

GigaSpire®

u6t



The Calix GigaSpire u6t (GS5229E) is a new generation of Wi-Fi 6 smart home system that offers 10GE WAN and 10GE LAN residential gateway functionality into a single system. It delivers the ultimate indoor 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 u6t provides switching and routing functions that support 10-Gigabit throughput for IPTV video and data services.

CALIX BROADBAND PLATFORM

All GigaSpire systems are powered by the Calix Broadband Platform. This container-based platform allows broadband service providers to quickly change and adapt their services to embrace new technologies and offer new, value-added managed services. This approach can generate recurring revenue and increase subscriber satisfaction.



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, 5 GHz, simultaneous dual-band
- 2.4 GHz 802.11ax (Wi-Fi 6) certified, 802.11b/g/n compatible
- 5 GHz 802.11ax (Wi-Fi 6) certified, 802.11a/n/ac compatible
- 6x6 streams (2x2 @ 2.4 GHz, 4x4 @ 5 GHz)
- WPA/WPA2/WPA3

- PuF (Physical Unclonable Functions)
- WPS push-button
- 4x4 DL/UL MU-MIMO, implicit/explicit high-power, dynamic 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; events

10GE WAN interface

- Full 10 Gigabit bandwidth

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

10 Gigabit Ethernet (10 GE) LAN interface

- Single port of multi-rate 100/1000/2500/5000/10000 BASE-T Ethernet, auto-negotiating for residential IPTV and data services

Two voice lines

- Carrier grade SIP, H.248 (aka Megaco) and MGCP

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

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

AC to 12 V DC power adapter

UPS power unit

SPECIFICATIONS

Dimensions

- Width: 2 in (3.7 inch with stand) (5/7,6 cm)
- Height: 10.1 in (10.75 inch with stand) (25.7/27.3 cm)
- Depth: 7 in (17.8 cm)
- Weight: 2.6 pounds (1.18 kg)

WAN Interface

- Single (1)
100/1000/2500/5000/10000
BASE-T Ethernet port, RJ 45
connector

LAN Interfaces

- One
100/1000/2500/5000/10000
BASE-T Ethernet port, RJ 45
connector
- Four 10/100/1000 BASE-T
Ethernet ports, RJ 45
connectors

Voice Interfaces

- Two ports supporting
Metaswitch; C15; C20 SIP;
H.248 and MGCP

Other Interfaces

- USB 2.0 Type A
- WPS push button actuator
- Reset button for factory default

Data

- Drop length: 328 feet (100 m)
maximum using CAT5/6 cable
for GigE
- Auto MDI/MDIX crossover for
1000BASE-TX, 100BASE-TX
- 10GBT: 98.4 feet (30m)
CAT6A/7 cable
- Traffic Management and QoS:
802.11Q VLAN; 802.11p voice,
video, data, and management
priorities; Q-in-Q tagging

Wireless

- Wireless: 2.4 GHz 2x2, 5 GHz
4x4 internal antennas
- 2.4 GHz 802.11b/g/n/ax
- 2x2 UL/DL MU-MIMO
- 5 GHz 802.11a/n/ac/ax
- 4x4 DL MU-MIMO,
- explicit high-power, dynamic
beamforming
- 2.4 GHz, 5 GHz simultaneous
- DCM, TWT, extended GI
- Auto channel selecting and
interference detection
- WPS, WPS push button
- 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
- USB-IF Compliance USB 2.0
- IEEE: 802.3, 802.3AB, 802.3U,
802.11p, 802.11Q
- Wi-Fi Alliance Certified 802.11ax
(Wi-Fi 6)



Powering and Alarms

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

Speed Performance Testing

- Subscribers can run an Ookla-
based performance test from
within the Calix CommandIQ[®]
mobile app
- Calix Speed and Performance
Test provides 10Gbps DL and
5Gbps UL speed test