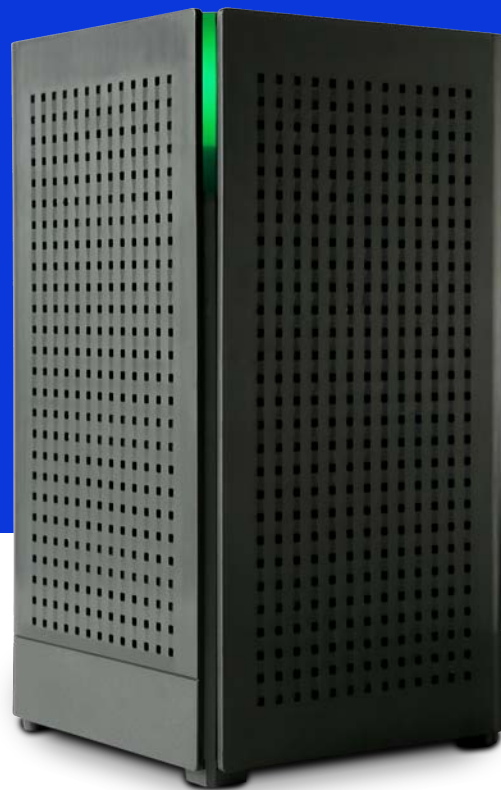




# GigaSpire<sup>®</sup>

## BLAST u6.1



The Calix GigaSpire<sup>®</sup> BLAST<sup>®</sup> u6.1 (GS4220E) is a new generation smart home system that extends the access network into the home and acts as a strategic location for control of the ultimate Wi-Fi experience. Besides supporting broadband connectivity of data and video services, this intelligent, high-performance system offers the latest 802.11ax 'Wi-Fi 6' technology. The GigaSpire BLAST u6.1 provides switching and routing functions that support multi-Gigabit throughput for IPTV video and data services.

## 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 (IPoE) 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 mappings
- 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
- MAC filtering
- Time/Zone support
- Universal Plug-and-Play (UPnP)

### Wi-Fi:

- 2.4 GHz and 5 GHz, simultaneous dual-band
- 5 GHz 802.11ax (Wi-Fi 6) certified, 802.11a/n/ac compatible
- 6x6 streams (2x2 @ 2.4 GHz and 4x4 @ 5 GHz)
- 2.4 GHz 802.11ax (Wi-Fi 6) certified, 802.11b/g/ac compatible

- WPA/WPA2/WPA3; WEP 64/128 bit encryption
- PuF (Physical Unclonable Functions)
- WPS push-button
- 4x4 DL/UL MU-MIMO with beamforming (5 GHz radio)
- 2x2 DL/UL MU-MIMO with beamforming (2.4 GHz radio)
- 1024 QAM; OFDMA; BSS Coloring
- DCM (Dual Carrier Modulation)
- TWT (Target Wake Time) for IoT clients

### Wi-Fi Redundant Mesh:

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

### 1 Gigabit Ethernet (GE) WAN interface:

- Multi-rate 100/1000 BASE-T Ethernet, auto-negotiating

### Gigabit Ethernet (GE) LAN interfaces:

- Four (4) ports of multi-rate 10/100/1000 BASE-T Ethernet, auto-negotiating for residential IPTV and data services

### Two voice lines:

- Carrier grade SIP, H.248 (aka Megaco) and MGCP<sup>1</sup>

### USB port:

- USB 2.0 - Type A host interface

### 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
- LAG of GE ports
- MAP-T

### IPTV, IGMPv2, future support of IGMPv3:

- IGMP Snooping and Proxy
- IGMP Fast Leaves

### Gateway Management:

- CSC (Calix Support Cloud)
- TR-069
- Local Home Gateway GUI, access provisionable
- Remote WAN side GUI access
- Default username/password

### AC to 12 V DV power adapter

<sup>1</sup> Currently supporting MetaSwitch and Ribbon softswitches

## SPECIFICATIONS

### Dimensions

- Width: 4.75 in (12.1 cm)
- Height: 8.5 in (21.6 cm)
- Depth: 4.75 in (12.1 cm)
- Weight: 36 oz (1.02 kg)

### WAN Interface

- Interface: One 2.5 Gigabit-Ethernet Port, RJ-45 connector

### Interfaces

- Wireless: 2.4 GHz 2x2 and 5 GHz 4x4 internal antennas
- LAN Data/IPTV: Four (4) 10/100/1000 BASE-T Ethernet port, RJ 45 connectors
- WAN: One (1) 10/100/1000
- USB: USB 2.0 Type A
- Voice: Two ports supporting carrier grade SIP, H.248 (aka Megaco) and MGCP
- Power: Single pin and 8-pin

### Data

- Drop length: 328 feet (100 m) max using CAT5 cable for GigE
- Auto MDI/MDIX crossover for 1000BASE-TX, 100BASE-TX
- 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
- 5 GHz 802.11 a/n/ac/ax
- 4x4 DL/UL MU-MIMO, implicit/explicit high-power, dynamic beamforming (5 GHz radio)
- 2x2 DL/UL MU-MIMO implicit/explicit high-power, dynamic beamforming (2.4 GHz radio)
- 2.4 GHz and 5 GHz simultaneous
- DCM, TWT, extended GI
- Auto channel selecting and interference detection
- WPS, WPS push button
- Wi-Fi multimedia (WMM)
- Supports up to 250 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 60950 and UL 1697 approved
- IEEE: 802.3, 802.3AB, 802.3U, 802.11p, 802.11Q
- Wi-Fi Alliance Certified 802.11ax



- USB-IF Compliance USB 2.0



### Powering and Alarms

- Single pin and 8-pin
- Input voltage: 12 V DC (nominal)
- External Power Adapter: 12 V DC, 3A

### Ookla-based Performance Testing

- Subscribers can run an Ookla-based performance test from within the Calix CommandIQ® mobile app
- Symmetrical speed test results in excess of 2 Gbps are possible with the GigaSpire BLAST u6.1 system (owing to the 1 GigE WAN port)