



DRG 600 series

DRG 600 - Access

DRG 600 - Access is the home gateway within the DRG 600 series. It provides a connection point to FTTx broadband networks and can deliver 100 Mbps to the end user. DRG 600 - Access can be complemented with a number of modules, such as a Switch module and CATV service functionality.

The DRG

DRG 600 (Digital Residential Gateway) is 42Networks world-leading modular Customer Premises Equipment (CPE) for delivery of multi-play services in FTTx networks.

It is based on a “sandwich” principle that builds upon the Base module for passive fiber/TP cable termination. Active modules are then easily snapped on for control and delivery of services.

The modular concept of DRG 600 allows network owners and service providers to effectively deploy broadband networks and offer services with limited initial investments. At the same time the versatility of DRG 600 enables greater earning potential with options for lifting end users to higher-value service packages over time.

Clear and manageable demarcation point

DRG 600 - Access offers one clear demarcation point with one Ethernet interface. This provides network owners with full control over the network end points. A robust demarcation point to the Service Extension Modules is also given. This facilitates easy management, which is an advantage in environments where network operators are organizationally separated from service providers.

The Access module, including the CATV converter, is fully manageable, thus avoiding costly on-site visits. Software and configuration profiles are easily provisioned from 42Networks element manager, the Home Device Director, HDD. Management is also supported using SNMP and DHCP options.

Flexible uplinks and easy-to-understand LEDs

DRG 600 - Access is available with fiber and TP cable uplink possibilities.

The LEDs are discrete and individually numbered, enabling easy recognition and reference for the end user. This is an advantage in the communication with network operators and/or service providers.

Build out with easy-to-add Service Extension Modules

DRG 600 - Access has one LAN port covering the initial need for e.g. high-speed Internet access. A separate module, DRG 600 - Switch is easily inserted into the Access module providing five additional LAN ports. The Switch module is individually manageable and controllable via the Access module and supports full troubleshooting capabilities.

Thanks to its small dimensions the Switch module is easily distributed to end users. Additional Service Extension Modules are easily added to the Access module to provide WiFi and Telephony capabilities.

Use the FTTx network for CATV services

DRG Ease - Access is optionally available with a CATV converter included. TV signals from the fiber are converted to RF signals and distributed over the coax cabling to a standard TV antenna outlet.

While migrating to an all-IP network, the CATV converter enables re-use of existing coax cabling at the end user’s premises. Another advantage is that end users do not need Set Top Boxes.

The CATV converter is fully manageable and features a filter for turning premium channels on or off. It can also be remotely turned on or off for TV service activation/deactivation.



The DRG 600 series consists of separate modules that are easily snapped together. The figure illustrates an example of the assembly process, starting with the Base module for fiber termination, followed by the Access module, Switch (snapped into the Access module), Organizer, WiFi and the Telephony module.

Product Specification for DRG 600 - Access

Interfaces						
Models	Port	Wavelength TX/RX (nm)	Max/Min output pwr (dBm)	Max/Min input pwr (dBm)	Speed (Mbps)	Specification
DRG601-Access-Switch	WAN	-	-	-	10/100	Copper, UTP, Cat5, RJ-45
	LAN	-	-	-	10/100	6 x Copper, UTP, Cat5, RJ-45
DRG606s-Access	WAN	1310/1550	-8/-14	0/-31	100	Single-mode, single-fiber, SC
	LAN	-	-	-	10/100	1 x Copper, UTP, Cat5, RJ-45
DRG626s-Access	WAN	1310/1550	-8/-14	0/-31	100	Single-mode, single-fiber, SC
	LAN	-	-	-	10/100	1 x Copper, UTP, Cat5, RJ-45
	CATV in	-	-	-	-	Single-mode, single-fiber, SC, APC8°
	CATV out	-	-	-	-	Coax out, F-connector Jack
DRG600-Switch	LAN	-	-	-	10/100	5 x Copper, UTP, Cat5, RJ-45 Coax
LED indicators						
LED 1 Status/power		Bi-color red/green				
LED 2 Up-link		Green				
LED 3 CATV (DRG626s-Access)		Bi-color red/green				
WAN Linkstatus (DRG601-Access-Switch)		Green				
LAN Linkstatus		Green				
Quality of Service						
DiffServ		Layer 3 (IP) QoS mechanism, 4 hardware queues for prioritization				
Class of Service		IEEE 802.1p, Layer 2 (Ethernet) QoS mechanism, 4 hardware queues for prioritization				
LAN port priority		4 hardware queues				
Bandwidth shaping		Rate limitation per LAN port				
IGMP snooping		IGMP v1, IGMP v2				
Traffic Classification and Security						
VLAN		Services and port separation				
VLAN stacking (Q-in-Q)		Service provider tagging				
Hybrid links		Tagged and untagged traffic simultaneously on the same link				
Management						
Protocols		SNMP v1, SNMP v2, MIB-II for statistics, enterprise-specific DRG MIB for configuration				
HTTP server		Two access levels for manual configuration, can be turned on/off remotely				
TFTP/HTTP client		Software download				
DHCP		Configuration support				
HDD		Full configuration and supervision via the Home Device Director (HDD), the DRG element manager				
Manageable CATV (DRG626s - Access)						
Monitored optical input		Alarms when configurable threshold of the input optical power is exceeded				
RF output on/off		Turn on/off CATV output				
Filter selector on/off		HP filter, cuts the output below 65MHz and pass signal higher than 87MHz unaltered				
Frequency range		40-862MHz (Premium: 40-65MHz, Free: 87-862MHz)				
RF output impedance		75Ω				
Output return loss		≥14dB @ 862MHz				
RF output level		75 - 95dBμV with opt input @ -10dB-0dBm and 76dBμV @ -8dB with 4% OMI				
Flatness		+/- 1.5dB				
C/R		≥46dB				
CTB (composite triple beat)		≥56dB				
CSO (composite second order)		≥56dB				
Physical						
Dimensions						
Access module		53 mm (D) x 170 mm (H including F-connector) x 162 mm (W)				
Complete DRG 600 configuration, all modules included		55 mm (D) x 231 mm (H) x 203 mm (W)				
Weight						
Access module		<445 g, (including F-connector)				
Switch module		68 g				
Complete DRG 600 configuration, all modules included		1.1 kg				
Power requirements		3.5W to 21W dependent on configuration				
Power supply		12Vdc, external plug-in wall adapter				
Operating temperature		0°C to +40°C				
Operating humidity		5-95% RH non-condensing				
Regulatory Compliance						
CE marked						
ETL marked						
IEC/EN/UL 60950, IEC/EN/UL 60825						
CB certified						
FCC Part 15 Subpart B						
EN 55022, EN 55024, EN 61000-3-2, EN 61000-3-3						
RoHS directive 2002/95/EC						
WEEE directive 2002/96/EC						
						<i>Subject to change without notice</i>
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