# PGS-4020

**< Conforme al Comma 6a PLUS >**
Comma 6a PLUS System with Intel® Cedar Trail™ Platform

**AWP**

PGS-4020 is an industrial gaming system compliant with the latest Italian Comma 6a PLUS requirements. Built with Intel® latest ATOM™ Cedar Trail™ platform, it can provide dual core 1.86GHz high performance. It supports features such as, "Battery voltage monitoring & warning" and "Ultra fast 32bit, 66MHz PCI-Express operated NVRAM". PGS-4020 is an ideal integrated platform for AWP market.
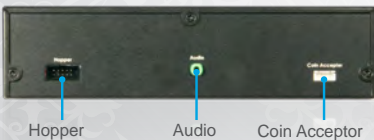
## FEATURES

- Compliant with latest Comma 6a PLUS
- AAMS smart card & PDA interface
- 5+2 Years lifespan
- Fanless system
- Dual independent display by VGA/DVI-D
- Ultra fast 32bit, 66MHz PCI-Express operated SRAM

## FRONT I/O



DVI-D    Italian JAMMA    USB
VGA      AAMS    LAN

## REAR I/O



Hopper    Audio    Coin Acceptor

## ORDERING GUIDE

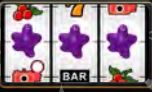| AS5-3320 | (R).PGS-4020. Gaming Logic Box. Comma 6a PLUS System with Intel® Cedar Trail™ Platform |
|---|---|

## GENERAL

| | |
|---|---|
| Processor | Intel® ATOM™ Processor D2550 (1.86GHz) |
| Chipset | Intel® NM10 PCH |
| Memory | Single channel up to 4GB DDR3 1066/800 SO-DIMM socket |
| Storage Devices | - 2x SATA 3.0 Gb/s; SATA DOM supported<br>- 1x Compact Flash<br>- 64KB of user EEPROM |
| Expansion Interface | N/A |

## I/O INTERFACE

| | |
|---|---|
| Audio | - High Definition Audio connector<br>- 6W + 6W Class A-B stereo Amplifiers via JAMMA connector |
| Ethernet | Realtek® Gigabit Ethernet |
| Serial Port | - 1x RS232 pin header<br>- 1x AAMS port<br>- 2x ccTalk for Coin Acceptor/Hopper |
| USB | - 2x USB 2.0 on rear I/O<br>- 4x USB 2.0 pin headers |

## GRAPHIC

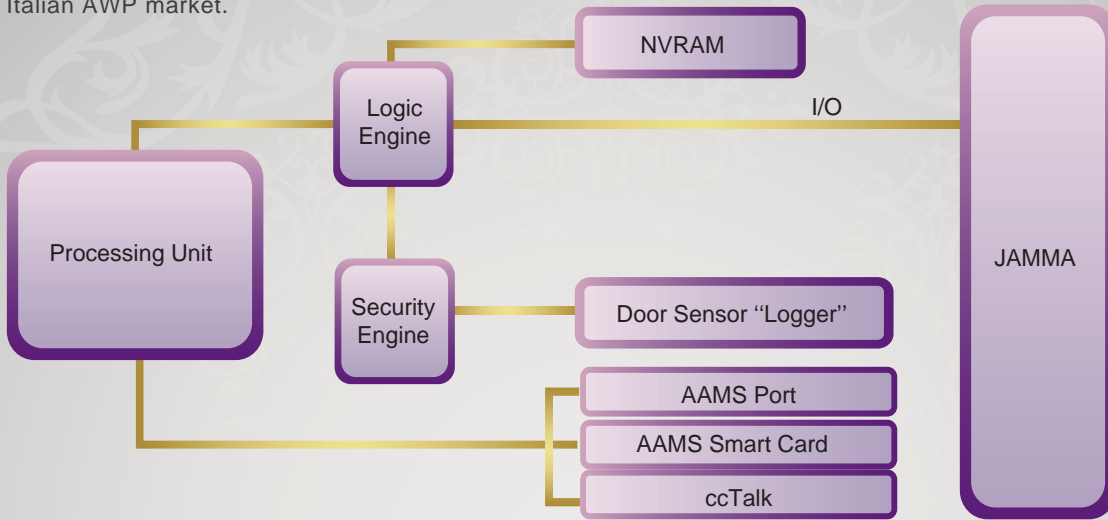| | |
|---|---|
| Graphic Controller | Intel® GMA3600 integrated GPU |
| Graphic Acceleration | - 2D: Directdraw, EXA and XRandR<br>- 3D: DirectX 9, OpenGL 3.0 |
| Video Playback | - H.264, MPEG-2, VC-1 hardware codecs<br>- DXVA, VA API media acceleration |
| Display Interface | - VGA: up to 2048x1536 (QXGA)<br>- DVI-D: up to 1920x1200 (WUXGA) |

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## Comma 6a PLUS

Comma 6a PLUS is coming, it features in
- 28-way JAMMA connector
- Door, Service, Refill, Button, Lamp
- 12V/24V cctalk for coin acceptor and hopper
- Multiple door (e.g. chassis, cover) sensors with time stamped logs

Built with Logic Engine and Security Engine, Portwell 4020 support latest Comma 6a PLUS regulation for Italian AWP market.



## GAMING FUNCTION

| | |
|---|---|
| Comma 6a PLUS | - AAMS smart card<br>- AAMS PDA interface |
| | - 6 door sensor inputs<br>   - 4 at JAMMA finger<br>   - 2 at internal connector<br>- Operates with and without AC power<br>- Logs of Date/Time stamped of 44 events<br>- Battery voltage monitoring & warning |
| | - 12V/24V ccTalk coin acceptor and hopper connectors |
| JAMMA Interface | - 28-way connector<br>- 5V, 12V, 24V power inputs<br>- 1x ccTalk<br>- Door, Service, Refill, Button, Lamp<br>- 6W + 6W Class A-B stereo Amplifier |
| NVRAM | - Ultra fast 32bit, 66MHz PCI-Express operation<br>- 2MB of battery backuped SRAM<br>- Dual independent physical banks<br>- Battery voltage monitoring & warning |
| Digital Input | - 17x Photo-coupler Protected Input<br>- Individual interrupt, triggered by rising/ falling edges or level changed<br>- Programmable de-bounce time |
| Digital Output | 11x open drain (150mA ~ 500mA); 50V |

## SECURITY

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|---|---|
| Integrity | - Comma 6a PLUS mechanical design<br>- Intrusion detection during AC OFF<br>- Programmable de-bounce<br>- Optical isolator<br>- Strict revision control<br>- Non-Volatile RAM<br>- Triple data redundancy<br>- Write protect<br>- Battery low warning<br>- Royal Integrity |
| Property | - Secured RTC<br>- Royal Property |
| Connectivity | - Royal Connectivity<br>- Watchdog Timer<br>- Over temperature warning |

## MECHANICAL & ENVIRONMENT

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|---|---|
| Dimension | 230mm(L) x 223mm(W) x 55mm(H);<br>9.06"(L) x 8.78"(W) x 2.17"(H) |
| Power Requirement | - Typical: +24V, +12V, +5V<br>- Support AT mode from JAMMA finger |
| Environment | - Operation Temperature: 0°C to 40 °C<br>- Storage Temperature: -20°C to 85 °C<br>- Relative Humidity: 10% to 95%, non-condensing |