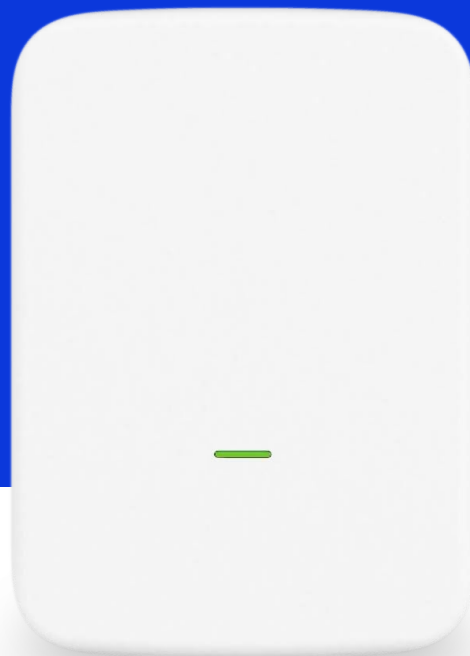


**GigaPro**
p4

The Calix GigaPro p4 (GPR1027E) is a new generation, dual-band, PoE or locally powered Wi-Fi 6 RG/Mesh system, ideal for business applications, bringing high-bandwidth services to restaurants, offices, small businesses, and more. This intelligent, high-performance system offers the latest 802.11ax Wi-Fi 6 technology along with a 2.5GE LAN/WAN interface, allowing it to support multi-Gigabit throughput for video and data services.

MULTI-GIGABIT SUBSCRIBER EXPERIENCE

The GigaPro p4 is a dual-band, PoE or locally powered Wi-Fi 6 system that leverages the 2.4 and 5 GHz spectrum. Using a 2.5 Gigabit Ethernet interface supporting either WAN or LAN allows broadband service providers (BSPs) to support high-bandwidth applications and/or services for the most demanding environments.

With integrated Power over Ethernet (PoE), the GigaPro p4 can accommodate new use cases within locations that could not be supported before---even in areas without power availability. Coupled with the Calix GigaPro GPR8802x, the GigaPro p4 can be powered via an ethernet cable. In addition, the p4 can also be powered locally (with a traditional power adapter), offering the ultimate location flexibility.

The GigaPro p4 enables business subscribers to receive Multi-Gigabit broadband data, Internet Protocol (IP) video and services. Using the latest 802.11ax technology in the 2.4 and 5 GHz radios, the GigaPro p4 incorporates 4x4 streams of Wi-Fi delivery (2x2 @ 2.4 GHz, 2x2 @ 5 GHz).

In addition, with multi-user multiple-input and multiple-output (MU-MIMO) and beamforming, the p4 allows BSPs to extend the access network outside smart homes, establishing a strategic location for the delivery and control of broadband services.

With Wi-Fi being the de facto wireless data communication technology, Calix engineered the GigaPro p4 for optimal coverage with simultaneous dual-band 2.4 GHz and 5 GHz operation and dynamic beamforming in all spectrums. Leveraging the latest Wi-Fi 6 features, the p4 provides long range and higher efficiencies compared to earlier generations of Wi-Fi technology.

The GigaPro p4 also supports the Dynamic Frequency Selection (DFS) channels at 5 GHz to maximize transmission capabilities. The p4 quickly and easily delivers HD and UHD (ultra-HD) video and data services to subscribers within any demanding

video-rich and mobile broadband environments.

Ensuring subscribers can have ultra-fast Wi-Fi throughout their premises, the p4 can operate in either a residential gateway (RG) or mesh satellite mode, while providing the latest generation of redundant Wi-Fi 6 connectivity. With multiple GigaPro p4s provisioned as mesh satellites with any GigaPro or GigaSpire RG, subscribers can truly realize the ultimate whole premises experience.

EASY TO INSTALL, ACTIVATE, AND MAINTAIN

With the GigaPro p4, Calix has redefined how to install and activate residential services. When deployed with a wired connection it's as simple as plugging a Cat 5/6 cable in between the GigaPro p4 RJ-45 port and the ONT. The GigaPro p4 leverages its TR-069 interface to communicate its presence to the Calix Support Cloud, which adds the GigaPro p4 to the subscriber account.

The system harmonizes the services on the GigaPro p4. This removes all human error-prone touch points. When deployed with a wireless mesh, the subscriber uses the Wi-Fi Protected Setup (WPS) button on both the GigaPro p4 and the GigaPro or GigaSpire RG to pair the mesh network.

Once this step is done, the discovery, configuration and harmonization steps occur. Support Cloud's extensive troubleshooting capabilities, remote software downloads, and easy-to-use service activation features ensure that services are delivered and maintained without needless truck rolls and hardware upgrades. Employing a GigaPro p4 RG and/or GigaPro p4 satellites allows BSPs to reduce their operational expenses while effectively delivering an elevated Gigabit experience to their subscribers.

UNLIMITED SUBSCRIBER PLATFORM

The GigaPro p4 uses the world's only hardware independent, modular, standards-based, software-defined Experience Innovation Platform. Not only will BSPs be able to capitalize on the operational efficiencies gained via common operating model, but they will also be able to excite their subscribers and drive new revenue streams by quickly and easily adding new services via cloud-based applications.

For most BSPs, integrating new hardware is complex, time-consuming, and costly. But because all GigaPro systems run on the mature, proven Experience Innovation Platform, they are fully interoperable and pre-integrated, resulting in OPEX and CAPEX savings. Further, upgrading or adding a new system only requires days, not weeks or months, allowing BSPs to dramatically accelerate their time to market, time to revenue capabilities.



KEY ATTRIBUTES

Business RG/Mesh

- Layer 2 bridge and Layer 3 routing for High Speed Internet (HSI) data and IPTV video services
- Self-Organizing Network (SON)
- Auto configuration
- Band and Node steering
- Bridge port assignment and data traffic pings
- MAC filtering Wi-Fi

Wi-Fi

- 2.4 GHz and 5 GHz, simultaneous dual-band
- 4x4 streams (2x2 @ 2.4 GHz, 2x2 @ 5 GHz)
- 2.4 GHz and 5 GHz 802.11ax (Wi-Fi 6) certified, 802.11a/b/g/n/ac compatible
- WPA/WPA2/WPA3; WEP 64/128 bit encryption
- PuF (Physical Unclonable Functions)
- WPS push-button
- DL/UL MU-MIMO with beamforming
- 1024 QAM; OFDMA; BSS Coloring
- DCM (Dual Carrier Modulation)
- TWT (Target Wake Time) for IoT clients

Wi-Fi Redundant Mesh

- Self-Managed: self-configuration, airtime fairness
- Dynamic Mesh: load balancing, band/node steering; interference management
- Self-Healing: backhaul failover; diagnostics

Interfaces

- 2.5 Gigabit Ethernet LAN/WAN interface; single port of multi-rate 10/100/1000/2500 BASE-T Ethernet, auto-negotiating for residential IPTV and data services

IPTV, IGMPv2, future support of IGMPv3

- IGMP Snooping and Proxy
- IGMP Fast Leaves

Management

- Calix Support Cloud
- TR-069
- Local Home Gateway GUI, access provisionable
- Remote WAN side GUI access

AC to 12 V DC power adapter

PoE 802.3AT PD

SPECIFICATIONS

Dimensions

- Width: 5 inches (12.7 cm)
- Height: 7 inches (17.8 cm)
- Depth: 1.6 inches (3.9 cm)
- Weight: 2.4 pounds (1.1 kg)

LAN/WAN Interface

- Wired: 10/100/1000/2500 BASE-TX Ethernet Port, RJ-45 connector

Interfaces

- Wireless: 2x2 2.4 GHz, 2x2 5 GHz internal antennas
- Power: 2-pin barrel connector

Data

- Drop length: 328 feet (100 m)
- CAT 5E cable for 2.5GigE
- Traffic Management and QoS: 802.11Q VLAN; 802.11p voice, video, data and management priorities; Q-in-Q tagging

Wireless

- 2.4 GHz 802.11 b/g/n/ac/ax
- 2x2 UL/DL MU-MIMO
- 5 GHz 802.11 a/n/ac/ax
- 2x2 UL/DL MU-MIMO, Explicit high-power, dynamic beamforming
- 2.4 GHz, 5 GHz simultaneous
- DCM, TWT, extended GI
- Auto channel selecting and interference detection
- Wireless Security: Wi-Fi protected access (WPA/WPA2/WPA3) WEP, MAC address filtering • Wi-Fi multimedia (WMM) • 802.11k, 802.11v, 802.11r
- WPS push button
- Wi-Fi multimedia (WMM)

Remote Management

- TR-069 remote management
- TR-098 Internet Gateway Device Data Model

Environmental

- Operating temperature: ambient temperature, 0°C to 40° C
- Operating and storage relative humidity: 10 to 90 % and 5 to 95% non-condensing respectively

Certification and Compliance

- Emissions:
 - FCC Part 15 Class B
 - IC ICES-003 Class B
 - ISPR-22
- Safety:
 - UL 62368 and UL 1697 approved
- IEEE: 802.3, 802.3ab, 802.3u, 802.11p, 802.11Q
- Wi-Fi Alliance Certified 802.11ax (Wi-Fi 6)



Powering and Alarms

- PoE 802.3AT PD
- 2-pin barrel connector
- Input voltage: 12 V DC (nominal), 10 V DC (min.), 15 V DC (max)
- External Power Adapter: 12 V DC, 2A

ORDERING INFORMATION

Order Code	Description
System	
100-05907	p4 (GPR1027E) Dual band Wi-Fi 6, 2.5GE LAN/WAN, AM Power Adapter
Power Adapters	
100-05669	802.3at PoE injector; 1Gbps WAN, 1Gbps LAN, AC Power Cord
100-06005	802.3bt PoE injector; 5Gbps WAN, 5Gbps LAN, AC Power Cord

Note: Calix believes the information in this publication to be accurate as of publication date, and is not responsible for error. Product Specifications are subject to change without notice.