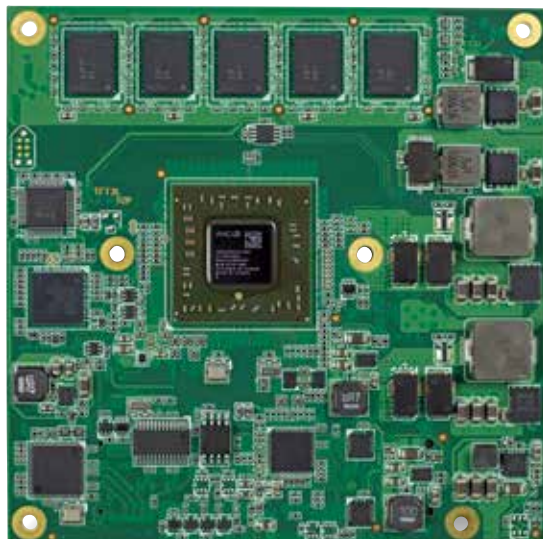


ERROR PROTECTED RAM

conga-TCG

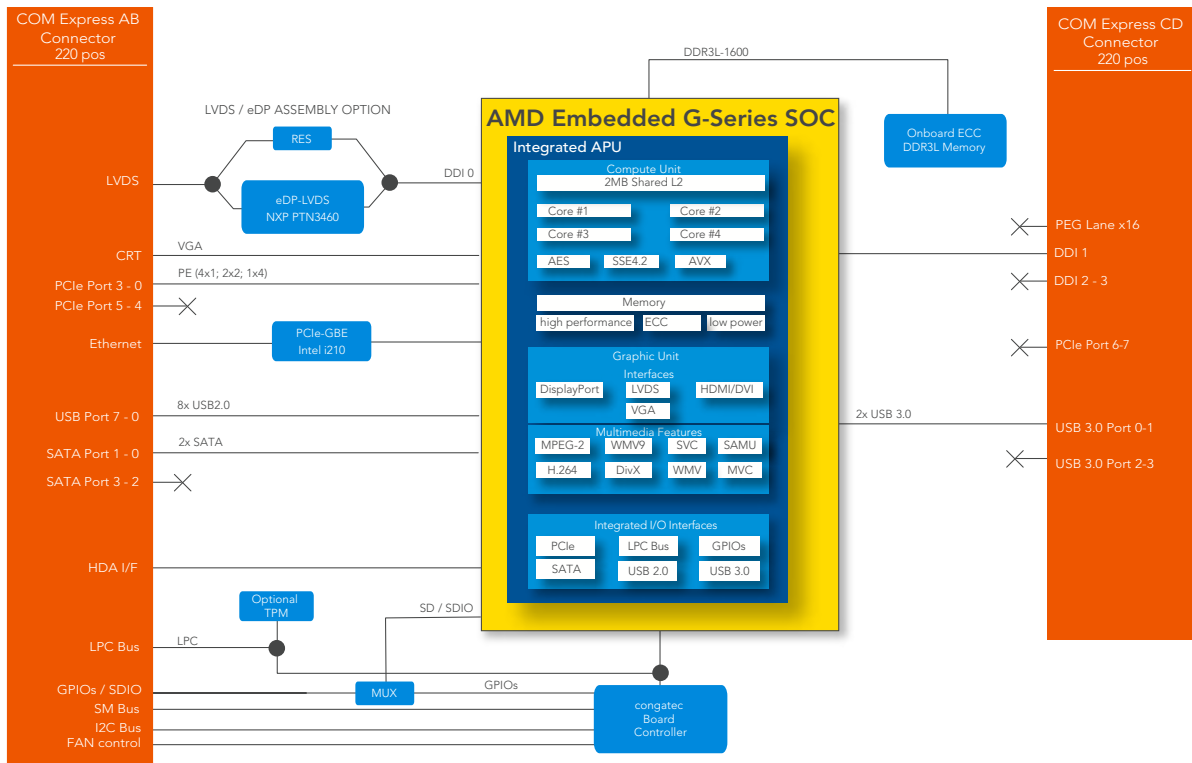


- AMD Embedded G-Series SOC APU
- Power saving „Steppe Eagle“ processors
- ECC protected memory up to 8 GByte
- High performance integrated graphics
- Extended longevity, min. 10 years



Formfactor	COM Express® Compact (95 x 95 mm) Type 6 Connector Layout																																																										
CPU	<p>AMD Embedded G-Series SOC</p> <table border="1"> <thead> <tr> <th>Model</th> <th>Frequency</th> <th>Core</th> <th>L2 cache</th> <th>TDP</th> </tr> </thead> <tbody> <tr> <td>AMD Embedded GX-420CA</td> <td>2.0 GHz</td> <td>Quad Core</td> <td>L2 cache 2MB shared</td> <td>25W TDP</td> </tr> <tr> <td>AMD Embedded GX-415GA</td> <td>1.5 GHz</td> <td>Quad Core</td> <td>L2 cache 2MB shared</td> <td>15W TDP</td> </tr> <tr> <td>AMD Embedded GX-217GA</td> <td>1.65 GHz</td> <td>Dual Core</td> <td>L2 cache 1MB shared</td> <td>15W TDP</td> </tr> <tr> <td>AMD Embedded GX-209HA*</td> <td>1.0 GHz</td> <td>Dual Core</td> <td>L2 cache 1MB shared</td> <td>9W TDP</td> </tr> <tr> <td>AMD Embedded GX-210HA</td> <td>1.0 GHz</td> <td>Dual Core</td> <td>L2 cache 1MB shared</td> <td>9W TDP</td> </tr> <tr> <td>AMD Embedded GX-424CC</td> <td>2.4 GHz</td> <td>Quad Core</td> <td>L2 cache 2MB shared</td> <td>25W TDP</td> </tr> <tr> <td>AMD Embedded GX-411GA*</td> <td>1.1 GHz</td> <td>Quad Core</td> <td>L2 cache 2MB shared</td> <td>15W TDP</td> </tr> <tr> <td>AMD Embedded GX-412HC</td> <td>1.2 GHz 1.6 GHz (Boost)</td> <td>Quad Core</td> <td>L2 cache 2MB shared</td> <td>7W TDP</td> </tr> <tr> <td>AMD Embedded GX-212JC</td> <td>1.2 GHz 1.4 GHz (Boost)</td> <td>Dual Core</td> <td>L2 cache 1MB shared</td> <td>6W TDP</td> </tr> <tr> <td>AMD Embedded GX-222GC</td> <td>2.2 GHz 2.4 GHz (Boost)</td> <td>Dual Core</td> <td>L2 cache 1MB shared</td> <td>15W TDP</td> </tr> </tbody> </table> <p>*Industrial Temperature Version</p>				Model	Frequency	Core	L2 cache	TDP	AMD Embedded GX-420CA	2.0 GHz	Quad Core	L2 cache 2MB shared	25W TDP	AMD Embedded GX-415GA	1.5 GHz	Quad Core	L2 cache 2MB shared	15W TDP	AMD Embedded GX-217GA	1.65 GHz	Dual Core	L2 cache 1MB shared	15W TDP	AMD Embedded GX-209HA*	1.0 GHz	Dual Core	L2 cache 1MB shared	9W TDP	AMD Embedded GX-210HA	1.0 GHz	Dual Core	L2 cache 1MB shared	9W TDP	AMD Embedded GX-424CC	2.4 GHz	Quad Core	L2 cache 2MB shared	25W TDP	AMD Embedded GX-411GA*	1.1 GHz	Quad Core	L2 cache 2MB shared	15W TDP	AMD Embedded GX-412HC	1.2 GHz 1.6 GHz (Boost)	Quad Core	L2 cache 2MB shared	7W TDP	AMD Embedded GX-212JC	1.2 GHz 1.4 GHz (Boost)	Dual Core	L2 cache 1MB shared	6W TDP	AMD Embedded GX-222GC	2.2 GHz 2.4 GHz (Boost)	Dual Core	L2 cache 1MB shared	15W TDP
Model	Frequency	Core	L2 cache	TDP																																																							
AMD Embedded GX-420CA	2.0 GHz	Quad Core	L2 cache 2MB shared	25W TDP																																																							
AMD Embedded GX-415GA	1.5 GHz	Quad Core	L2 cache 2MB shared	15W TDP																																																							
AMD Embedded GX-217GA	1.65 GHz	Dual Core	L2 cache 1MB shared	15W TDP																																																							
AMD Embedded GX-209HA*	1.0 GHz	Dual Core	L2 cache 1MB shared	9W TDP																																																							
AMD Embedded GX-210HA	1.0 GHz	Dual Core	L2 cache 1MB shared	9W TDP																																																							
AMD Embedded GX-424CC	2.4 GHz	Quad Core	L2 cache 2MB shared	25W TDP																																																							
AMD Embedded GX-411GA*	1.1 GHz	Quad Core	L2 cache 2MB shared	15W TDP																																																							
AMD Embedded GX-412HC	1.2 GHz 1.6 GHz (Boost)	Quad Core	L2 cache 2MB shared	7W TDP																																																							
AMD Embedded GX-212JC	1.2 GHz 1.4 GHz (Boost)	Dual Core	L2 cache 1MB shared	6W TDP																																																							
AMD Embedded GX-222GC	2.2 GHz 2.4 GHz (Boost)	Dual Core	L2 cache 1MB shared	15W TDP																																																							
DRAM	Up to 8 GByte DDR3L-1600 with ECC protection																																																										
Chipset	Integrated in SOC (single-chip)																																																										
Ethernet	Gigabit Ethernet																																																										
I/O Interfaces	4x PCI Express™ 2.0 lanes 2x SATA® 3Gb/s 2x USB 3.0 8x USB 2.0 LPC bus I²C bus (fast mode, 400 kHz, multi-master) SD SPI SM-Bus																																																										
Sound	High Definition Audio Interface																																																										
Graphics	Integrated AMD Radeon™ HD 8000E Graphics supports DirectX 11.1 OpenGL 4.2 and OpenCL™ 1.2; up to two simultaneous displays Unified Video Decoder 4.2 (H.264, MPEG-2, VC-1, MPEG4 and WMV) Video Compression Engine 2.0 (Video conferencing, wireless display, H.264, SVC). Security Asset Management Unit 2.1 (DRM offloaded from CPU, HDCP2) VGA																																																										
LVDS	18/24-bit Single/Dual Channel LVDS Interface Resolutions up to 1920X1200@60Hz VESA standard or JEIDA data mapping Automatic Panel Detection via EDID/EPI																																																										
Digital Display Interface	One DisplayPort 1.2 / HDMI 1.4a																																																										
congatec Board Controller	Multi Stage Watchdog non-volatile User Data Storage Manufacturing and Board Information Board Statistics BIOS Setup Data Backup I²C bus (fast mode, 400 kHz, multi-master) Power Loss Control Backlight																																																										
Embedded BIOS Features	AMI Aptio® UEFI 2.x firmware 8 MByte serial SPI firmware flash																																																										
Security	The conga-TCG can be optionally equipped with a discrete "Trusted Platform Module" (TPM). It is capable of calculating efficient hash and RSA algorithms with key lengths up to 2,048 bits and includes a real random number generator. Security sensitive applications such as gaming and e-commerce will benefit also with improved authentication, integrity and confidence levels.																																																										
Power Management	ACPI 3.0 with battery support																																																										
Operating Systems	Microsoft® Windows 8 Microsoft® Windows 7 Linux Microsoft® Windows® 7/8 Embedded Standard Microsoft® Windows® 7 Embedded Compact																																																										
Temperature	Commercial : Operating: 0 to +60°C Storage: -20 to +80°C Industrial : Operating: -40 to +85°C Storage: -45 to +85°C																																																										
Humidity	Operating: 10 - 90% r. H. non cond. Storage: 5 - 95% r. H. non cond.																																																										
Size	95 x 95 mm (3.74" x 3.74")																																																										

conga-TCG | Block diagram



conga-TCG | Order Information

Article	PN	Description
conga-TCG/GX-420CA-2GECC	042000	AMD Embedded G-Series GX-420CA quad core processor with 2.0GHz 2MB L2 cache and 2GB 1600MT/s ECC DDR3L onboard memory. Features AMD Radeon™ HD 8400E Graphics with 600MHz GPU frequency.
conga-TCG/GX-415GA-2GECC	042001	AMD Embedded G-Series GX-415GA quad core processor with 1.5GHz 2MB L2 cache and 2GB 1600MT/s ECC DDR3L onboard memory. Features AMD Radeon™ HD 8330E Graphics with 500MHz GPU frequency.
conga-TCG/GX-217GA-2GECC	042002	AMD Embedded G-Series GX-217GA dual core processor with 1.65GHz 1MB L2 cache and 2GB 1600MT/s ECC DDR3L onboard memory. Features AMD Radeon™ HD 8280E Graphics with 450MHz GPU frequency.
conga-TCG/GX-210HA-2GECC	042003	AMD Embedded G-Series GX-210HA dual core processor with 1.0GHz 1MB L2 cache and 2GB 1333MT/s ECC DDR3L onboard memory. Features AMD Radeon™ HD 8210E Graphics with 300MHz GPU frequency.
conga-TCG/420CA-4GECC	042004	AMD Embedded G-Series GX-420CA quad core processor with 2.0GHz 2MB L2 cache and 4GB 1600MT/s ECC DDR3L onboard memory. Features AMD Radeon™ HD 8400E Graphics with 600MHz GPU frequency.
conga-TCG/i-411GA-2GECC	042010	AMD Embedded G-Series GX-411GA quad core processor with 1.1GHz 2MB L2 cache and 2GB 1600MT/s ECC DDR3L onboard memory. Features AMD Radeon™ HD 8210E Graphics with 300MHz GPU frequency. Industrial grade temperature
conga-TCG/i-209HA-2GECC	042011	AMD Embedded G-Series GX-209HA dual core processor with 1.0GHz 1MB L2 cache and 2GB 1066MT/s ECC DDR3L onboard memory. Features AMD Radeon™ HD 8000E Graphics with 225MHz GPU frequency. Industrial grade temperature
conga-TCG/424CC-4GECC	042020	AMD Embedded G-Series GX-424CC quad core processor with 2.4GHz 25W TDP 2MB L2 cache and 4GB 1600MT/s ECC DDR3L onboard memory. Features AMD Radeon™ HD 8000E Graphics with 497MHz GPU frequency.
conga-TCG/412HC-4GECC	042021	AMD Embedded G-Series GX-412HC quad core processor with 1.2GHz/1.6GHz 7W TDP 2MB L2 cache and 4GB 1333MT/s ECC DDR3L onboard memory. Features AMD Radeon™ HD 8000E Graphics with 300MHz GPU frequency.
conga-TCG/212JC-2GECC	042022	AMD Embedded G-Series GX-212JC dual core processor with 1.2GHz/1.4GHz, 6W TDP, 1MB L2 cache and 2GB 1333MT/s ECC DDR3L onboard memory. Features AMD Radeon™ HD 8000E Graphics with 300MHz GPU frequency.
conga-TCG/222GC-4GECC	042023	AMD Embedded G-Series GX-222GC dual core processor with 2.2 GHz to 2.4 GHz, 10W to 15 W TDP, 1MB L2 cache and 4GB 1600MT/s ECC DDR3L onboard memory. Features AMD Radeon™ HD 8000E Graphics with 655/800 MHz GPU frequency.
conga-TCG/HSP-B	042051	Standard heatspreader for COM Express module conga-TCG. All standoffs are 2.7mm bore hole
conga-TCG/HSP-T	042052	Standard heatspreader for COM Express module conga-TCG. All standoffs are M2.5 thread.
conga-TCG/CSP-B	042053	Standard passive cooling solution for COM Express module conga-TCG with 20mm overall heat sink height. All standoffs are 2.7mm bore hole.
conga-TCG/CSP-T	042054	Standard passive cooling solution for COM Express module conga-TCG with 20mm overall heat sink height. All standoffs are M2.5mm thread.
Accessories		
conga-TEVAL	065800	Evaluation carrier board for Type 6 COM-Express-modules
conga-LDVI/EPI	011115	LVDS to DVI converter board for digital flat panels with onboard EEPROM
COM-Express-carrier-board-Socket-5	400007	Connector for COM-Express carrier boards height 5mm packing unit 4 pieces
COM-Express-carrier-board-Socket-8	400004	Connector for COM-Express carrier boards height 8mm packing unit 4 pieces

© 2015 congatec AG. All rights reserved.

All data is for information purposes only. Although all the information contained within this document is carefully checked, no guarantee of correctness is implied or expressed. Product names, logos, brands, and other trademarks featured or referred are the property of their respective trademark holders. These trademark holders are not affiliated with congatec AG. Rev. August 26, 2015 KS

Компания «Океан Электроники» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Поставка оригинальных импортных электронных компонентов напрямую с производств Америки, Европы и Азии, а так же с крупнейших складов мира;
- Широкая линейка поставок активных и пассивных импортных электронных компонентов (более 30 млн. наименований);
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Помощь Конструкторского Отдела и консультации квалифицированных инженеров;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Поставка электронных компонентов под контролем ВП;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- При необходимости вся продукция военного и аэрокосмического назначения проходит испытания и сертификацию в лаборатории (по согласованию с заказчиком);
- Поставка специализированных компонентов военного и аэрокосмического уровня качества (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Actel, Aeroflex, Peregrine, VPT, Syfer, Eurofarad, Texas Instruments, MS Kennedy, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Компания «Океан Электроники» является официальным дистрибьютором и эксклюзивным представителем в России одного из крупнейших производителей разъемов военного и аэрокосмического назначения «**JONHON**», а так же официальным дистрибьютором и эксклюзивным представителем в России производителя высокотехнологичных и надежных решений для передачи СВЧ сигналов «**FORSTAR**».



JONHON

«**JONHON**» (основан в 1970 г.)

Разъемы специального, военного и аэрокосмического назначения:

(Применяются в военной, авиационной, аэрокосмической, морской, железнодорожной, горно- и нефтедобывающей отраслях промышленности)

«**FORSTAR**» (основан в 1998 г.)

ВЧ соединители, коаксиальные кабели, кабельные сборки и микроволновые компоненты:

(Применяются в телекоммуникациях гражданского и специального назначения, в средствах связи, РЛС, а так же военной, авиационной и аэрокосмической отраслях промышленности).



Телефон: 8 (812) 309-75-97 (многоканальный)

Факс: 8 (812) 320-03-32

Электронная почта: ocean@oceanchips.ru

Web: <http://oceanchips.ru/>

Адрес: 198099, г. Санкт-Петербург, ул. Калинина, д. 2, корп. 4, лит. А