



ALL-RUT22GW

Industrial 4G LTE Cellular Router



Kurzanleitung

1. Standardwerte:

IP-Adresse	192.168.1.1
Benutzername	root
Passwort	2wsx#EDC

2. Hardware Installation

- Legen Sie die SIM-Karte in den SIM-Kartenslot.
- Schließen Sie den 8-48V DC-Netzadapter an den Router an und stecken Sie den Netzadapter dann in eine Steckdose.
- Verbinden Sie den Ethernet-Port des Routers mit Ihrem Netzwerk.

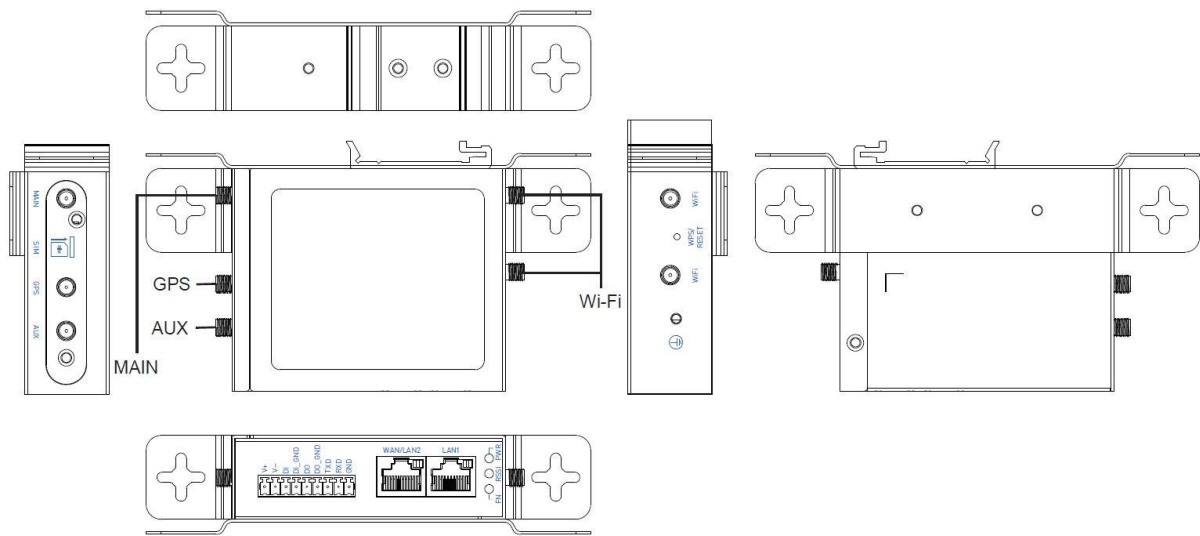
3. Einlegen und Entfernen der SIM Karte

- Vergewissern Sie sich vor dem Einsetzen oder Entfernen der SIM-Karte, dass der Strom abgeschaltet und der Stromanschluss vom ALL-RUT22GW entfernt wurde.
- Legen Sie die SIM-Karte in der richtigen Richtung ein, sonst bleibt sie im Inneren stecken. Schieben Sie die SIM-Karte in den Schlitz, und drücken Sie sie leicht an, um sie im Schlitz zu verriegeln.



- Um die SIM-Karte zu entfernen, drücken Sie leicht auf die SIM-Karte und sie springt heraus.

4. Mechanische Abmessungen



5. I/O Ports

Das Gerät hat vier Klemmen auf dem Klemmblock für die digitalen Ein- und Ausgänge.

	PIN	Description
	DI	Digitaler Eingang
	DI_GND	
	DO	Digitaler Ausgang
	DO_GND	

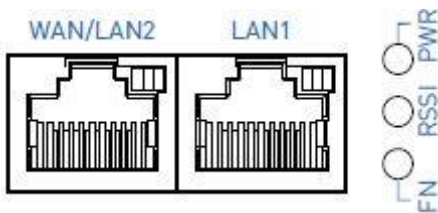
- DI: Low (+0 to +5V) / High (+8 to +40V)
- DO: Open Collector (maximum 30V/300mA)

6. LED Anzeige

LED	RSSI	FN	PWR
An	Starkes Signal	VPN verbunden	Power On
Langsam blinkend	Mittlers Signal / Reset	Internet verbunden / Reset	N/A
Schnell blinkend	Schwaches Signal / Reset to Default	System Booting / Reset to Default	N/A
Aus	Fehler	N/A	Power Off
Heart Beat	WPS Verarbeitung	Wi-Fi verbunden	N/A

7. Ethernet Port

- **10/100 Mbps Ethernet LAN/WAN**



Die LAN- und WAN-Schnittstelle sind Standard-RJ45-Anschlüsse.

PIN	Beschreibung	Funktion
1	TX+	10/100 Mbps, Tx+ Pin
2	TX-	10/100 Mbps, Tx- Pin
3	RX+	10/100 Mbps, Rx+ Pin
4	N/A	N/A
5	N/A	N/A
6	RX-	10/100 Mbps, Rx- Pin
7	N/A	N/A
8	N/A	N/A

- **LED Anzeige des Ethernet-Ports**

LED	Status	Description
Grün (Link / ACT)	Aus	Keine Verbindung
	Blinkt	Daten werden übertragen
	An	Verbunden

8. Anschließen der Stromversorgung

DC-Stromversorgungen im Bereich von 8-48V DC.

PIN	Power (8-48V DC)
V+	Positiv
V-	Negativ

9. UART (RS-232)

PIN	Power (8-48V DC)
TXD	Daten übertragen
RXD	Daten empfangen
GND	Erde

10. WPS / Reset Button

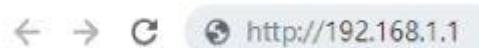
Mit der Reset-Taste können Sie das Gerät neu starten oder die Werkseinstellungen wiederherstellen.

Funktion	Operation
WPS Verarbeitung	Drücken Sie den Knopf für weniger als 5 Sekunden.
Neustart	Drücken Sie den Knopf für 5-10 Sekunden.
Werksreset	Drücken Sie den Knopf für länger als 10 Sekunden

11. Einrichtung

a.) Zugriff auf den Web-Konfigurator

- Geben Sie die Standard-LAN-Adresse des Gerätes in ihrem Web-Browser ein 192.168.1.1.



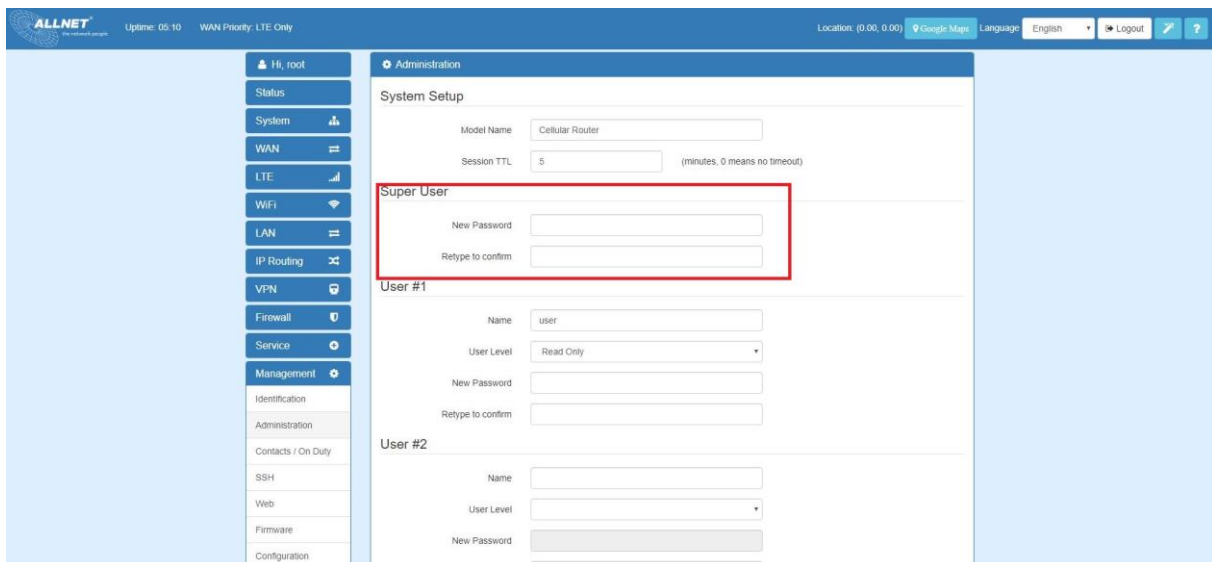
- Um sich einzuloggen verwenden Sie den Benutzernamen **root** und das Passwort **2wsx#EDC**. Anschließend bestätigen Sie mit **Login**.



b.) Passwort ändern

Unter **Management > Administration** können Sie unter dem Punkt **Super User** das **neue Passwort** vergeben. Scrollen Sie auf der Seite nach unten und bestätigen sie mit **Apply**.

Hinweis: Bitte verwenden Sie keine einfach zu erratenden Passwörter (z.B. admin, root, 1234, ...)



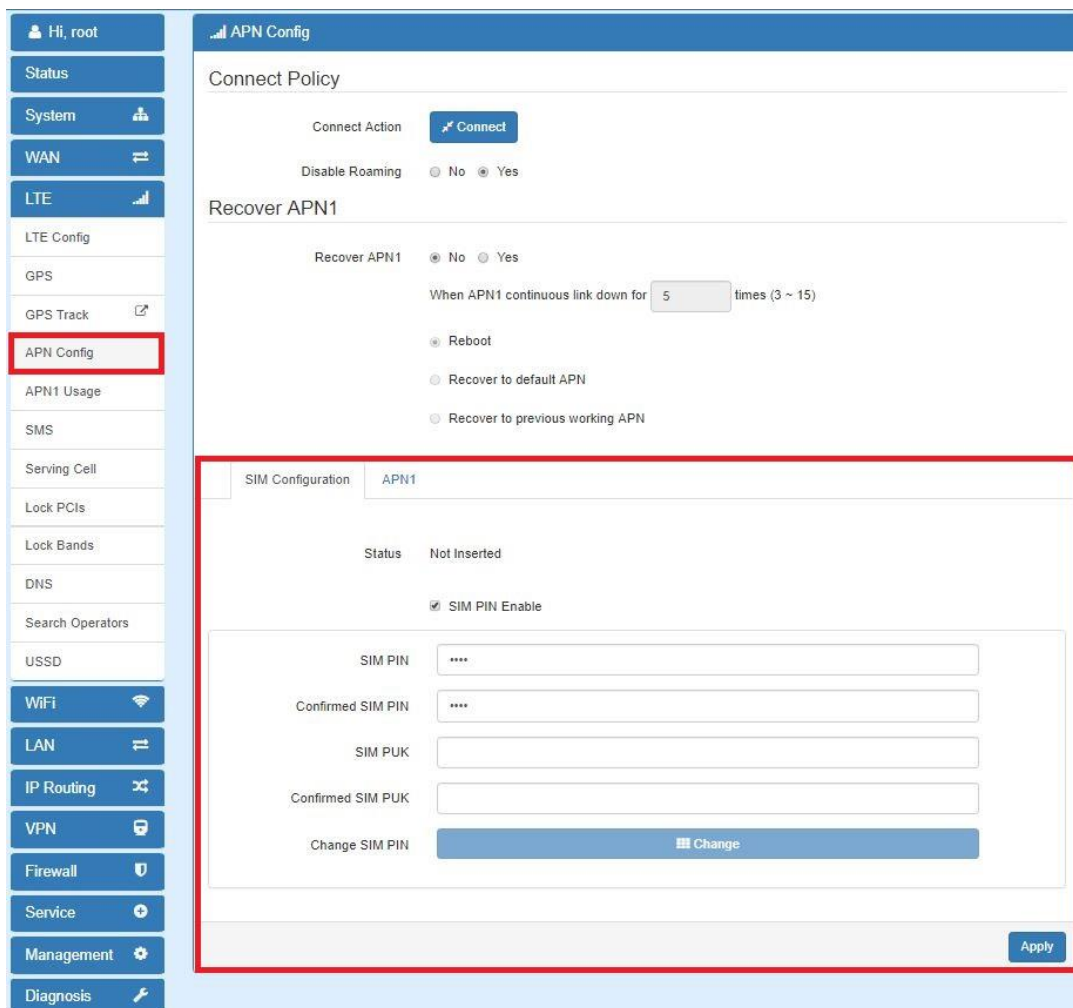
c.) LTE Konfiguration

Unter **LTE > LTE Config** können Sie die folgenden Einstellungen treffen:



d.) SIM Konfiguration

Unter **LTE > APN Config** können Sie die SIM-Einstellungen bearbeiten:



e.) DNS Konfiguration

Unter **WAN > IPv6 DNS** und **LTE > DNS** können Sie folgende DNS-Einstellungen treffen:

Hi, root

Status

System

WAN

Priority

Ethernet

WiFi STA

IPv6 DNS

IPv6 DNS

APN1 DNS Server Configuration

IPv6 DNS Server #1 From ISP

IPv6 DNS Server #2 From ISP

IPv6 DNS Server #3 From ISP

Apply

Hi, root

Status

System

WAN

LTE

LTE Config

GPS

GPS Track

APN Config

APN1 Usage

SMS

Serving Cell

Lock PCIs

Lock Bands

DNS

DNS

APN1 DNS Server Configuration

IPv4 DNS Server #1 From ISP

IPv4 DNS Server #2 From ISP

IPv4 DNS Server #3 From ISP

Apply

f.) LAN Konfiguration

Unter **LAN > IPv4** können Sie Ihre LAN-Einstellungen anpassen:

The screenshot shows the LAN IPv4 configuration page. On the left sidebar, the 'LAN' menu is expanded, and 'IPv4' is selected. The main content area is titled 'LAN IPv4'. It contains the following fields and settings:

- IP Address:** 192.168.1.1
- IP Mask:** 255.255.255.0
- DHCP Server Configuration:**
 - DHCP Server:** On
 - IP Address Pool:** From 192.168.1.20 To 192.168.1.25
- Static IP Addresses:** A button labeled '+ Add Static IP Address' is present.

An 'Apply' button is located at the bottom right of the configuration area.

g.) Status

Gehen Sie auf den Menüpunkt **Status**, um den Router-Status (WAN LTE / LTE APN1 DNS / WAN Ethernet / LAN Ethernet) wie folgt zu überprüfen:

Hinweis: Die markierten Felder (in rot) zeigen Ihnen, dass der LTE-, IP- und DNS-LAN-Status in Ordnung ist.

The screenshot displays the router's status page with a sidebar menu on the left. The main content area is divided into several sections, each with a table of attributes and values. Red boxes highlight specific fields across different sections:

- DO:** Alarm Status: Alarm OFF
- GPS:** Latitude: 0, Longitude: 0, Altitude: 0, Date: 0, Time: 0, Satellite: 0
- WAN LTE:** Modem Status: Ready, Operator: T-Mobile (Germany), Modem Access: 10000, IMSI: 262011040110309, Phone Number: +4917524184209, Band: WCDMA_2100
- LTE APN1 (Router):** IPv4 Address: 10.152.138.107, IPv4 Mask: 255.255.255.248, Default Gateway: 10.152.138.108, Connected: Yes, IPv4 Conn Time: 15.47, Uplink Speed Kbps: 0.000, Downlink Speed Kbps: 0.000, Tx/Rx Kbytes: 177.000/302.000, Tx/Rx Dropped Packets: 0/0, LTE Net Mode: Router Only
- WAN DNS:** IPv4 DNS Server #1: 10.74.210.210, IPv4 DNS Server #2: 10.74.210.211, IPv4 DNS Server #3: (empty), IPv6 DNS Server #1: 2a01:598:7f0:1074:210:210, IPv6 DNS Server #2: 2a01:598:7f0:1074:210:211, IPv6 DNS Server #3: (empty)
- WAN Ethernet:** IPv4 Address: (empty), IPv4 Mask: (empty), Default Gateway: (empty), IPv4 Conn Time: 00:00
- WAN WiFi:** IPv4 Address: (empty), IPv4 Mask: (empty), Default Gateway: (empty), IPv4 Conn Time: 00:00, SSID: (empty), MAC Address: (empty), Channel: 0
- LAN Ethernet:** IPv4 Address: 192.168.1.1, IPv4 Mask: 255.255.255.0, IPv6 Address: 2a01:598:50c:50c::1, IPv6 Conn Time: 14.00, Uplink Speed Kbps: 9.000, Downlink Speed Kbps: 3.000, Tx/Rx Kbytes: 2960.000/575.000, Tx/Rx Dropped Packets: 0/0
- WiFi AP:** Connected Clients: 0
- Connected VPN Connections:** OpenVPN: 0, IPSec: 0, GRE: 0, PPTP Server: 0, L2TP: 0

Hinweis:

- Alle Standardeinstellungen sollten ordnungsgemäß funktionieren, so dass es nicht notwendig ist, die Werte für diese Kurzanleitung zu ändern (mit Ausnahme der PIN-Einstellungen)
- Wenn Sie Verbindungsprobleme haben oder Sie eine benutzerdefinierte Konfiguration ausprobieren möchten, lesen Sie bitte das Benutzerhandbuch für weitere Informationen.

12. RLM-Remote-Link-Manager

Allgemein:

Der ALL-RUT22GW unterstützt ab Firmware Version 1.09 ein neue Funktion, dass sie die ALL-RUT22GW und zukünftigen Router dieser Serie über ein Online Management-Tool namens RLM-Remote-Link Manager über die zu erreichende Adresse <https://m2m.allnet.de/> managen & verwalten können.

The image shows two screenshots related to the RLM-Remote-Link Manager. The top screenshot is the login page, featuring a blue Wi-Fi icon above a black oval containing '4G' and '5G' in white, with 'REMOTE LINK MANAGER' written below. The login form includes fields for 'UserName' and 'Password', a captcha image with the text 'T M N 1', and a blue 'Login' button. The bottom screenshot is a screenshot of the ALLNET router management web interface. The top navigation bar shows 'ALLNET' and various status indicators. A left sidebar menu includes 'Firewall', 'Service', 'Management', 'Identification', 'Administration', 'Contacts / On Duty', 'SSH', 'Web', 'Tchnet', 'Firmware', 'Configuration', 'Load Factory', 'Restart', 'Schedule / Reboot', 'Fail2Ban', 'FOTA', and 'RLM'. The 'RLM' option is highlighted with a red arrow. The main content area displays 'LTE' settings, including a table of attributes and values:

Attr.	Value
SIM Status	Ready
Operator	Telekom de Telekom de
Modem Access	FDD LTE
BMS	262016848803563
ICCID	8949020001500468963
Phone Number	+49-15165837511
Band	LTE BAND 3
EARFCN	1309
PLMN	26201
Roaming	No
Uplink Speed Kbps	4.000
Downlink Speed Kbps	2.000
Tx/Rx KiBytes	2133.000/9270.000
Tx/Rx Dropped Packets	0/0
LTE Net Mode	Router Only

At the bottom of the interface, it says 'LTE APN1 (Router)'.

Damit sich die Router an den RLM-Remote-Link Manager verbinden kann, muß im Router unter dem Reiter „Management“ „RLM“ noch ein paar Einstellungen durchgeführt werden.

- a.) Besuchen Sie die Webseite <https://m2m.allnet.de>
- b.) Registrieren Sie sich, um einen Account für dieses Portal zu erhalten.
- c.) In ihrem angelegten Account müssen Sie sich einen Kommunikationstoken generieren, der dann später im Router auch eingefügt werden muß.

The screenshot shows the RLM configuration page. At the top, the status is 'Connected'. Below that, the 'Mode' is set to 'Enable'. The 'Server' field contains 'm2m.allnet.de', the 'Port' is '8883', and the 'Token' is '105ac619a26e4e2'. The 'TLS Mode' is also set to 'Enable'. There are three sections for certificates and keys: 'CA Certificate', 'X.509 Certificate', and 'X.509 Key', each with an 'Import' button and icons for information, user, and delete. The 'Advance Setting' section has three input fields: 'MQTT Keepalive (s)' set to 60, 'Alive Period Time (s)' set to 30, and 'Timeout (s)' set to 60. The 'Insecure Mode' is set to 'Enable'. An 'Apply' button is located at the bottom right of the configuration area.

Damit sich die Router sich mit der Plattform verbindet, müssen wie oben in dem Beispiel folgende Themen

- RLM-Server Adresse = m2m.allnet.de
- Port = 8883
- Token = ihr zuvor generierter Token aus Ihrem Account von <https://m2m.allnet.de>
- TLS Mode = Enable

Danach bitte auf „Apply“ klicken. Sie können oben bei Status dann ersehen das dieser auf „Connected“ stehen muß.

Wechselt dieser Status nicht auf „Conneted“, müssen Sie in Ihrer Firewall folgende Ports nach außen öffnen.

Port = 8883 TCP

Port = 443 TCP

Sollte somit alles richtig konfiguriert sein und die Ports geöffnet sollte der Router in der Config folgendes anzeigen.



Funkfrequenzen und Sendeleistung WLAN

Frequenz	Frequenzbereich	max. Sendeleistung
2,4 GHz	2400 - 2483 MHz	100 mW

13. Sicherheitshinweise

Beachten Sie unbedingt folgende Hinweise:

- Öffnen Sie niemals das Gerät.
- Führen Sie niemals eine Installation während eines Gewitters durch.
- Stellen Sie sicher, dass Leitungen stolper- und trittsicher verlegt werden.
- Setzen Sie das Gerät im Betrieb niemals direkter Sonneneinstrahlung aus.
- Betreiben Sie das Gerät niemals in die Nähe von Wärmequellen.
- Stellen Sie das Gerät niemals auf Oberflächen, die wärmeempfindlich sind.
- Schützen Sie das Gerät vor Nässe, Staub, Flüssigkeiten und Dämpfen.
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<http://ce.allnet.de/>

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