theft.
2. Don't touch the metal surface of the SIM card in case information in the card is lost or destroyed.
3. Don't bend or scratch your SIM card. Keep the card away from electricity and magnetism.
4. Make sure router is power off before inserting or removing your SIM card.

2.7. CONNECT THE EXTERNAL ANTENNA (SMA TYPE)

Connect router to an external antenna with SMA male connector. If use a different antenna, make sure the antenna is for the correct frequency as your GSM/3G/4G operator with impedance of 50ohm, and also connector is secured tightly.

3. CONFIGURATION SETTINGS OVER WEB BROWSER

The router can be configured through your web browser. The product provides an easy and user-friendly interface for configuration. Make sure that your PC has an Ethernet interface properly installed and configured prior to connecting the router. You must configure your PC to obtain an IP address through a DHCP server or a fixed IP address that must be in the same subnet as the router.

3G Industrial Router VPN Pro has a the following IP address:

IP: 192.168.0.1
Mask: 255.255.255.0

3.1. FACTORY DEFAULT SETTINGS

Before configuring your router, you need to know the following default settings.

User authentication required. Login please.

Username:

admin

Password:

Language:

English

Please enter your login username and password.

Login

ITEM	DESCRIPTION
Username	admin
Password	admin
Ethernet	IP Addr: 192.168.0.1 Mask : 255.255.255.0
DHCP Server	Enabled

3.2. CONTROL PANEL

This section allows users to save configuration, reboot router and logout.

Status

System

Network

Route

VPN

Services

Event/Log

Configuration

Cellular WAN

Ethernet

Serial

USB

NAT/DMZ

Firewall

QoS

IP Routing

DynDNS

IPsec

OpenVPN

GRE

L2TP

PPTP

SNMP

VRRP

IP Passthrough

AT over IP

Phone Book

SMS

LEDs Information

RUN: GREEN/BLINK

USR: OFF

PPP: GREEN/ON

Router Information

Device Model: R3000

Serial Number: Robustel SN

Device Name: Cellular Router

Firmware Version: 1.01.01-sub-131211

Hardware Version: 1.00.03

Kernel Version: 2.6.39-5

Radio Module Type: MU609

Radio Firmware Version: 11.103.63.00.00

Uptime: 0 day 00:03:20

CPU Load: 06.08%

RAM Total/Free: 123.05MB/74.78MB(60.77%)

System Time: 2013-12-11 19:01:40

Current WAN Link

Current WAN Link: Cellular

IP Address: 10.124.120.213

Gateway: 192.168.254.254

NetMask: 255.255.255.255

DNS Server: 221.179.38.7, 120.196.165.7

Keepalive PING IP Address: 8.8.8.8, 8.8.4.4

Keepalive PING Interval: 30

Manual Refresh

Refresh

Control Panel

ITEM	DESCRIPTION
Save	Click to save the current configuration into router's flash.
Reboot	After save the current configuration, router needs to be rebooted to make the modification taking effect.
Logout	Click to return to the login page.
Language	Select English
Refresh	Click to refresh the status.
Apply	Click to apply the modification on every configuration page.
Cancel	Click to cancel the modification on every configuration page.

Note: The steps of how to modify configuration are as bellow:

- 1. **Modify in one page**
- 2. **Click Apply under this page**
- 3. **Modify in another page**
- 4. **Click Apply under this page**
- 5. **Complete all modification**
- 6. **Click Save**
- 7. **Click Reboot**

3.3. STATUS -> SYSTEM

This section displays the router's system status, which shows you a number of helpful information such as the LEDs information, Router information, Current WAN Link and Cellular Information.

LEDs Information

For the detail description, please refer to LED Indicators chapter.

System	
LEDs Information	
RUN:	GREEN/BLINK
USR:	OFF
PPP:	GREEN/ON

Router Information

ITEM	DESCRIPTION
Device Model	Show the model name of this device
Serial Number	Show the serial number of this device
Device Name	Show the device name to distinguish different devices you have installed.
Firmware Version	Show the current firmware version
Hardware Version	Show the current hardware version
Kernel Version	Show the current kernel version
Radio Module Type	Show the current radio module type
Radio Firmware Version	Show the current radio firmware version
Uptime	Show how long the router have been working since power on
CPU Load	Show the current CPU load
RAM Total/Free	Show the total capacity /Free capacity of RAM
System Time	Show the current system time


In this section you can check the IP address assigned to WAN Link:

Current WAN Link	
Current WAN Link:	Cellular
IP Address:	10.124.120.213
Gateway:	192.168.254.254
NetMask:	255.255.255.255
DNS Server:	221.179.38.7, 120.196.165.7
Keepalive PING IP Address:	8.8.8.8, 8.8.4.4
Keepalive PING Interval:	30

Current WAN Link

ITEM	DESCRIPTION
Current WAN Link	Show the current WAN link: Cellular WAN.
IP Address	Show the current WAN IP address
Gateway	Show the current gateway
NetMask	Show the current netmask
DNS Server	Show the current primary DNS server and Secondary server
Keeping PING IP Address	Show the current ICMP detection server which you can set in "Configuration->Link Management".
Keeping PING Interval	Show the ICMP Detection Interval (s) which you can set in "Configuration->Link Management".

In this section you can check the Cellular information like SIM , Signal Level, Network Operator etc.

Cellular Information	
Current SIM:	SIM1
Phone No.:	
SMS Service Center:	8613800200500
Modem Status:	Ready
Network Status:	Registered, roaming
Signal Level (RSSI):	 (21,-71DB)
Network Operator:	China Mobile (LAC: 2515 / Cell ID: 62DC)
Network Service Type:	GPRS
IMEI/ESN:	357784040029991
IMSI:	460079148174440
APN:	cmnet
Username:	
Password:	
USB Status:	Ready

Cellular Information

ITEM	DESCRIPTION
Current SIM	Show the SIM card which the router work with currently: SIM1 or SIM2
Phone No.	Show the phone number of the current SIM.
SMS Service Center	Show the SMS Service Center.
Modem Status	Show the status of modem. There are 8 different status: 1. Unknown. 2. Ready. 3. Checking AT. 4. Need PIN. 5. Need PUK.

	6. Signal level is low.
	7. No registered.
	8. Initialize APN failed.
Network Status	Show the current network status. There are 6 different status: 1. Not registered, ME is currently not searching for new operator! 2. Registered to home network. 3. Not registered, but ME is currently searching for a new operator. 4. Registration denied. 5. Registered, roaming. 6. Unknown.
Signal Level (RSSI)	Show the current signal level.
Network Operator	Show Mobile Country Code (MCC) +Mobile Network Code (MNC), e.g. 46001. Also it will show the Location Area Code (LAC) and Cell ID.
Network Service Type	Show the current network service type, e.g. GPRS.
IMEI/ESN	Show the IMEI/ESN number of the radio module.
IMSI	Show the IMSI number of the current SIM.
USB Status	Show the current status of USB host.

3.4. STATUS -> NETWORK

This section displays the router's Network status, which include status of Cellular WAN and LAN.

Network

Cellular WAN

Connection Status:	Connected
Connect Time:	0 day 00:00:08
IP Address:	10.153.113.95
MTU:	1500
Gateway:	192.168.254.254
Primary DNS Server:	221.179.38.7
Secondary DNS Server:	120.196.165.7

LAN

IP Address:	172.16.2.113
MAC Address:	00:ff:74:46:dc:e1
MTU:	1500
NetMask:	255.255.0.0

3.5. CONFIGURATION -> CELLULAR WAN

This section allows users to set the Cellular WAN and the related parameters.

Basic
Advanced
ISP Profile

Cellular Settings

	SIM1	SIM2
Status:	Ready	Not inserted
Network Provider Type:	Auto ▼	Auto ▼
APN:		
Username:		
Password:		
Dialup No.:		
PIN Type:	None ▼	None ▼

Connection Mode

Connection Mode:

Connect On Demand

Redial Interval (s):

30

Max Retries:

3

Inactivity Time (s):

0

Serial Output Content (Hex):

☒ Triggered By Serial Data

☒ Triggered By Tel

☒ Triggered By SMS

SMS Connect Command:

SMS Disconnect Command:

SMS Connect Reply:

SMS Disconnect Reply:

Phone Group:

NULL

Click to add PhoneGroup!

☒ Periodically Connect

Periodically Connect Interval (s):

300

Time Schedule:

NULL

Time Range

Name	SUN	MON	TUE	WED	THU	FRI	SAT	Time Range1	Time Range2	Time Range3
schedule_1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	08:10-12:00	14:10-20:15	

Add

Dual SIM Policy

Main SIM Card:

SIM1

☒ Switch To Backup SIM Card When Connection Fails

☒ Switch To Backup SIM Card When ICMP Detection Fails

☒ Switch To Backup SIM Card When Roaming Is Detected

Preferred PLMN:

☒ Switch To Backup SIM Card When Data Limit Is Exceeded

Max Data Limitation (MB):

100

100

Date Of Month To Clean:

1

1

Already used (KB):

0

0

☒ Switch Back Main SIM Card After Timeout

Initial Timeout (min):

60

Basic @Cellular WAN**Cellular Settings**

ITEM	DESCRIPTION
Network Provider Type	Select from "Auto", "Custom" or the ISP name you preset in "Configuration"->"Cellular WAN"->"ISP Profile". Auto: Router will get the ISP information from SIM card, and set the APN, username and password automatically. This option only works when the SIM card is from well-known ISP. Custom: Users need to set the APN, username and password manually. Default: Auto
APN	Access Point Name for cellular dial-up connection, provided by local ISP. Default: Null
Username	User Name for cellular dial-up connection, provided by local ISP. Default: Null
Password	Password for cellular dial-up connection, provided by local ISP. Default: Null
Dialup No.	Dialup number for cellular dial-up connection, provided by local ISP. Default: *99***1#
PIN Type	Select from "None", "Input", "Lock", "Unlock". None: Select when SIM card does not enable PIN lock or PUK lock. Input: Select when SIM card has enabled with PIN lock or PUK lock. Correct PIN/PUK code need to be entered. Lock: Select when user needs to lock the SIM card with PIN or PUK code. Unlock: Select when user needs to unlock the SIM card with PIN or PUK code. Note: Please ask your local GSM ISP to see whether your SIM card requiring PIN or not. If you want to change with a new PIN code, you need to input new PIN code in item "New PIN Code" and "Confirm New PIN Code". You can go to tab "Status" -> "Event/Log" and find out "AT+CPIN?" to check what the status of the SIM card is. Default: None

Connection Mode

ITEM	DESCRIPTION
Connection Mode	Select from "Always Online" and "Connect On Demand". Always Online: Auto activates PPP and keeps the link up after power on. Connect On Demand: After selection this option, user could configure Triggered by Serial Data, Triggered by Periodically Connect and Triggered by Time Schedule. Note: If you select several connect on demand policies, router only have to meet one of them to be triggered. Default: Connect On Demand
Redial Interval	Router will automatically re-dial with this interval when it fails communicating to peer via TCP or UDP. Default: 30
Max Retries	The maximum retries times for automatically re-connect when router fails to dial up. After maximum retries, router will reboot the wireless module. If router still cannot dial up successfully, it will try to switch to the other SIM card. Then router will re-connect with the other SIM card with maximum retries. After successful connection, the Max Retries counter will be set to 0. Default: 3
ICMP Detection Primary Server	Router will ping this primary address/domain name to check that if the current connectivity is active. Default: 8.8.8.8
ICMP Detection Secondary Server	Router will ping this secondary address/domain name to check that if the current connectivity is active. Default: 8.8.4.4
ICMP Detection Interval	Set the ping interval time. Default: Null
ICMP Detection Timeout	Set the ping timeout. Default: 30

ICMP Detection Retries	If Router ping the preset address/domain name time out continuously for Max Retries time, it will consider that the connection has been lost. Default: 3
Reset The Interface	Enable to reset the cellular/ETH interface after the max ICMP detection retries. Default: 3
Serial Output Content	The content which output to the serial device which connect to router and inform it that router is ready to receive serial data. Default: Null
Triggered by Serial Data	Tick this check box to allow router automatically connects to cellular network from idle mode when there is data comes out from serial port. Default: Enable
Triggered by Tel	Tick this check box to allow router automatically connects to cellular network from idle mode when make a voice call to router. Default: Disable
Triggered by SMS	Tick this check box to allow router automatically connects to cellular network from idle mode when send a specific SMS to router. Default: Disable
SMS Connect Command	Users shall send this specific SMS to trigger router to connect to cellular network. Default: Null
SMS Disconnect Command	Users shall send this specific SMS to trigger router to disconnect to cellular network. Null
SMS Connect Reply	When router connects to cellular network, it will automatically send out this SMS to specific users (set in the Phone Group). Default: Null
SMS Disconnect Reply	When router disconnect from cellular network, it will automatically send out this SMS to specific users (set in the Phone Group). Null
Phone Group	Click to add Phone Group to Set specific users' phone Book and which phone Group they are belonged to. Default: Null
Periodically Connect	Tick this check box to allow router automatically connects to cellular network with preset interval which you preset in Periodically Connect Interval. Default: Enable
Periodically Connect Interval	Periodically Connect Interval for Periodically Connect. Default: 300
Time Schedule	Select the Time Range to allow router automatically connects to cellular network during this time range. Default: NULL
Time Range	Adding the Time Range for Time Schedule. You can set the days of one week and at most three ranges of time of one day. Default: Null

Dual SIM Policy

ITEM	DESCRIPTION
Main SIM Card	Set the preferred SIM card from SIM 1, SIM 2 or Auto. Default: SIM1
Switch to backup SIM card when connection fails	Router will switch to another SIM card if main SIM card fail to connect to network. Default: Disable
Switch to backup SIM card when roaming is detected	Router will switch to backup SIM card when preferred SIM card is roaming. Default: Disable
Preferred PLMN	The identifier for Router to check if it is in home location area or in roaming area, and decide if it needs to switch back to preferred SIM card. Default: Null
Switch to backup SIM card when data limit is exceeded	If the SIM card that the router worked with currently has reached the data traffic limitation you preset, it will switch to the other SIM card. Default: Disable
Max Data limitation(MB)	Set the monthly data traffic limitation. Default: 100
Date of Month to Clean	Set one day of month to restore the used data to 0. Default: 1

Already used	This tab will show how many data traffic has been used. Default: 0
Switch back Main SIM card after timeout(min)	Enable to Switch back Main SIM card after the Initial timeout. Disable
Initial Timeout(min)	Set the initial timeout. Default: 60

Cellular Advanced Settings

	SIM1	SIM2
Phone No.:	<input type="text"/>	<input type="text"/>
Network Type:	Auto	Auto
Band Mode:	<input type="checkbox"/> ALL <input type="checkbox"/> GSM850 <input type="checkbox"/> EGSM900 <input type="checkbox"/> PGSM900 <input type="checkbox"/> RGSM900 <input type="checkbox"/> GSM1800 <input type="checkbox"/> GSM1900 <input type="checkbox"/> UMTS800 <input type="checkbox"/> UMTS850 <input type="checkbox"/> UMTS900 <input type="checkbox"/> UMTS1700 <input type="checkbox"/> UMTS1900 <input type="checkbox"/> UMTS2000	<input type="checkbox"/> ALL <input type="checkbox"/> GSM850 <input type="checkbox"/> EGSM900 <input type="checkbox"/> PGSM900 <input type="checkbox"/> RGSM900 <input type="checkbox"/> GSM1800 <input type="checkbox"/> GSM1900 <input type="checkbox"/> UMTS800 <input type="checkbox"/> UMTS850 <input type="checkbox"/> UMTS900 <input type="checkbox"/> UMTS1700 <input type="checkbox"/> UMTS1900 <input type="checkbox"/> UMTS2000
Authentication:	Auto	Auto
MTU:	1500	1500
MRU:	1500	1500
Asynmap Value:	ffffffff	ffffffff
Use Peer DNS:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Primary DNS Server:	<input type="text"/>	<input type="text"/>
Secondary DNS Server:	<input type="text"/>	<input type="text"/>
Address/Control Compression:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Protocol Field Compression:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Expert Options:	noccp nobsdcomp	noccp nobsdcomp

Advanced @Cellular WAN

ITEM	DESCRIPTION
Phone No.	Set the SIM card's phone number, and it will be showed in "Status->"System->"System->"Cellular WAN Information". "SIM Phone Number". In general, you don't need to set this number because router will read it from the SIM card automatically. Default: Null
Network Type	Select from "Auto", "2G GSM" and "3G UMTS" as the SIM card supported. Default: Auto
Band Mode	Tick the Band Mode options to fix the bands router working with. Default: Disable
Authentication	Select from "Auto", "PAP" and "CHAP" as the local ISP required. Default: Auto
MTU	Maximum Transmission Unit. It is the identifier of the maximum size of packet, which is possible to transfer in a given environment. Default: 1500

MRU	Maximum Receiving Unit. It is the identifier of the maximum size of packet, which is possible to receive in a given environment. Default: 1500
Asyncmap Value	One of the PPP initialization strings. In general, you don't need to modify this value. Default: 1
Use Peer DNS	Enable to obtain the DNS server's address from the ISP. Default: Enable
Primary DNS Server	Set the primary DNS server's address. This item will be unavailable if you enable "Use Peer DNS". Default: Null
Secondary DNS Server	Set the secondary DNS server's address. This item will be unavailable if you enable "Use Peer DNS". Default: Null
Address/Control Compression	Used for PPP initialization. In general, you need to enable it as default. Default: Enable
Protocol Field Compression	Used for PPP initialization. In general, you need to enable it as default. Default: Enable
Expert Options	You can enter some other PPP initialization strings in this field. Each string can be separated by a space. noccpp nobsdcomp

ISP Profile

This section allow users to preset some ISP profiles which will be shown in the selection list of "Configuration"->"Cellular WAN"->"Network Provider Type".

ISP Profile @Cellular WAN

ITEM	DESCRIPTION
ISP	Input the ISP's name which will be shown in the selection list of "Configuration"->"Cellular WAN"->"Network Provider Type". Default: Null
APN, Username, Password, Dialup No.	All these parameters were provided by the ISP. Default: Null

3.6. CONFIGURATION -> ETHERNET

This section allows users to set the Ethernet LAN parameters of Eth0.

Eth0

Dhcp Relay

LAN Interface

IP Address:

172.16.2.113

NetMask:

255.255.0.0

MTU:

1500

Multiple IP Address

IP Address

NetMask

Add

DHCP Server

☒ Enable DHCP Server

IP Pool Start:

192.168.0.2

IP Pool End:

192.168.0.100

NetMask:

255.255.255.0

Lease Time (min):

60

Primary DNS Server:

192.168.0.1

Secondary DNS Server:

Windows Name Server:

192.168.0.1

Static Lease

MAC Address

IP Address

*MAC: ff:ff:ff:ff:ff:ff

Add

Eth0@Ethernet

ITEM	DESCRIPTION
IP Address, Netmask, MTU @ LAN interface	Set the IP address, Netmask and MTU of Eth0. These parameters will be un-configurable if you enable Bridge. Default: Null
Multiple IP Address @ LAN Interface	Assign multiple IP addresses for Eth0. Default: Null
Enable DHCP Server @ DHCP Server	Enable to make router can lease IP address to DHCP clients which connect to Eth0. Default: Enable
IP Pool Start, IP Pool End @ DHCP Server	Define the beginning (IP Pool Start) and end (IP Pool End) of the pool of IP addresses which will lease to DHCP clients. Default: 192.168.0.2 / 192.168.0.100
Netmask @ DHCP Server	Define the Netmask which the DHCP clients will obtain from DHCP server. Default: 255.255.255.0
Lease Time @ DHCP Server(min)	Define the time which the client can use the IP address which obtained from DHCP server. Default: 60
Primary/Secondary DNS Server @ DHCP Server	Define the primary/secondary DNS Server which the DHCP clients will obtain from DHCP server. Default: 192.168.0.1 / 0.0.0.0
Windows Name Server @ DHCP Server	Define the WINS Server which the DHCP clients will obtain from DHCP server. Default: 192.168.0.1
Static Lease @ DHCP Server	Define to lease static IP Addresses, which conform to MAC Address of the connected equipment. Default: Null

Router can be DHCP Relay, which will provide a relay tunnel to solve problem that DHCP Client and DHCP Server is not in a same subnet. This section allow user to configure DHCP Relay settings.

Eth0

Dhcp Relay

DhcpRelay Configuration

☒ Enable Dhcp Relay

DHCP Server:

DHCP Relay @ Ethernet

ITEM	DESCRIPTION
DHCP Server	Enter DHCP Server's IP address. Note: Please disable DHCP Server and DHCP Client first to make sure DHCP relay can be enabled. Default: Null



Digicom S.p.A.

Italy - Via Alessandro Volta 39

21010 Cardano al Campo -VA

Tel +39/0331/702611 Fax +39/0331/263733

<http://www.digicom.it>