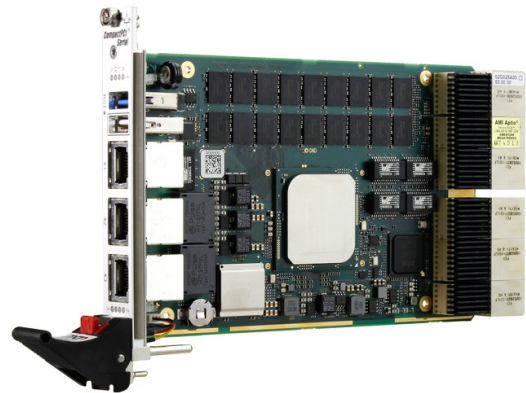


G25A

Embedded Single Board Computer with Intel Xeon D 3U CompactPCI Serial

- » *Intel Xeon D-1500 (Broadwell DE)*
- » *Up to 16 cores*
- » *Up to 32 GB DDR4 DRAM soldered, ECC*
- » *2 10 Gb Ethernet, 1 Gb Ethernet, 1 USB 3.0, 1 RS232 for configuration*
- » *4 HP system master and peripheral slot*
- » *PICMG CPCI-S.0 CompactPCI Serial*
- » *microSD card slot*
- » *Standard rear I/O: 28 PCIe lanes, 2 USB 3.0, 6 SATA, 4 Gb Ethernet*
- » *VGA, RS232, RS422/485 and USB 3.0 available on special I/O board*
- » *Built-in Intel VT hardware virtualization*
- » *Trusted Platform Module (TPM)*



High Performance for Virtualization Applications

The G25A is a high-performance multicore CPU platform based on Intel's Xeon D-1500 System-on-a-Chip (SoC). Paired with I/O cards, the G25A can be ideally used for transferring data from and to storage media, the Internet via LTE, wireless, copper or optical Ethernet. Its up to 16 processor cores and built in Intel® VT-d and VT-x support make the board ideally suited for virtualization applications.

The G25A offers high data bandwidth on both the front and the rear I/O interfaces. Two 10 Gigabit Ethernet interfaces are available on RJ45 or M12 connectors at the front, for example.

USB 3.0, SATA revision 3.x, PCI Express 3.0 and Gigabit Ethernet interfaces on front and rear complement the I/O possibilities of the board.

Ruggedized Memory and Mass Storage

The memory configuration of the G25A includes a state-of-the-art fast DDR4 DRAM with ECC which is soldered to the board to guarantee optimum shock and vibration resistance. A microSD card device offers space for user applications or as a local boot medium.

System Security and Board Management

For system security, a Trusted Platform Module is assembled on the board. A board management controller provides thermal supervision of the processor and a watchdog for the operating system.

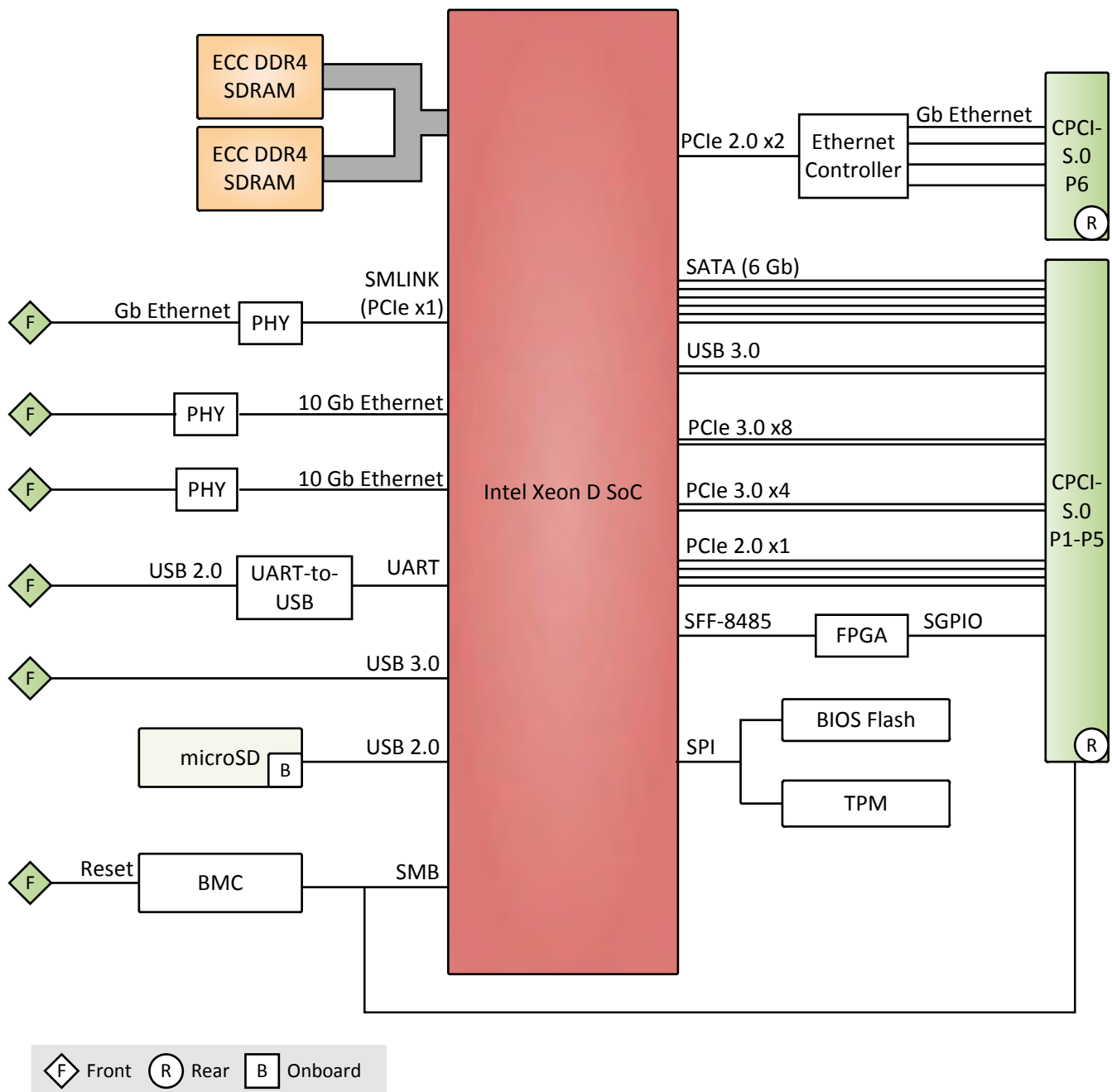
Perfect for Embedded and Harsh Environments

The G25A operates in Windows and Linux environments as well as under real-time operating systems that support Intel's multi-core architecture.

The G25A comes with a tailored heat sink within 4 HP height. All components are soldered for protection against shock and vibration according to applicable DIN, EN or IEC industry standards. The G25A is also ready for coating so that it can be used in humid and dusty environments and has a guaranteed minimum standard availability of 7 years.

G229 I/O Extension Board

The G229 offers one m.2 slot, three USB 3.0 interfaces, one RS232 interface, one RS422/485 interface, one VGA via PCI Express Mini card and up to three flexible slots for two additional RS232 or RS422/485 interfaces. It is combined with the G25A to form a space-saving solution with a bigger heat sink.



CPU

- The following CPU types are supported:
 - Intel Xeon D-1577, 16 cores, 1.3 GHz, 45 W, 24 MB cache
 - Intel Xeon D-1559, 12 cores, 1.5 GHz, 45 W, 18 MB cache
 - Intel Xeon D-1548, 8 cores, 2 GHz, 45 W, 12 MB cache
 - Intel Xeon D-1539, 8 cores, 1.6 GHz, 35 W, 12 MB cache
 - Intel Xeon D-1529, 4 cores, 1.3 GHz, 25 W, 6 MB cache
 - Intel Xeon D-1527, 4 cores, 2.2 GHz, 35 W, 6 MB cache
 - Intel Pentium D-1519, 4 cores, 1.5 GHz, 25 W, 6 MB cache
 - Intel Xeon D-1509, 2 cores, 1.5 GHz, 19 W, 3 MB cache
 - Intel Xeon D-1508, 2 cores, 2.2 GHz, 25 W, 3 MB cache
- Intel Virtualization Technology (Intel VT)
 - VT-d
 - VT-x
- Intel Turbo Boost Technology
- Intel Hyper-Threading Technology

Security

- Trusted Platform Module (TPM 2.0)

Memory

- System RAM
 - Soldered DDR4, ECC support
 - 8 GB, 16 GB, or 32 GB
- Boot Flash
 - 16 MB

Mass Storage

- The following mass storage device can be assembled:
 - microSD card

Front Interfaces

- USB
 - One Type A connector, USB 3.0
 - One configuration port implemented as a USB 2.0 device interface
- Ethernet
 - Two RJ45 connectors, 10GBASE-T, or
 - Two 8-pin M12 connectors, X-coded, 10GBASE-T
 - One RJ45 connector, 1000BASE-T, or
 - One 8-pin M12 connector, X-coded, 1000BASE-T
 - Two link and activity LEDs per Ethernet channel
- Status LED
- Hot-plug LED
- Reset button

Rear Interfaces

- SATA
 - Six channels, SATA Revision 3.x, RAID level 0/1/5/10 support
- USB
 - Two channels, USB 3.0
- Ethernet
 - Four channels, 1000BASE-T
- PCI Express
 - Four x1 links, PCIe 2.x
 - Two x4 links, PCIe 3.x
 - Two x8 links, PCIe 3.x

G229 Peripheral Board

- Mass Storage
 - m.2 disk
- Graphics
 - None, or
 - VGA PCI Express MiniCard MPX-750, operating temperature 0°C to +40°C instead of one legacy serial I/O interface
- USB
 - Three Type A connectors, USB 3.0
- RS232
 - D-Sub connector at front panel
 - Handshake lines: RTS, CTS
- RS422/485
 - D-Sub connector at front panel
 - Full duplex
- Legacy serial I/O
 - None, or
 - Up to three interfaces via SA-Adapters:
 - RS232, not optically isolated, -40°C to +85°C, conformal coating
 - RS232, optically isolated, -40°C to +85°C, conformal coating
 - RS422/485, full duplex, optically isolated, -50°C to +85°C, conformal coating
- Contact MEN's sales team for ordering information

Supervision and Control

- Board controller
- Watchdog timer
- Temperature measurement
- Real-time clock with supercapacitor or battery backup
 - Data retention of supercapacitor: 72 h

Backplane Standard

- Compliance with CompactPCI Serial PICMG CPCI-S.0 Specification
- System or peripheral slot

Electrical Specifications

- Supply voltage
 - +12 V (9.5 to 15.5 V)
- Power consumption
 - 4.5 A typ, 6 A max. (depending on CPU and board configuration)

Mechanical Specifications

- Dimensions
 - 3U, 4 HP, or
 - 3U, 8 HP, or
 - 3U, 12 HP together with G229 peripheral board
- Weight: 228 g (model 02G025A00 without heat sink)

Environmental Specifications

- Temperature range (operation)
 - EN 50155 class T1, T2, T3 or TX
 - Depends on system configuration (CPU, hard disk, heat sink...)
- Temperature range (storage): -40°C to +85°C
- Cooling concept
 - Air-cooled, airflow 1.5 m/s
 - Conduction-cooled in MEN CCA frame
- Humidity: EN 60068-2-30, EN 50155
- Altitude: -300 m to +2000 m
- Shock: EN 50155 category 1 class B
- Vibration: EN 50155 category 1 class B

Reliability

- MTBF: 311 585 h @ 40°C according to IEC/TR 62380 (RDF2000) (model 02G025A00)

Technical Data



Safety

- Electrical Safety
 - EN 62368-1 (former EN 60950-1)
 - Flammability (PCBs)
 - UL 94 V-0
-

EMC

- EN 55022 class B, EN 50121-3-2 (radiated and conducted emission)
 - EN 55024, EN 50121-3-2 (immunity)
-

BIOS

- AMI Aptio UEFI Firmware
-

Software Support

- Windows
- Linux
- For more information on supported operating system versions and drivers see Software.

Germany

MEN Mikro Elektronik GmbH

Neuwieder Straße 3-7
90411 Nuremberg
Phone +49-911-99 33 5-0

sales@men.de
www.men.de

USA

MEN Micro Inc.

860 Penllyn Blue Bell Pike
Blue Bell, PA 19422
Phone 215-542-9575

sales@menmicro.com
www.menmicro.com

France

MEN Mikro Elektronik SAS

18, rue René Cassin
ZA de la Châtelaine
74240 Gaillard
Phone +33-450-955-312

sales@men-france.fr
www.men-france.fr

China

MEN Mikro Elektronik (Shanghai) Co., Ltd.

Room 808-809, Jiaxing Mansion, No. 877 Dongfang Road
200122 Shanghai
Phone +86-21-5058-0961

sales@men-china.cn
www.men-china.cn

Up-to-date information, documentation and ordering information:
www.men.de/products/g25a/

MEN is not responsible for the results of any actions taken on the basis of information in the publication, nor for any error in or omission from the publication. MEN expressly disclaims all and any liability and responsibility to any person, whether a reader of the publication or not, in respect of anything, and of the consequences of anything, done or omitted to be done by any such person in reliance, whether wholly or partially, on the whole or any part of the contents of the publication.

The correct function of MEN products in mission-critical and life-critical applications is limited to the environmental specification given for each product in the technical user manual. The correct function of MEN products under extended environmental conditions is limited to the individual requirement specification and subsequent validation documents for each product for the applicable use case and has to be agreed upon in writing by MEN and the customer. Should the customer purchase or use MEN products for any unintended or unauthorized application, the customer shall indemnify and hold MEN and its officers, employees, subsidiaries, affiliates, and distributors harmless against all claims, costs, damages, and expenses, and reasonable attorney fees arising out of, directly or indirectly, any claim or personal injury or death associated with such unintended or unauthorized use, even if such claim alleges that MEN was negligent regarding the design or manufacture of the part.

In no case is MEN liable for the correct function of the technical installation where MEN products are a part of.

© 2018 MEN Holding