

DRG 600 series

DRG 600 - Telephony

DRG 600 - Telephony is a module within the DRG 600 series equipped to deliver high-quality broadband telephony services over two telephone lines.

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.

Use existing analog phones

The Telephony module includes all the functionality needed for high-quality broadband telephony, eliminating any need for stand-alone ATA boxes. A standard analog phone and/or a G3 fax machine is all that is needed to use the telephony services.

Carrier-class broadband telephony

The in-house developed Telephony software allows feature flexibility and faster Time To Market. Many Class 5 services are internally supported, independent of the softswitch used, or the services in the softswitch can be activated/deactivated via the DRG. The major VoIP protocols are supported by the Telephony module: SIP, H323, MGCP, and H248.

Full control and manageability for service providers

DRG 600 enables separate ownership per module. This is beneficial, for example, in environments where network operators are organizationally separated from service providers.

The Telephony module can be individually controlled and managed by a third-party service operator.

Consequently, the ability to troubleshoot one isolated module, such as the Telephony, allows rapid localization of faults and problems are solved faster.

The Telephony module is fully manageable, thus avoiding costly on-site visits. Software and configuration profiles are easily provisioned from the element manager, Home Device Director, (HDD). Furthermore, HDD provides support for VoIP statistics and subscriber line tests.

Management is also supported using SNMP or DHCP options.

Easy to get started

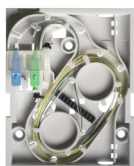
The Telephony module is installed simply by attaching it to the Access module using the built-in magnets, allowing end users to easily install it themselves. No technician is needed, and the whole process of distribution and connection is accomplished smoothly and cost-efficiently.

Modern design

The entire design concept behind the DRG 600 solution is focused on smart and innovative functionality in mechanics, and ease-of-use. For the Telephony module this has resulted in clear and instructive LEDs, an embossed area for service-provider branding and easy installation mechanism.

No cables between different modules are needed. The Telephony module is, as the other Service Extension Modules, (WiFi and Switch), connected to the Access module with built-in connectors.

All cabling and connectors are hidden and managed in a dedicated Organizer module, making cable tangle a non-issue. Also, the Telephony module does not require a separate Power Supply Unit (PSU), further reducing the amount of cables and boxes in the household. Only one PSU is needed for the complete DRG 600.



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 - Telephony

Interfaces

Model	Port	Speed (Mbps)	Specification
DRG600-Telephony	WAN Telephony	100 N/A	Connect to DRG600-Access 2 x Analog phones lines, RJ-11

LED indicators

LED 4 Power/Status	Bi-color red/green
LED 5 POTS line 1	Green
LED 6 POTS line 2	Green

Telephone and fax services

VoIP protocols	SIP, H.323, MGCP, H.248
Speech codecs	G.711, G.729AB, (G.723.1 available on request)
Class 5 services	E.g. Call Waiting, 3-Party Call, Call Transfer, Differentiated Ringing Signals, Call Forwarding, Calling Identification Presentation (CLIP), permanent and temporary CLIR (Calling Line Identification Restriction)
Fax	T.38 and in-band pass-thru when using G.711 codecs
3rd party initiated pause and re-routing	External re-routing of media stream during speech, e.g. for pre-paid calling cards and recording announcement
DTMF	Inband and outband using H.245 and H.225, RFC2833 or SIP INFO
Number of telephones	Up to 5 analog telephones can be connected to each telephone port
Market adaptation	It is possible to set ring signals, tones, cadences, impedance, CLIP etc. according to local market requirements

Management

Protocols	SNMP v1, SNMP v2, MIB-II for statistics, Enterprise-specific DRG MIB for configuration
HTTP server	Built-in WEB server for manual configuration, can be switched 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

Physical

Dimensions	
Telephony module	53 mm (D) x 166 mm (H) x 34 mm (W)
Complete DRG 600 configuration, all modules included	55 mm(D) x 231 mm (H) x 203 mm (W)
Weight	
Telephony module	128 g
Complete DRG 600 configuration, all modules included	1.1 kg
Phone connectors	2 x RJ-11
Power supply	12Vdc, supplied by DRG 600 - Access module. No extra PSU required
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

Subject to change without notice