IMPACT REPORT

Cradlepoint unleashes LTE-A modems for enterprise networking, SD WANs

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Cradlepoint unveiled a Category 6 LTE Advanced (LTE-A) modem for 4G cellular enterprise networking designed to improve speed and resilience, and simplify deployment. The modem features out-of-band management for failover and business continuity, and troubleshooting of devices on the same LAN. It also incorporates new firmware and management features designed to improve network visibility, routing and data offload in vehicles.

The 451 Take

Cradlepoint is a cellular WAN pioneer, having offered products in this space for 10 years. The LTE-A upgrade increases bandwidth and performance significantly over previous-generation LTE Category 3. Yet being first out the door with a new technology is always a double-edged sword. A company can crow about having the shiny new thing ahead of everyone else, but if anything goes wrong, that pioneer is found with arrows in its back. Nonetheless, LTE-A will be important as enterprises consider LTE data services as a backup or replacement for hard-wired WAN links.

Context

Cradlepoint is a privately held company founded in 2006 to provide software-defined 4G LTE WAN connectivity – including carrier-certified CPE and cloud management – for fixed, mobile, and M2M/IoT networks. It offers a cellular LTE alternative for enterprise connectivity targeted at branch offices, point-of-sale retailers, vehicle fleets, kiosks, digital signage and video cameras. Based in Boise, Idaho, Cradlepoint has 435 employees. Late in 2015, the company acquired Pertino, an SDN startup offering cloud-based networks as a service to enterprises and SMBs. Cradlepoint has 15,000 customers and 1.3 million units worldwide, and says its business has grown in excess of 50% for the past three years. Its products are used by 75% of the world's top 25 retailers and 25 of the largest cities in the US, the company says.

Technology

LTE can be rapidly deployed as an adjunct or alternative to traditional wired MPLS and private line networks, or DSL or cable broadband networks. SD WANs leverage installed WANs by providing a more agile and dynamically adjustable software overlay for rapid service provisioning, improved management, flexible connectivity and in some cases, lower cost. 451 Research estimates that the SD WAN market will grow from $195m in 2015 to $470m in 2019, a CAGR of 19.36%.

LTE Advanced builds upon the initial LTE network feature set by adding features for expanded bandwidth and performance. User equipment (UE) is classified by categories based on the number of radio carriers supported, the number of antennas used for multiple-input multiple-output (MIMO) and modulation sophistication.

LTE-A Category 6 UE is operating up to 3X faster than first-generation Category 3 devices, thanks to higher capacity from aggregating additional LTE bands together, and MIMO. Network improvements, as well, bolster LTE enterprise service offerings with new features such as low power relay nodes at the cell network edges to improve capacity and coverage. Verizon has rolled out LTE-A across the majority of its network (under 'XLTE') and AT&T is live with it in major networks, with ongoing deployments. T-Mobile has LTE-A deployed across its LTE footprint (under the 'Wideband' name) and Sprint has coverage in major markets with ongoing deployments.

Products

Cradlepoint offers an array of wireless 4G LTE modems and routers for small and medium-sized branch

offices, small office/home office, and IoT/M2M and vehicle/fleet applications. The company's ARC router is purpose-built for failover and uptime; Cradlepoint's cloud-based management and security applications are designed for rapid deployment and flexible management of geographically distributed branch networks.

The LTE-A modem capabilities will be embedded in Cradlepoint's AER edge routers, ARC failover routers and out-of-band management routers, and in the COR IBR1100 ruggedized router for vehicles and mass transit. It features 300Mbps download and 50Mbps upload speeds, vs. 100/50 for Cradlepoint's Category 3 LTE modem. It supports US, Canada and European carriers, and LTE bands 1-5, 7, 8, 12, 13, 17, 20, 25, 26, 29, 30 and 41, depending on the carrier. In addition to aggregating two radio channels together, the LTE-A modem can fall back to WCDMA/DC-HSPA+ on bands 1-5, and 8 for 42/5.76Mbps. Unlike the company's original Category 3 modem, its new LTE-A modem does not have EVDO or 2G fallback.

The LTE-A modem also automatically detects the SIM card and configures itself for the appropriate carrier. This is designed to simplify and reduce time to configure the Cradlepoint routers in that it does not require internet access to download modem firmware for switching between carriers. It also enables users to deploy a single Cradlepoint product for any carrier network.

Out-of-band management enhancements in the LTE-A modem allow a user to troubleshoot devices beyond the primary router through a CLI. Advanced enterprise routing features in fixed edge routing applications include route filtering, policy-based routing, BGP Multipath, and CLI debugging tools. Home Station Fast Data Offload enables rapid offload of vehicle-stored DVR data over a dedicated 5Ghz band. And the Cradlepoint CBA850 router can now failover a branch router that might be using all available WAN ports.

New features in the Cradlepoint Enterprise Cloud Manager enhance router configuration management by identifying group and individual configurations for any device and enable centralized SIM tracking and inventory management across multiple carriers to compare data usage charges based on carrier invoice.

Competition

Cradlepoint competes with Cisco and its ISR and IWAN products lines. It also competes with other established and startup companies targeting SD WANs, including Aryaka, Citrix, Glue Networks, Viptela, CloudGenix, Versa Networks, Talari, Nuage Networks, Silver Peak and VeloCloud. Cisco offers cellular WAN interfaces on its branch routers and LTE gateways for IoT applications. Intel offers cellular IoT modems, and a number of companies offer LTE gateways to aggregated device out-of-band management

interfaces.

SWOT Analysis

Strengths

Cradlepoint has been focusing squarely on cellular/LTE WANs and specific markets for 10 years, so it is not encumbered by trying to offer all WANs to all users as primary links.

Weaknesses

An enterprise needing wired WAN connectivity via MPLS, private lines or broadband might look past Cradlepoint's offerings. The Pertino cloud NaaS asset is new so Cradlepoint lacks deep experience with it.

Opportunities

As LTE and LTE-A coverage expand, and with 5G cellular emerges, so does the TAM for Cradlepoint. And with a CAGR of roughly 20%, SD WANs is a growing opportunity for all players.

Threats

As these markets grow, competition grows along with them. Vendors targeting IoT, for example, may encroach on Cradlepoint's territory while waiting for the IoT market to grow.

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M&A ACTIVITY BY SECTOR
M&A ACTIVITY BY ACQUIRER
FIGURES SHOWN INDICATE NUMBER OF TRANSACTIONS

COMPANY MENTIONS (PRIMARY)

Cradlepoint

COMPANY MENTIONS (OTHER)

Aryaka Networks AT&T Cisco Citrix CloudGenix Cloud Manager Glue Networks Intel Nuage Networks Pertino Silver Peak Sprint PCS T-Mobile USA Talari Networks VeloCloud Verizon Versa Networks Viptela

CHANNELS

Cloud Transformation Networking Service Providers

SECTORS

All / Enterprise networking / WANs

All / Cloud / Infrastructure as a service