

How to use the Router Application Kit (RAK) Firmware with Modems

The DIL/NetPC DNP/9200 Router Application Kit (RAK) supports simple modem-based links (RAK with analogue or ISDN modem) to the Internet. This kind of links needs an Internet Service Provider (ISP) account or access to an Internet-by-Call provider service telephone number.

Within the German telephone network, there are many Internet-by-Call providers reachable. Each provider offers a service telephone number, a user name and a password. These parameters are necessary for the RAK firmware configuration.

The following table shows the information for two Internet-by-Call ISPs (Arcor, Avivo Internet) as a sample.

	Arcor Internet by Call	Avivo Internet
Phone number	01920785	019352150
User name	acor	eins
Password	internet	eins

Please note: The usages of Internet-by-Call provider service numbers is not free of charge. Please check the details before using Internet-by-Call service numbers. In most cases the ISP web side offers more information.

• 1. Step: Run your web browser and access the web-based interface of the RAK firmware. Just enter: http://192.168.0.126:7777 within the URL field of your web browser.





• 2. Step: Please use the password *dnp9200* for your login. Please use only lowercase letters within the password. Then press the *Submit* button.

🕘 Mozilla Firefox			
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eev/			
			Configuration
	Status		^
Status	System status		
System	System name :	DNP/9200	System host name
Network	System location :	SSV Embedded Systems	Location information
Services	Contact :	support@ist1.de	Contact information
General System	Time and date :	Fri, 09.03.2007 17:35:26	Current time and date of this system
Serial port			8
Proxy DynDNS	Status LAN1		
• Email	IP address :	192.168.0.126	Current device IP address
Logout	Subnet mask :	255.255.255.0	Current subnet mask of the local network
	Status WAN		
	IP address :	disabled	Current device IP address
	Subnet mask :	disabled	Current subnet mask of the network
	Status DNS		
	Primary DNS server :	not set	Current DNS server adresse
© 2007 SSV	Secondary DNS server :	not set	Current DNS server adresse
http://192.168.0.126:7777/mer	nu.htm#		

• 3. Step: Please select the menu item *Network* → *Modem* (see left frame of the web-based user interface). Select the authentication method *CHAP*. Then enter the service telephone number, a user name and the password. Retype the password. Finally press the *Apply* button.

🕘 http://192.168.0.126:777	7/cgi-bin/login.cgi - Microsoft Internet Ex	plorer		
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SSV		M.		Configuration
	Modem configuration			<u>~</u>
Status	ISP settings			
System	Authentication method :	CHAP	~	Choose authentication method for ISP
Network	Dealing phone number :	001920785		Enter the phone number to ISP
• LAN	Login name :	arcor		Username given to you from ISP
• Modem Services	Password :	•••••		Password given to you from ISP
Logout	Confirm password :	•••••		Verify the entered password
	Connection settings			
	Connect type :	Manual	 Connect 	Disconnected
	Disconnect type :	Manual	 Disconnect 	
	Connect notify :	None	~	Select a connect notify method
	Disconnect notify:	None	~	Select a disconnect notify method
	Nameserver and Gateway configure	-		
© 2007 SSV	DNS :	Dynamic	~	Use static, dynamic or other DNS
E Fertig				🧭 Internet



• **4. Step:** Press the embedded *Connect* button (see field *Connect type*) and wait until the RAK is connected to the Internet.

http://192.168.0.126:	7777/cgi-bin/login.cgi - Microsoft Inte	ernet Explorer			
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	ISP settings				
Status	Authentication method :	CHAP	~		Choose authentication method for ISP
System Network	Dealing phone number :	001920785			Enter the phone number to ISP
• LAN	Login name :	arcor			Username given to you from ISP
• Modem Sensions	Password :	•••••			Password given to you from ISP
onout	Confirm password :	•••••			Verify the entered password
-ogout					
	Connection settings				
	Connect type :	Manual	~	Connect	Connecting :
	Disconnect type :	Manual	▼	Disconnect	
	Connect notify :	None	~		Select a connect notify method
	Disconnect notify :	None	~		Select a disconnect notify method
	Disconnect notify :	None	~		Select a disconnect notify method
	Disconnect notify : Nameserver and Gateway configur	None	~		Select a disconnect notify method
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Please note: Without an Internet connection, there is no interface device with the name *ppp0*. Verify this with the help of a Telnet session. Use *ifconfig* for more details.

• **5. Step:** The web-based user interface shows a connect message if the RAK is connected to the Internet. Within your Telnet session you find then *ppp0*. It's now possible to access host computers within the Internet over the modem link.

🖾 Telnet 192.168.0.126	- 🗆 🗙
- SSV Embedded Linux - Version 0.62.26	
DNP/9200 login: root Password: [root@DNP/9200 /root]\$ifconfig	
eth0 Link encap:Ethernet HWaddr 02:80:A0:20:CA:/8 inet addr:192.168.0.126 Bcast:192.168.0.255 Mask:255.255.255.0 UP BROADCAST RUNNING MULTICAST MTU:1500 Metric:1 RX packets:4060 errors:0 dropped:0 overruns:0 frame:0 TX packets:2666 errors:0 dropped:0 overruns:0 carrier:0 collisions:0 txqueuelen:1000 Interrupt:24 Base address:0xc000	
lo Link encap:Local Loopback inet addr:127.0.0.1 Mask:255.0.0.0 UP LOOPBACK RUNNING MTU:16436 Metric:1 RX packets:8 errors:0 dropped:0 overruns:0 frame:0 TX packets:8 errors:0 dropped:0 overruns:0 carrier:0 collisions:0 txqueuelen:0	
ppp0 Link encap:Point-to-Point Protocol inet addr:145.254.152.254 P-t-P:145.253.1.185 Mask:255.255.255.255 UP POINTOPOINT RUNNING NOARP MULTICAST MTU:1500 Metric:1 RX packets:34 errors:0 dropped:0 overruns:0 frame:0 TX packets:34 errors:0 dropped:0 overruns:0 carrier:0 collisions:0 txqueuelen:3	į
Iroot@DNP/9200 /root]\$ping dilnetpc.com PING dilnetpc.com (212.227.224.85): 56 data bytes 64 bytes from 212.227.224.85: icmp_seq=0 ttl=53 time=128.5 ms 64 bytes from 212.227.224.85: icmp_seq=1 ttl=53 time=140.1 ms 64 bytes from 212.227.224.85: icmp_seq=2 ttl=53 time=130.2 ms 64 bytes from 212.227.224.85: icmp_seq=4 ttl=53 time=130.2 ms 64 bytes from 212.227.224.85: icmp_seq=4 ttl=53 time=130.2 ms 64 bytes from 212.227.224.85: icmp_seq=5 ttl=53 time=120.2 ms	
dilnetpc.com ping statistics 7 packets transmitted, 6 packets received, 14% packet loss round-trip min/avg/max = 120.2/129.9/140.1 ms [root@DNP/9200 /root]\$	-



It is also possible to reach the RAK over the Internet. The *ifconfig* command shows the IP address of the RAK within the Internet (IP address of the *ppp0* device).

• **6. Step:** Please try out the Internet connection. Run a *ping* command to *dilnet.com* or any other server. E.g.:

ping dilnetpc.com

The DNP/9200 Linux contains three other commands for Internet server access. The following table shows more details.

Command	Function
wget	Read file from or write file to a HTTP server.
ftpput	Linux command line tool for automating FTP (file) transfers.
ftpget	Linux command line tool for automating FTP (file) transfers.

• 7. Step: Finally disconnect the RAK connection to the Internet. Please press the embedded *Disconnect* button (see field *Disconnect type*) and wait until the RAK is disconnected from the Internet.



Please note: Within the disconnect process the DNP/9200 Linux removes the *ppp0* interface from the internal device list.



That's all.