Snapshot

LiFi systems provide immersive connectivity

Connectivity is evolving. The spectrum now has to accommodate more mobile users and a forecasted increase to 20 Billion IoT devices by the year 2020.

It is time to future proof our networks to enable the connectivity demands of tomorrow. With LiFi we can utilise spectrum more than 1000 times greater than the spectrum utilised for radio frequencies. LiFi is begining to unlock unprecedented data and bandwidth.

Getting more from your network with LiFi

Imagine every LED light in our offices, buildings and cities could become a high speed, smart, and secure internet access point.

The pureLiFi LiFi-XC system offers partners the ability to deploy a fully networked LiFi solution. LiFi-XC supports multiple access, roaming, complete mobility and ease of use – providing a level of user experience that is comparable to existing wireless technologies such as Wi-Fi with the added security, safety and data density of visible light.
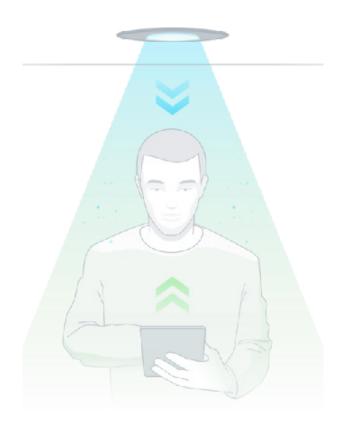
Benefits

Security: Light can be contained in a physical space making LiFi inherantly more secure. Users can see where data is going and there is less requirement for additional security.

Safety: Radio frequency technologies such as Wi-Fi cause interference to electronic devices. LiFi is directional meaning interference is simpler to avoid and even prevent all together. This means LiFi can be used in RF hostile zones.

Data Density: LiFi offers a greater user experience as it reduces the need to share wireless bandwidth with other users.
LiFi can achieve approximately 1000 times the data density of Wi-Fi offering substantially more data per square metre.

Location Services: LiFi systems are fully networked and each LiFi enabled light has it's own IP address which means advanced geo fencing can be deployed simply in a LiFi network.

Sixty percent of total mobile data traffic was offloaded from the fixed network through Wi-Fi or femtocell in 2016, making a total of 10.7 exabytes of mobile data traffic offloaded each month.

If mobile data traffic continues to increase as expected the world will run out of RF spectrum before 2025.

LiFi Deployment

LiFi products from pureLiFi are LED agnostic allowing for LiFi technology to transform existing LED lighting infrastructures into reliable, fast, secure and highly dense wireless networks.
The installation process is straightforward and flexible. LiFi backhaul can be deployed using a standard mains powered solution.
The LiFi Access Point also supports PoE/PoE+ and Cisco UPOE to minimise the cabling required for deploying the network.
In addition to the standard lighting and LiFi functionality, the LiFi-XC AP also allows the attached LED luminaire to be dimmed using a proprietary control protocol over IP, DALI frames, or an analogue level where available.

TR-069 remote management and automatic provisioning software suite are also available to ease the deployment and management of large LiFi networks.

The LiFi-XC Station (STA) is USB powered to enable complete mobility and ease of use. After installing the provided device driver, the system simply uses existing operating system tools for scanning and connecting to LiFi-XC Access Points.

Downlink rate: 43 mbps
Uplink rate: 43 mbps

Next Steps

Visit **www.purelifi.com** or talk to your account manager to learn how you can harness light to power your connectivity needs.

At-a-Glance: Data Sheet

Features

- Fully networked LiFi system providing end-to end IP connectivity

- Full-duplex wireless link providing up to 43 Mbps in downlink and uplink

- A single access point (AP) supports up to 8 stations (STAs)

- PoE/PoE+ and Cisco UPOE support

- Capable of working with a range of LED luminaires

- TR-069 remote management as well as SNMP v3

- DALI building management support

- Analog dimming control interface

- EnergyWise support

- Proprietary protocol for power management/dimming

- pureLiFi user roaming between APs on the same subnet

- USB 2.0 powered STA unit allows complete mobility

- Supports WPA2-Personal and Enterprise (802.1X) authentication

- Compact design for improved mobility and handling

- Link status

Access Point

Parameter	Nominal Value	Unit
Supply voltage	27 - 57	VDC
Data interface	Gigabit Ethernet Port	-
Driver box interface	10-way Micro-Fit 3.0 connector	-
Power input	2-way Microfit 3.0 connector	-
Stand-by power consumption	4	W
Max. active power consumtion	8	W
Remote management	TR-069, SNMP v3	-
Status LED indicator	Tristate - red, orange, green	-
Unit size	88 x 88 x 20	mm
Unit weight	200	g
Operating Temperture	0 - 35	°C
Humidity (Non-condensing)	20 - 95	%

TX Driver

Parameter	Nominal Value	Unit
Min lamp voltage	2	VDC
Max lamp voltage	55	VDC
Max DC lamp current	700	mA
AP interface	10-way MicroFit-3.0 connector	-
Lamp connector	3-way push-in	-
Lamp wire cross-section area	0.05 - 1.31	mm^2
Lamp wire gauge	30-16	AWG
Stand-by power consumption	4 (excluding lamp)	W
Max. active power consumption	4.2	W
Unit size	74 x 55 x 32	mm
Unit weight	124	g
Operating Temperture	-10 - 45	°C
Humidity (Non-condensing)	20 - 95	%

Complete System

Parameter	Nominal Value	Unit
Downlink line rate (max.):	43	Mbps
Uplink line rate (max.):	43	Mbps
Minimum operational distance	1.0	m
Maximum operational distance	6.0	m
Maximum concurrent users	8	-
Inter-AP handover (roaming)	Supported	-
Atto-Cell Diameter @ 2.5m range	2.8	m
Atto-Cell Diameter @ 3m range	3.5	m

Station

Parameter	Nominal Value	Unit
Data interface	USB 2.0	-
Max. power consumption	2.5	W
Unit Size	85 x 29.4 x 10.2	mm
Unit weight	42	g
Operating temperature	0 - 35	°C
Humidity (Non-condensing)	20 – 95	%