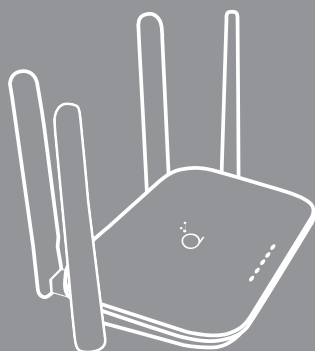




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General Information	TYPE (Specify type and technology: Handset, Modem, Router, MiFi,..., 2G, 3G, 4G, etc.) BRAND MODEL COMMERCIAL NAME SW VERSION HW VERSION	Router CPE (Customer Premises Equipment) Quantum Connectivity Access Q3 Access Q3 Access Q3_ALTAN Ver 1.8 Ver 1.0
SIM	SIM TYPE (Normal 2FF, MicroSIM 3FF, NanoSIM 4FF) SINGLE SIM / DUAL SIM support	Normal 3FF Single SIM
Chipset	BRAND MODEL NUMBER OF CORES & SPEED	MODEM Qualcomm MDM9207 Dual Core
S.O	OPERATIVE SYSTEM & VERSION	Linux 3.18.20
Supported bands	2G - GSM (Supported bands -MHz) 3G - UMTS (Supported bands - MHz) 4G - LTE (Supported bands - MHz)	Not supported B2(1900)/B5(850) MHz B4(1700-2100)/B5 (850)/B7(2600)/B28ab (700APT) / B66 (1700+) MHz
Release 3GPP	UMTS - HSDPA - Release, Category & DL/UL Speed UMTS - HSUPA - Release, Category & DL/UL Speed DC-HSDPA (Supported-Enabled / Supported-Disabled / Not Supported) DC-HSUPA (Supported-Enabled / Supported-Disabled / Not Supported) GSM - GPRS CLASS AND DL/UL SPEED GSM - EDGE CLASS AND DL/UL SPEED 3GPP RELEASE (Access Stratum Release) LTE - DL Category - DL Speed / UL Category - UL Speed	Supported Supported Supported Not supported Not supported Not supported 3G: R8/4G: R10 Categoría 4 (DL 150Mbps/UL 50Mbps)
Throughput	16QAM DL (Supported-Enabled / Supported-Disabled / Not Supported) 64QAM DL (Supported-Enabled / Supported-Disabled / Not Supported) 256QAM DL (Supported-Enabled / Supported-Disabled / Not Supported) 16QAM UL (Supported-Enabled / Supported-Disabled / Not Supported) 64QAM UL (Supported-Enabled / Supported-Disabled / Not Supported) MIMO 2x2 (Supported-Enabled / Supported-Disabled / Not Supported) MIMO 4x4 (Indicates in which LTE Bands supports MIMO 4x4) CARRIER AGGREGATION 2CC (DL) CARRIER AGGREGATION 3CC (DL) CARRIER AGGREGATION 4CC (DL) CARRIER AGGREGATION CA_28C (DL) MAXIMUM NUMBER OF COMPONENT CARRIERS IN DL MAXIMUM NUMBER OF COMPONENT CARRIERS IN UL	Supported-Enabled Supported-Enabled Not Supported Supported-Enabled Not Supported MIMO2X2 Not Supported Not Supported Not Supported Not Supported Not Supported Not Supported

*La información técnica descrita en este documento es una propuesta la cual puede ser actualizada en un futuro próximo.
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IMS	VoLTE (Supported-Enabled / Supported-Disabled / Not Supported) ViLTE(Supported-Enabled / Supported-Disabled / Not Supported) VoWiFi (Supported-Enabled / Supported-Disabled / Not Supported)	Supported Not supported Not supported
Main Features	IP PROTOCOL DEFAULT (IPv4 only, IPv6 only, Dual Stack IPv4/IPv6) RAM MEMORY INTERNAL MEMORY (Specify total capacity and capacity available for end user) EXTERNAL MEMORY (Specify total capacity) Device screen: Size and Type GSMA TAC number BACK CAMERA (Megapixels) FRONT CAMERA (Megapixels) FLASH SUPPORT (BACK / FRONTAL) Fingerprint recognition Dual Band in WiFi (2.4GHz / 5GHz) TR069 (Visible & Editable) APN CORRECTION (apn could be corrected by network) NITZ SPN & ONS support (From SIM Card) RADIO FM (Internal antenna or headphones antenna) BLUETHOOT (Version) WI-FI (Version 802.11 a/b/g/n) HOTSPOT SMS BATTERY (MiliAmperes & Volts) / REMOVABLE OR INTERNAL LAN, WAN PORTS VOICE PORT	Supported 256MB 512(ROM) Not supported Not supported On behalf of "Quantum Connectivity" Not supported Not supported Not supported Not supported Only 2.4GHz Supported Supported Supported Only SPN Not supported Not supported Support 802.11 b/g/n Supported Supported over IP Not supported 1 WAN X 1 LAN 1 voice port (RJ11)
Dimensions	DEVICE SIZE (Lenght x Width x Height) Weight (Gr) KEYBOARD TYPE	217mm*130mm*145mm 200g Not supported
Messaging services	MENSAJES MULTIMEDIA (MMS) E-MAIL SMS 7 & 8 BITS support MULTIMEDIA MESSAGES (MMS) SMS via LTE SMS Concatenated (not mms) SMS via 2G, 3G	Not supported Not supported Supported over IP Not supported Not supported Supported over IP Not supported
Audio Codecs	2G - GSM AUDIO CODECS (AMR,AMRFR,ETC) 3G - UMTS AUDIO CODECS (AMR,AMRFR,ETC) 4G - LTE AUDIO CODEC (AMR-NB / AMR-WB)	Not supported Not supported Supported AMR,FR,not support ETC



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SIM	SDN support (From SIM Card) SIMLOCK BY MCC/ MNC support SIMLOCK BY EF GID 1 / EF GID 2 SIM Voltage supported OTA SMS OTA HTTP Preferred networks CLIENTE ANDSF (Access Network Discovery and Selection Function)	Not supported Supported Supported 1.8/3V Supported Supported Supported Not supported
Functionalities	VIDEO PLAYER VIDEO RECORDER VOICE RECORDER AGPS GPS PTT LOUDSPEAKER IMAGE, AUDIO & VIDEO (files supported) LED Indicators	Not supported Not supported Not supported Not supported Not supported Not supported Not supported Not supported Supported
Connectivity	LPP protocol support LBS 2G, 3G, 4G (Location based services - Support) PROTOCOL SUPPORT EAP-SIM / EAP-AKA HDMI MODEM (USB Cable) Tethering via Bluetooth WIFI OFFLOADING (ENABLED /SUPPORTED) USB (Support modes , photo, sharing, HDD) WAP XHTML HTTPS HTML WEB WEB BROWSER VoIP (Supported/enabled)? NFC Support USSD Tool for traces (Name) SW UPDATE (Remote, via PC, etc)	Not Supported Not Supported Not supported Not supported Supported Not supported Not supported Not supported Not Supported Not Supported Not Supported Not Supported Not Supported Supported (optional) Not supported Not supported Supported (QXDM, QCAT) Supported
3GPP Features	CPC RECEIVER TYPE 3i ENHANCED F-DPCH & SRBoHS Cell_PCH and URA_PCH EVS PC/CS Multirab establishment TTI Bundling RLC segmentation Different MCS usage SPS - Semi-persistent scheduling RoHC - Robust overHead Compression Handover intra eNodeB/inter eNodeB / inter-Frequency / inter-RAT Redirection to UTRAN	Supported Supported Not supported Not supported Not supported Not supported supported supported supported Not supported Supported Supported Supported Supported



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SRVCC (Telcel / ATT Network)	Not supported
CSFB w/measurements	Not supported
Short DRX	Supported
C-DRX (Connected Mode DRX)	Supported
MFB1	Supported
TM9	Supported
LAA	Not supported
CIRCUIT SWITCH CALL FALLBACK SUPPORT(CSFB)	Not supported
IRAT (UTRAN, GERAN con PS HANDOVER)	Not support GERAN
FAST DORMANCY (rel 8 3gpp support)	Supported
SRBoHS	Supported
E-FACH (HS_FACH, HS_RACH, e_DRX)	Supported
VAMOS I&II	Not supported
SUPPORT BIP (BEARER INDEPENDENT PROTOCOL)	Supported
BIP Client Supported: UDP/ TCP	Supported
SOPORTE DE MODO TRANSPARENTE (Alpha ID = NULL o NO Alpha ID)	Supported
OPEN CHANNEL	Supported
CLOSE CHANNEL	Supported
RECEIVE DATA	Supported
SEND DATA	Supported
REFRESH	Supported
GET CHANNEL STATUS	Supported
Handset requirement: A BIP-capable SIM Toolkit handset, "class e"	Not supported
BIP Channels supported	Supported

CPE, Mifi, Routers

Mandatory

- Protocol TR069 suport and data models:
- TR-069 Amendment 1,2,3,4,5 – CPE WAN Management Protocol
 - TR-098 – Internet Gateway Device Data Model for TR-069
 - TR-104 – LTE/WiMAX Home™ Provisioning Parameters for VoIP CPE/UE
 - TR-106– Data Model Template for TR-069 Enabled Devices - provides the template for extending TR-069 remote management to other digital home devices
 - TR-111/TR-069 Annex G and K – Applying TR-069 to Remote Management of Home Networking Devices - makes it easier for an auto-configuration server (ACS) to interact with home-based devices that live behind a NAT router
 - TR-110 Issue 1.01 - DSLHome™ Reference Models for VoIP Configurations in the DSL Home
 - TR-135 – Data Model for a TR-069 Enabled STB
 - TR-140 Issue 1.1 - TR-069 Data Model for Storage Service Enabled Devices
 - TR-142 – Framework for TR-069 enabled PON devices
 - TR-143 – Specifies diagnostics objects for use in data models
 - TR-156 – Using GPON Access in the context of TR-101
 - TR-157 – Specifies Component objects for use in data models
 - TR-18111 - Specifies Device:1
 - TR-18112 - Specifies Device:2
 - TR-196 - Femto Access Point Service Data Model

Partial, only support TR069/098/143



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Enabled and editable menu to enter URL ACS Server, user and password and Period Inform Interval. But Support limited access to restrict/disable this sensitive settings from the LAN Side

Supported

Protocol STUN or XMPP support

Supported

Support real-time update of this hosts list including connected devices and relevant parameters (MAC, IP, description, speed)

Supported

Support real-time update of this hosts list including connected devices and relevant parameters (MAC, IP, description, speed)

Supported

LTE Statistics:
 - WAN/LAN Statistics (Packet Drops/Lost/Sent/Received)
 - WAN/LAN bandwidth utilization/allocation
 - Uplink/Downlink data rates
 - IMSI
 - IMEI
 - MSISDN
 - Cell ID
 - RSRP
 - RSRQ
 - SINR
 - CQI
 - RSCP
 - RSSI
 - CPE Tx power
 - CPU usage
 - Memory usage
 - Connection time (retention) to network

Supported

and additional WIFI Statistics (neighbor's channels, noise level, etc)

Support active and passive notifications

Supported

Support device diagnostics: speed test (ping, DSL, ATM Loopback, DNS diagnostics, Trace, etc)

Partial, only support DL/UL speed test

Support Https with and without certificate

Not supported

Support of Connection request issued by the ACS with user and Password (basic, digest)

Supported

Support of RPC

Supported

Support file download RPC initiated by ACS server

Supported

Support restart RPC, when activated by ACS

Supported



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	Support functionality of Set and Get commands, issued by the ACS. CPE should respond according to TR-069 (and its subsets) protocol rules(e.g. Get parameters, get attributes etc.). ALL parameters must to be checked one by one. session to the ACS and including new value in the Parameter List within associated Inform message.	Supported
	Avoid using X_Vendor, if possible To make life much easier, it is highly recommended to avoid or reduce to a minimum the use of devices which their data model is based on X_Vendor parameters rather than standard data model. In cases the data model includes parameters which are not part in the TR-069 standard data model, naturally there is no alternative.	Supported
	TR-069 Client robustness Important to verify that the TR-069 client on the device is not stopping to work after a sever load, and become non-manageable. If the TR-069 Client sopped working, only a manual reboot will fix the problem. This problem can be resolved by implementing a "Watchdog" in the CPE that monitors and verified that the TR-069 Client is alive.	Not supported
	Security Verify that the CPE supports HTTPS with and without Certificate. The CPE should support advanced security authentication where the CPE will use the Serial as unique username and use unique password only for this Serial.	Not supported
Optional	Protocol LPP/LPPa support	Not supported
	NAT configuration (Type A, B, C, D, E, F or 1, 2, 3)	Supported
	Function as Ethernet Access point	Not Supported
	Port Forwarding	Supported
	VoLTE supported /Enabled	Supported
	NAT ALG (supported/enabled)	Not Supported