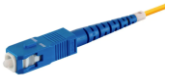
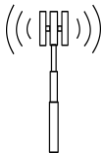
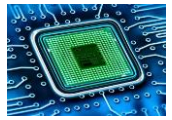
Terminology

Transport methods

	Component / Service Name	Purpose and Definition	User/Implementor	Notes
	DOCSIS / Cable - Data Over Cable Service Interface Specification	Protocol behind coaxial cable as a data (and video) delivery method	Comcast, Liberty Global, etc – founded by CableLabs consortium	“Cable” operators transport method for both broadbband & video. Today, this is mostly a hybrid of fiber within the core network and cable for “last mile”
	PON – Passive Optical Network	Fiber-based communications technology for delivering ”last mile” broadband (and video) access to subscribers	Comcast, Sky, Liberty Global, NOS, Deutsche Telekom, etc	Several overlapping standards that generally define the delivery (to the home) of data over a physical fiber link – see ONU/ONT
	DSL – Digital Subscriber line	The technology behind video and broadband service delivered over traditional telephone (copper) lines	Sky (broadband), Deutsche Telekom, Vodafone, etc	More prevalent in Europe and overseas, and rapidly being replaced by PON technologies but still has a very large subscriber base despite a lack of new growth
	DBS – Direct Broadcast Satellite	Primarily a *video* delivery method directly to end users via Satellite, but data can be sent as well	Sky (video), any Satellite provider	Typically 1-way communication from Satellite to end-user, but 2-way can be augmented using subscriber’s source of internet for additional features and services (such as OTT video)
	Cellular based (4G/LTE, 5G)	Wireless transport method of delivering data (including OTT video) via existing cellular infrastructure for fixed residential use	T-Mobile, Verizon, many Cellular providers worldwide.	Different use-case than data being served on mobile phones. Intended to be ***primary*** data connection for that subscriber at their fixed resi location - Cellular networks are used between towers and user’s cellular modem(s), while fiber serves the towers themselves. This is similar to how DOCIS uses cable as last-mile, but fiber within its core

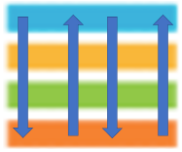
Terminology

Hardware

	Company / Platform Name	Purpose and Definition	User/Implementor	Notes
	SoC – “System on a Chip”	Embedded Hardware providing the basis for OEMs to build devices – RDK-V, B C	Broadcom, Intel, Amlogic, Realtek, Qualcomm, Quantenna, Raspberry Pi	Chipset, memory and other components – lowest level of a device’s
	IoT – Internet of Things	Catch-all term for every day devices that can now be internet-connected	Any manufacturer building or supporting devices typically labeled “smart”	Basis behind the smart-home, activity trackers and anything whose initial use was not web-based
	Modem – portmanteau of “Modulator/Demodulator”	Device located at the customer premise to connect local LAN to RF modulated access network. Provides the actual connection to the outside internet.	End user, all ISP’s	Device can be either COAM (customer owned and managed) or provided by an ISP usually with a lease fee. Different versions exist for use with different transport methods (Cable, DSL, Cellular etc)
	ONU / ONT – Optical Network Unit (or Terminator)	Small hardware device installed at a PON subscriber’s home to convert the physical fiber’s signal into Ethernet or Coax for use within the customer’s LAN	Any Fiber MSO, located in End user’s home	Similar in purpose to a modem, this converts the outside connection (fiber) to use to more common technologies within the home such as Ethernet. It can then be connected to a router or gateway for even more functionality
	Router - See Gateway below	Routes data between the modem’s outside connection (WAN), within the home (LAN)	End user (when used alongside of a separate modem)	Downstream from a modem as it allows multiple devices (on premises) to share a single internet connection via that modem, often includes WiFi
	Gateway	***Combines*** the functions of a Modem/Router/WiFi access point into a single unit	End user, Many ISP’s	Greatly simplifies the configuration, telemetry and operations for both MSO and end customer in most resi use cases by using 1, easily setup box

Terminology

Development, Testing and Telemetry



Component / Service Name	Purpose and Definition	User/Implementor	Notes
Raspberry Pi	Commercial off the shelf - Open-source, Linux-based single board micro-computer with a low price point	RDK community	Standardized hardware configuration and adequate processing power, its used by the RDK community as a reference platform for most initial testing and development of all things RDK
Abstraction (Architecture concept)	Well-defined, idealized interface, intended to reduce complexity of layered software systems	Software development community (not RDK specific)	Implementation is up the individual operator + component being engineered
HAL - Hardware Abstraction Layer (Implementation)	Software layer allowing application and component interaction with a hardware device at a general or abstract level rather than at a detailed more specific level	RDK Community, OEMs	Eases both development and porting efforts, increases device reliability and can also assist support efforts on lower resource devices
WebPA	protocol messaging system for communication between cloud server and RDK devices	Comcast, Other ISPs	Developed originally by Comcast and later open-sourced. Secure and web-based, not specific to RDK
TR-069	protocol messaging system for communication between cloud server and IP-connected devices	RDK Community, other ISPs	Similar to WebPA with a different cost structure to manage, can co-exist with WebPA as well depending on the requirements of the MVPD/ISP
TR-181	Device data model used by protocols such as TR-069 and WebPA to communicate telemetry	RDK Community, other ISPs	Among other features, this is the list of codes, states, device issues that correspond to the remote management of devices in a customer's home

Terminology

Framework and Application layer software

Component / Service Name	Purpose and Definition	User/Implementor	Notes
OpenSync	Carrier-grade open-source software acting as the connection between in-home hardware devices and the cloud managing them.	Plume, RDK Community	Originally developed by Plume, then later open-sourced. Assists in the management of a subscriber's home network by the MVPD. Provides telemetry and visibility to detect and prevent connection issues, automatically, from the cloud
EasyMesh	Effort with the goal of a standardization spec intended to allow broadband devices to interoperate within a single mesh network from different manufacturers	EasyMesh member community, RDK community (future)	Spec that aims to support adaptive consumer mesh networks with an emphasis of easy setup and flexible configuration, paired with robust automatic network intelligence, scalability & load balancing without user interaction
Cujo	Proprietary artificial intelligence agent, being deeply integrated into RDK-B allowing additional security features for end users	RDK Community, Comcast	Automatic, evolving security and telemetry solution intended to block known bad actors, blacklists, DDoS attacks, malicious tracking software, etc for the entire household using the RDK-B device