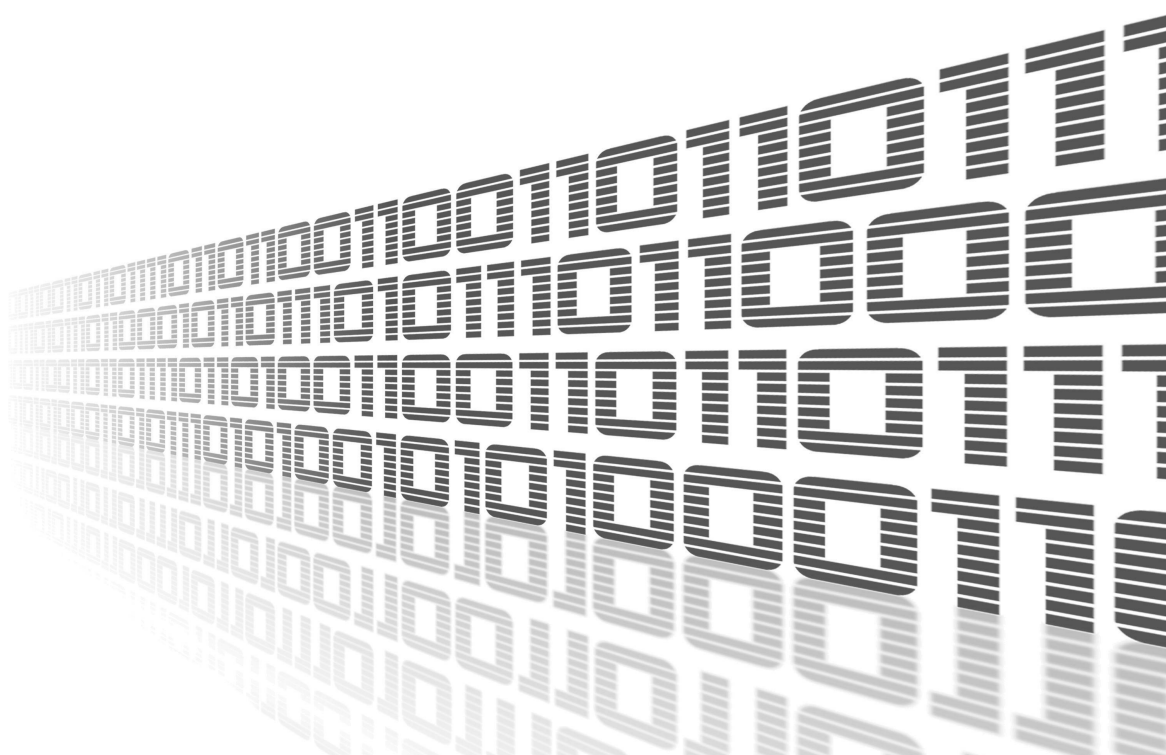




User Module

# Transparent Mode

APPLICATION NOTE



## Used symbols



*Danger* – Information regarding user safety or potential damage to the router.



*Attention* – Problems that may arise in specific situations.



*Information or notice* – Useful tips or information of special interest.



*Example* – example of function, command or script.



Advantech Czech s.r.o., Sokolska 71, 562 04 Usti nad Orlici, Czech Republic  
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# 1. Description of user module



This user module is not installed on *Advantech* routers by default. See *Configuration Manual* for the description how to upload a user module to the router. For more information see the *Configuration manual*, chapter *Customization* → *User Modules*.



This user module works for the ETH0 interface only.

After loading the user module into any Advantech router, this router becomes "invisible" for the remote devices. It is available only for a device that is located behind the router. The default IP address of the ETH0 interface is 192.168.1.1. All communication with the device, that is located behind this router, runs directly. This means that communication from the Internet toward the SIM IP will be redirected to the interface of the device behind this router.

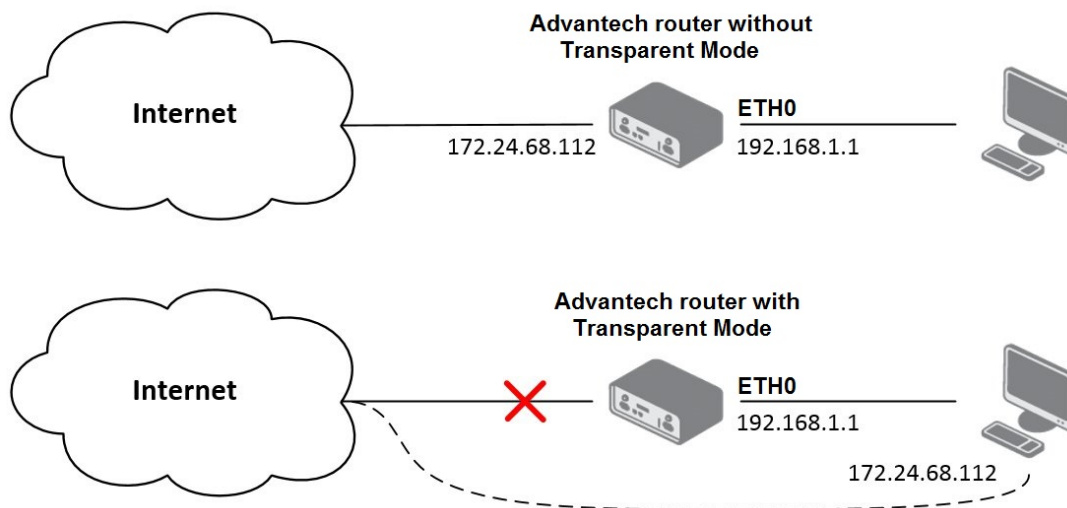


Figure 1: Functional scheme



The user module has no web interface and it is not necessary to activate it (it's active immediately after uploading).

## 2. Configuration

### 2.1 Automatic configuration during the module installation

During the installation of *Transparent Mode* module to the router, DHCP server (dynamic distributing of IP addresses) is disabled. IP address is allocated only when PPP connection is established. For cases when PPP connection is not established, it is necessary to set a static IP address for a device behind the router. The moment the user module is uninstalled, the router is reconfigured to its original state. If the DHCP server was enabled before installing *Transparent Mode* module, after uninstalling this module will be enabled again.

LAN Configuration		
	Primary LAN	Secondary LAN
DHCP Client	disabled ▼	disabled ▼
IP Address	192.168.1.1	
Subnet Mask	255.255.255.0	
Bridged	no ▼	no ▼
Media Type	auto-negotiation ▼	auto-negotiation ▼
Default Gateway		
DNS Server		
<input type="checkbox"/> Enable dynamic DHCP leases		
IP Pool Start	192.168.1.2	
IP Pool End	192.168.1.254	
Lease Time	10 sec	
<input type="checkbox"/> Enable static DHCP leases		
MAC Address	IP Address	
<input type="button" value="Apply"/>		

Figure 2: Reconfiguration of *Lease Time*



During the installation of this module, *Masquerade outgoing packets* item (on *NAT* page of router web interface) is disabled. **This item must never be enabled!**

For automatic forwarding from the router to the device behind this router is necessary to enable the protocol through which access to this device will be allowed. This is done using the form on the *NAT* page (see the figure below). By default, access through each of protocols is disabled.

[www.lucom.de](http://www.lucom.de)

Figure 3: Configuration of forwarding

## 2.3 Access to the router

As already mentioned in the first chapter, router with *Transparent Mode* module is normally available only for a device which is located behind the router. Use the default IP address of the router – 192.168.1.1 (configuration can be performed only by logged in user – name and password is *root* by default).

However, it is also possible to set access to the router from the outside using selected protocol. In that case, communication within this protocol is not forwarded to the device behind the router. Configuration is done using the form on *NAT* page of the router web interface. It is necessary to set values for *Public Port* and *Private Port*, select protocol and enter 192.168.1.1 to the *Server IP address* field (see the figure below).

NAT Configuration			
Public Port	Private Port	Type	Server IP Address
80	80	TCP ▼	192.168.1.1
		TCP ▼	
		TCP ▼	
		TCP ▼	
		TCP ▼	
		TCP ▼	
		TCP ▼	
		TCP ▼	
		TCP ▼	
		TCP ▼	
		TCP ▼	
		TCP ▼	
		TCP ▼	
		TCP ▼	
		TCP ▼	
		TCP ▼	
		TCP ▼	
		TCP ▼	
		TCP ▼	
		TCP ▼	
		TCP ▼	

☒ Enable remote HTTP access on port   
☐ Enable remote HTTPS access on port   
☐ Enable remote FTP access on port   
☐ Enable remote SSH access on port   
☐ Enable remote Telnet access on port   
☐ Enable remote SNMP access on port

☐ Send all remaining incoming packets to default server  
 Default Server IP Address

☐ Masquerade outgoing packets !

Figure 4: Access to the router from the outside

### 3. Related Documents

- [1] Advantech Czech: **v2 Routers Configuration Manual** (MAN-0021-EN)
- [2] Advantech Czech: **SmartFlex Configuration Manual** (MAN-0023-EN)
- [3] Advantech Czech: **SmartMotion Configuration Manual** (MAN-0024-EN)
- [4] Advantech Czech: **SmartStart Configuration Manual** (MAN-0022-EN)
- [5] Advantech Czech: **ICR-3200 Configuration Manual** (MAN-0042-EN)



Product related documents can be obtained on *Engineering Portal* at [www.ep.advantech-bb.cz](http://www.ep.advantech-bb.cz) address.