Low Power AGX 20 Embedded Single Board Computer

The AMD Embedded G-Series SOC "eKabini" delivers good performance and graphics in a low power solution through the integration of dual or quad-core x86 core, integrated discrete-class GPU, and I/O controller all on the same die.

The integrated Radeon™ HD 8330E graphics delivers good graphics, compute, and multiple display support for applications such as low-end casino and arcade gaming machines, medical imaging applications, digital signage, and industrial HMI.

Low power, small form factor, low cost, embedded SBC

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Processor	AMD Embedded G-Series GX-415GA SOC "eKabini"
Memory	Up to 4GB DDR3 1600 MHz, SO-DIMM
mSATA	1
Display Interface	DP 1.2 / HDMI 1.3 / RJ-45(HDBaseT)
Ethernet	10/100/1000 Mbps RJ-45
USB3.0	2
USB2.0	Internal Connector (2)
GPIO	1x 10 pin header
Serial	2x RS-232, 1 on front panel
Power	12V DC-IN
Temperature	Operating 0 ~ 55°C
Dimensions	120mm x 120mm (4.7" x 4.7")
Planned Availability	2021[i]

Processor: Up to four Jaguar x86 cores with up to 2 MB of shared L2 cache. The Jaguar core offers excellent x86 compatible performance for low power and cost applications.

3D Compatibility: The integrated AMD Radeon HD 8330E graphics engine supports Microsoft® DirectX® 11 and OpenGL 4.2 to deliver smooth graphics rendering for digital gaming, signage and HMI applications.

HD Video: Delivering crisp high resolution video, AMD's third generation unified video decoder (UVD) to deliver hardware decode acceleration of HD H.264, VC-1, MPEG-2 and DivX video formats.

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Display Support: Support for up to two independent HD displays can be delivered through the on board HDMI (1.3), DisplayPort (1.2), and HDBaseT interfaces. Delivering flexible options for multi-headed applications.
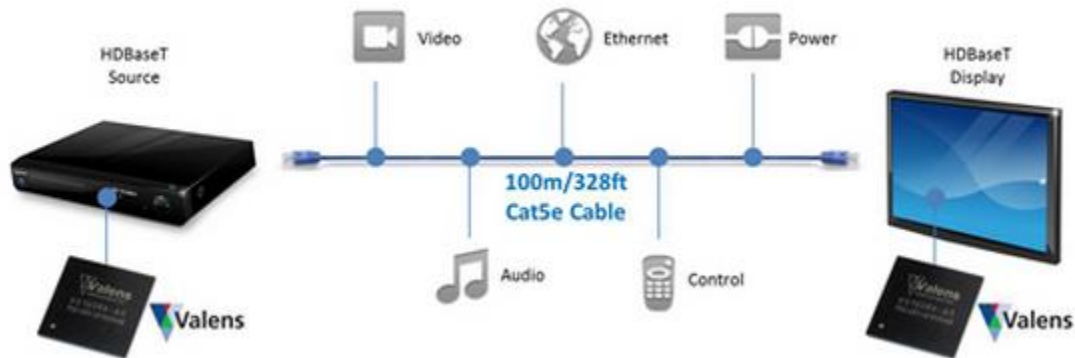
HDBaseT 5Play Features:

- Audio/Video – Uncompressed ultra-high-definition/3D video in up to 4K resolution
- Ethernet – 100BaseT Ethernet
- Control – Various control signals including CEC, RS-232, USB and IR
- USB – Support for USB 2.0 and other native interfaces
- Distance – 2K resolution up to 100M ,4K resolution up to 90M, up to 20Gbps

Power Efficient Processing: The AMD G-Series SOCs support Thermal Design Profiles (TDPs) from 5W to 25W and offers dynamically configurable TDP capabilities. The integrated SOC features power gating added of the multimedia engine, display controller, and memory controller with supported memory power states to reduce system power when needed.

Small Form Factor: The small form factor of the AGX 20 enables it to be designed into a variety chassis and thermal solutions to fit into small or portable applications.

Long Life: With a planned product life cycle of up to 10 years for the AMD G-Series SOC, the AGX 20 delivers a stable lifecycle for industrial and embedded systems. Avoiding product obsolescence due to a shortage of critical parts enables this SBC to meet the demands of long life, durable and high stability applications and also helps to reduce OEMs development costs by avoiding frequent product revisions. The AGX 20 available through HTA is planned to be available and supported through 2021 or longer under contract.[i]

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[i] While efforts are made to select long life components, availability or exact board design is subject to modification based on availability of components.

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