



G-LINK



Transfer HD video between two devices in a few seconds without cables or a wireless network

WHAT IS G-LINK?

G-Link is a low-power wireless connection that enables instantaneous transfer of gigabits of data between two devices a few centimeters apart.

G-Link makes data sharing easier, quicker and smarter:

- Gigabits data transfer in a few seconds
- Wireless
- Extended battery life
- Easy to use
- No need for network access, cable or connector
- Available anywhere (interfaced with any device USB, HDMI etc.)
- Secure, confined point-to-point connection
- More reliable because it requires no ports (waterproof, dustproof)
- Very small size

APPLICATIONS

For consumers

Ultra-high-speed wireless connection between two mobile devices to share HD videos, between a movie camera and a video display, between a kiosk and a tablet to download HD videos, etc.

For industry

In addition to above, secure application in industrial environments where cable reliability is a concern for data transfer. For example, any device in which connectors are affected by rotation, vibration or pressure that reduce lifetime can be replaced by G-Link.

ULTRA-HIGH-SPEED AND LOW-POWER CONTACTLESS CONNECTIVITY

WHAT'S NEW?

Today, high-speed wireless connectivity uses mainly the WiGig standard (802.11ad) at the 60 GHz frequency band. Power consumption of existing products in WiGig is very high. Leti's G-Link provides a 10-20x lower power solution for a high-speed wireless link over short distances. Moreover, G-Link uses a very compact and low-cost package, integrating the entire system, including antennas.

Antenna included on chip

- Leti has included an antenna on chip to enable maximum miniaturization and reduce packaging costs.
- Solutions without antenna integrated on chip, with standard CMOS technologies, require additional assembly steps that result in higher costs.

Works with 60GHz worldwide RF band

- No need for network to connect two devices
- No need for compliance with any existing communication standard

Low cost

- Standard low-cost package (QFN)
- Small silicon area in low-cost process (65 nm CMOS)
- No connector for data transfer

WHAT'S NEXT?

G-Link 2nd generation will be available in 2016 and will provide increased data rate (5 Gbps) at lower power consumption (50 mW).

Further steps will be towards higher frequencies (>100 GHz) to exploit wider bandwidth targeting a data rate of 25-40 Gbps per link.

Leti is cooperating closely with industrial companies to design the first mass-market generation as well as to define future generations of chips.

	WiFi 11ac	Leti demonstrator at CES	2 nd generation (2016)	3 rd generation (2017/18)
Frequency	< 6 GHz	60 GHz	60 GHz	>100 GHz
Range	5 m	7 cm	4 cm	>2 cm
Data rate	400 Mbps	2.5 Gbps	5 Gbps	25-40 Gbps
Chip size	-	2.1×1.9 mm ²	1.5×1.5 mm ²	2×2.5 mm ²
Pdc (Tx+Rx)	2,500 mW	100 mW	50 mW	150 mW
Power Efficiency	6,250 pJ/bit	40 pJ/bit 5 pJ/(bit.cm)	10 pJ/bit 2 pJ/(bit.cm)	5 pJ/bit 2 pJ/(bit.cm)
Time to transfer 1 gigabyte between 2 users	2 min 40 s	25 s	12 s	2 s



Interested in this technology?

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