

**GigaSpire®**
7u6



The GigaSpire 7u6 (GS3137E) delivers multiple times the performance of current Wi-Fi 6 systems, setting the new standard for all Calix SmartLife™ managed solutions. Equipped with Wi-Fi 7 functionality, broadband service providers now have the ideal Wi-Fi system to complement high speed fiber delivery systems to solve for the high-speed requirements of gaming systems, the low latency need for applications equipped with augmented/virtual reality functionality, the expanded use of 4K/8K streaming devices and the growing number of connected intelligent devices per subscriber.

2.5-GIGABIT SUBSCRIBER EXPERIENCE

The latest addition to the Unlimited Subscriber Wi-Fi systems portfolio, the GigaSpire 7u6 is a premium smart home system that delivers the latest Wi-Fi 7 technology. The 7u6 offers a full 2.5GE up-link at the subscriber's premises, connecting to the growing number of multi-Gig fiber delivery services. On the LAN side, Wi-Fi 7, three 2.5GE interfaces are available for customer multi-media devices.

The GigaSpire 7u6 enables residential and small business subscribers to receive multi-Gigabit broadband data, Internet Protocol (IP) video, and voice (POTS) services. Using the latest 802.11be technology in both the 2.4, 5 and 6 GHz radios, the 7u6 incorporates 6x6 streams of Wi-Fi delivery (2x2 @ 2.4 GHz, 2x2 @ 5 GHz, and 2x2 @ 6 GHz). In addition, with multi-user multiple-input and multiple-output (MU-MIMO) and beamforming, the 7u6 allows broadband service providers to extend the access network inside the home and establish a strategic location for the delivery and control of broadband services.

With Wi-Fi being the de facto wireless data communication technology of choice for consumers, Calix engineered the GigaSpire 7u6 for optimal whole-home coverage with simultaneous tri-band 2.4 GHz, 5 GHz, and 6 GHz operation with dynamic beamforming in both spectrums. Leveraging the latest Wi-Fi 7 features, the 7u6 provides longer range, higher efficiency, and less interference compared to earlier generations of Wi-Fi technology. The 7u6 also supports the entire 6 GHz band of 1.2 GHz spectrum and can be provisioned to support 240 and 320 MHz channel bandwidth at 5 and 6 GHz, respectively. The 7u6 easily delivers HD, UHD (ultra-HD) and 4K video and data throughout a

subscriber's home in an increasingly video-rich and mobile broadband environment.

Ensuring consumers can have ultra-fast Wi-Fi throughout their premises, multiple GigaSpire 7u6 can provide the latest generation of redundant Wi-Fi 7 mesh network. With one of the 7u6 as the hub, and the rest of the 7u6m as satellite extenders, consumers can truly gain the whole home/smart home experience.

VOICE SUPPORT: The GigaSpire 7u6 also provides a voice port supporting a comprehensive family of voice protocols such as SIP, MGCP, and H.248.

EASY TO INSTALL, ACTIVATE, AND MAINTAIN

With the GigaSpire 7u6 integrated system, Calix has redefined how to install and activate residential services at a subscriber's premises. Using the Calix Field Service app or Subscriber CommandIQ® app, and a phone or laptop, a field technician can install and apply the subscriber's service profile without special equipment or assistance from the central office.

Calix also provides the innovative Calix Service Cloud, which allows broadband service providers to configure, activate and upgrade the GigaSpire 7u6 quickly from a remote location using in-band management, or TR-069. 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. Deploying 7u6 systems allows service providers to reduce their operational expenses while effectively delivering an unparalleled 2.5 Gigabit experience to their subscribers.

CALIX UNLIMITED SUBSCRIBER

Unlimited Subscriber brings the power of Calix Cloud into the daily lives of your residential and small business subscribers. High-capacity Unlimited Subscriber Wi-Fi systems can be deployed indoors and outdoors, on desks, walls, and poles – in any combination you need. And with Calix Cloud, your staff gets the insights and tools they need to differentiate your brand through amazing customer support.

All GigaSpire models are powered via the Calix Broadband Platform and operate from a common operating system, Experience OS (EXOS). This container-based operating system architecture allows service providers to quickly change and adapt their services to embrace innovative technologies and offer new, value-added services. This approach can generate recurring revenue and increase subscriber satisfaction.

SMARTLIFE MANAGED SERVICES

The Calix SmartLife suite of managed Wi-Fi solutions provides everything your community needs to connect and thrive, in the places they live, work, learn, and play. With SmartLife, you deliver unrivaled subscriber experiences everywhere and elevate life for all in your community. Calix SmartHome™ gives your subscribers the tools to enhance, operate and secure their connected lifestyle through a growing portfolio of managed services. Your subscribers SmartLife does not end at the

front door. Re-imagine community Wi-Fi as a ubiquitous, secure, managed experience across your service area by making your town a SmartTown®. With SmartMDU™ properties managers expect more than business-as-usual broadband, as the multi-dwelling unit (MDU) market experiences rapid growth of new multifamily housing properties, driven by economic growth, changing demographics, and evolving lifestyles. SmartBiz™ meets the needs of the small business with an all-in-one managed service that increases staff productivity, secures critical business systems, and drives customer loyalty. Enable your small business customers to maximize their productivity and drive customer engagement.



KEY ATTRIBUTES

Home Gateway

- Layer 2 bridge and Layer 3 routing for High-Speed Internet (HSI) data and IPTV video services
- DHCP server options
- DHCP (IPv4) and PPPoE network connections
- Network Access Translation (NAT), public to private IP addressing
- Configurable IP address schemes, subnets, static-IP addresses
- DNS server
- Bridge port assignment and data traffic mapping
- Port forwarding
- Firewall and security
- Application and website filtering
- Selectable forwarding and blocking policies
- DMZ hosting
- Parental controls, time of day usage
- Denial of service (DoS) protection
- Time/Zone support
- Universal Plug-and-Play (UPnP)

Wi-Fi

- 2.4 GHz, 5 GHz, and 6 GHz simultaneous tri-band
- 5 GHz 802.11be (Wi-Fi 7) certified, 802.11a/b/g/n/ac/ax compatible
- 6 GHz (Wi-Fi 7), 802.11be compatible
- 2x2 @ 2.4 GHz, 2x2 @ 5 GHz and 2x2 6 GHz
- 2.4 GHz 802.11be certified, 802.11b/g/ac/ax compatible

- WPA/WPA2/WPA3
 - PuF (Physical Unclonable Functions)
 - WPS push-button
 - 2x2 DL/UL MU-MIMO, implicit/explicit high-power, dynamic beamforming
 - 4096 QAM; OFDMA; BSS Coloring
 - DCM (Dual Carrier Modulation)
 - TWT (Target Wake Time) for IoT clients
 - MLO (Multi-Link Operation)**
 - Multi-RU Preamble Puncturing**
 - 320MHz support @ 6GHz
- ** Future functionality*

Wi-Fi Redundant mesh

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

Voice

- General: SIP, H.248 (aka Megaco) and MGCP
- RENs per unit: 10 maximum
- Drop length: Maximum 1000 feet (305 m) using 26 AWG wire
- DS0 Output: 25 mA
- Ring Voltage: 56–84 VAC

Supports multiple data service profiles

Traffic Management and Quality of service (QoS)

- 802.1Q VLANs
- 802.1p service prioritization
- Q-in-Q tagging
- Multiple VLANs
- DiffServ
- Pre-defined QoS on service type
- MAP-T

IPTV, IGMP

- IGMPv1, IGMPv2, IGMPv3 support
- IGMP Snooping and Proxy
- IGMP Fast Leaves

Gateway Management

- Calix Service Cloud
- TR-069
- Local GUI access for provisioning

Ookla-based Performance Testing

- Subscribers can run an Ookla-based performance test from within the Calix CommandIQ[®] mobile app
- Symmetrical speed test results of 2.5 Gbps are possible with the GigaSpire system.

SPECIFICATIONS

Dimensions

- Depth: 6.3 in (16 cm)
- Height: 8.9 in (22.6 cm) without stand; 9.2 in (23.4 cm) with stand
- Width: 2 in (5.1 cm) without stand; 3.7 in (9.4 cm) with stand
- Weight: 2.2 lbs (1 kg)

Interfaces

- WAN: One (1) 100/1000/2500 BASE-T Ethernet ports, RJ 45 connectors
- LAN: Three (3) 100/1000/2500 BASE-T Ethernet ports, RJ 45 connectors
- Voice: One (1) port
- USB: USB 2.0 Type A
- Power: Single and eight pin
- WPS: WPS Push button actuator
- Reset button for factory default

Data

- Drop length: 328 feet (100 m) maximum using CAT5/6 cable for 2.5 GigE
- Traffic Management and QoS: 802.1Q VLAN; 802.1p voice, video, data, and management priorities; Q-in-Q tagging

Wireless

- 2.4 GHz 2x2, 5 GHz 2x2 and 2x2 6 GHz internal antennas
- 2.4 GHz 802.11 b/g/n/ax/be
- 2x2 UL/DL MU-MIMO
- 5 GHz 802.11 a/n/ac/ax/be
- 2x2 UL/DL MU-MIMO, explicit high-power, dynamic beamforming
- 6 GHz 802.11be 2x2
- 2.4 GHz, 5 GHz, and 6 GHz simultaneous
- DCM, TWT, extended GI
- Auto channel selecting and interference detection
- Wi-Fi multimedia (WMM)
- 802.11k, 802.11v,
- Supports up to 500 wireless clients

Remote Management

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

Environmental

- Operating temperature: Indoor ambient temperature, 0° to 40°C (32° to 104° F)
- 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, CISPR-22
- Safety: UL 62368 and UL 1697 approved
- IEEE: 802.3, 802.3AB, 802.3U, 802.1p, 802.1Q
- USB-IF Compliance USB 2.0
- Wi-Fi Alliance Certified 802.11be (Wi-Fi 7)



Powering and Alarms

- Input voltage: 12 V DC (nominal)
- External Power Adapter: 12 V DC, 3A



ORDERING INFORMATION

Product Number	Description
System	
100-06043	7u6 (GS3137E) Triband 2x2 Wi-Fi 7 RG/Mesh, 2.5GE WAN, 3 2.5GE LAN, 1 POTS, USB, AM PA
Branding Plate	
100-06157	7u6 (GS3137E) Spare wall mount/stand
100-06158	7u6 (GS3137E) Branding plate (quantity : 10)
Power Adapter	
100-06024	Power Adapter white, CPA6 12V 3Amp - AM Type A

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