

## HOME NETWORKING

### Sigma Design Shows New Single-Chip, Low-Power G.hn Family

- Optimized for 4K Streams
- Can Also Support HPNA 3.1

Sigma Designs has a new single-chip, low-power G.hn CG5300 family, which it says will “minimize equipment makers’ overall bill of material (BOM) and design costs plus reduce the amount of space that’s needed in the devices in which it’s embedded.

It said the CG5300 family “enables large scale networks running a high number of simultaneous 4K video streams and guaranteed whole-home DVR coverage.” Products with the CG5300 chips allow users to “enjoy unprecedented convenience and flexibility because every power outlet, coaxial outlet and phone jack in home becomes a network connectivity point on the same mesh network.”

It says it optimized the chipsets for 4K video and IPTV distribution and advanced multicast systems. They can be used in a number of products such as:

- Connected (smart) TVs
- DVRs
- Thin client STBs
- OTT gateways
- Blu-ray players, including the new 4K Blu-ray players
- Optical Network Terminals (ONT), which are the boxes that are used to connect the incoming fiber broadband to the home’s wireline and/or Wi-Fi network

The benefit to service providers is reduced installation costs and avoidance of truck rolls because subscribers can easily self-install home entertainment networks without the need of professional installers.

The CG5300 series can be configured for:

- MIMO (multiple input, multiple output) using all three wires in the power outlet – phase, neutral, and ground to ensure best delivery of IPTV traffic over power lines, even in the presence of surge protectors, circuit breakers and

across multiple phases.

-SISO (single input, single output) based products utilize only the phase and neutral wires coax and phone and are backward compatible with HPNA 3.1 (G.9954) to enable smooth migration from HPNA3.1 to G.hn coax and phone.

Nadav Katsir, VP of Sigma Design’s home connectivity business unit, said, “G.hn is the natural backbone for the home. It is based on a home’s existing wiring and takes the traffic load off of the often over-extended wireless infrastructure to ensure consumers have an easy to install solution to take advantage of the exciting new 4K content and the use of multiple screens.”

Sigma Designs said the CG5300 is sampling now to select OEM and ODM customers, and will be in volume production in 3Q 15.

### G.hn Shows off Big Time at Taiwan’s Computex

- Rolls out Lots of Big (and Little) Name Players
- Shows a Smart TV with G.hn Built-in
- G.hn over Phonewire & Plastic Optical Fiber

The G.hn troops usually put on a big show at Taiwan’s Computex trade show and this year, under the direction of **HomeGrid Forum** president Donna Yasay, was no exception.

Once again the HomeGrid Forum showed how G.hn home networking can be used to deliver multiple 4K videos to TV sets and other devices. UHD sets are proving to be quite popular in China, South Korea and Japan, plus surprisingly on a more limited basis even in India.

One demonstration showed 4K video being delivered over powerline, using **ARRIS** and **Comtrend** gear, to a smart TV that has a G.hn chip embedded. The Forum called it a “truly” plug and play technology. Customers can simply plug the G.hn-enabled smart TV into an AC outlet to simultaneously get both electrical power and access to the Internet. The set maker provides a separate G.hn adapter that plugs into the modem, router or gateway, which causes the home’s powerlines to become a G.hn network.

**G.hn: continued on page FOURTEEN**

**“G.hn is the natural backbone for the home.”**

**“Simultaneously get both electrical power and access to the Internet”**

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### *Electrical Plug Provides Both Power and Network Connection*

In this picture is a smart TV with G.hn embedded. The name of the setmaker was not provided but it's assumed to be the Chinese setmaker **Skyworth**, which has previously announced that it would make such a set using **Marvell's** G.hn chips. A powerline adapter is included to connect the modem/router/gateway to the G.hn powerline network. **Hisense, Haier, TCL, Changhong, Konka** and perhaps others have also indicated they'll build sets for the Chinese market with G.hn embedded — in partnership with the giant telco **China Telecom**.

See TOR899: "China Telecom Specifies that TVs Will Have G.hn Built In."

The Forum held a press conference to spotlight new certified products, which it said "demonstrates the multi-vendor, multi-source, multi-wire capability of G.hn."

The Forum's booth showed multi-room, multi-node and multicast G.hn networks operating over coax, powerline, phoneline and plastic optical fiber. Its smart home demonstration features an "i-Family" smart home management system that connects to the home's Wi-Fi network.

Demonstrating in the HomeGrid Forum booth were **ARRIS, Comtrend, D-Link, Institute for Information Industry of Taiwan (III), Marvell, Metanoia, Prime Electronics & Satellitics, SendTek, Sigma Designs, Suttle, Tecom, Teleconnect, Xingtera** and **Zinwell**.



### *G.hn Also Operates over Phone Wires and Plastic Optical Fiber*

Yasay said, "In Taiwan last year we promised that we would have major deployments within the year. This year, more than ever, we have so much to show the public and the industry. Services are now up and running bringing gigabit speeds to in-home networks across Asia."

And, it might be added, connecting directly to smart TV sets.

### **The Coming Trend to Built-In Wireline Home Networking**

Every smart TV has some version of Wi-Fi built-in. In fact, some setmakers have started bragging that they have the best, fastest version of Wi-Fi. That leaves the question "When will every smart TV (is there any other kind these days?) have a wireline home network technology embedded?"

G.hn is not the first to have a TV set with a powerline network technology built-in. Eighteen months ago we reported that the Chinese setmaker **Hisense**, a HomePlug Alliance partner, was showing at CES a TV set with HomePlug AV embedded in it — as well as an air conditioner that had both HomePlug and Wi-Fi. We were also told that Hisense was developing an outdoor grill with HomePlug and Wi-Fi embedded.

Built-in wireline home networking is the ultimate

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"Demonstrates the multi-vendor, multi-source, multi-wire capability of G.hn."

"Services are now up and running bringing gigabit speeds to in-home networks across Asia."