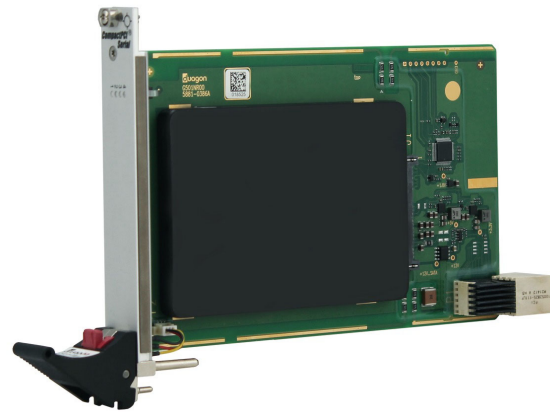


- Hard disk drive or solid state drive shuttle
- 2.5" SATA HDD/SSD slot
- Four status LEDs
- -40 °C to +85 °C
- Compliant with EN 50155 (railways)
- PICMG CPCI-S.0 CompactPCI Serial peripheral card



### 2.5" HDD OR SSD

The G501N is a CompactPCI Serial hard disk drive carrier board. It is designed to carry a 2.5" SATA hard disk drive or a solid state drive.

### FRONT PANEL STATUS LEDs

The unit's front panel features LEDs that signalize the board's SGPIO status while a fourth indicates the status of the internal controller's power supply.

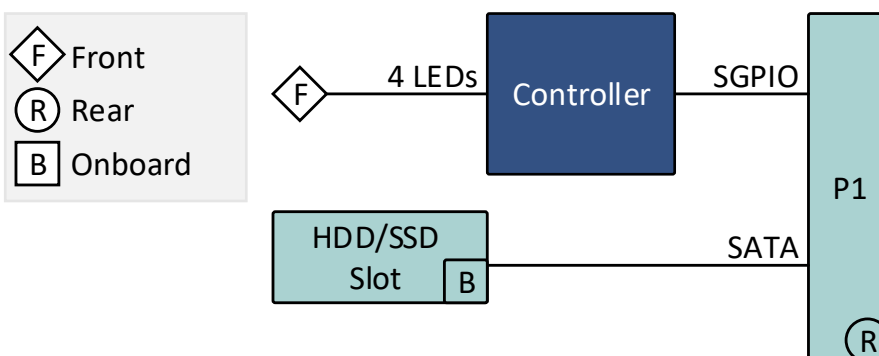
### SUITABLE FOR RAILWAY APPLICATIONS

Its compliance with the EN 50155 standard makes the board suitable for use in railway applications.



[www.duagon.com/products/g501n/](http://www.duagon.com/products/g501n/)

## G501N | DIAGRAM



## DATA SHEET



## G501N | TECHNICAL DATA

### INTERFACES

- SSD/HDD slot
  - 1 × SATA 2.5"
  - SATA Revision 3.x

### PRODUCT STANDARD

- CompactPCI Serial: CompactPCI Serial PICMG CPCI-S.0 Specification

### ELECTRICAL SPECIFICATIONS

- Supply voltage
  - +12 V (9 V to 13.2 V)
- Power consumption
  - Depending on HDD/SSD

### MECHANICAL SPECIFICATIONS

- Dimensions: 3U, 4 HP
- Cooling: Air cooling, forced convection, airflow 1.5 m/s
- Protection rating: IP20

### PRODUCT COMPLIANCE: RAIL - ROLLING STOCK

- Compliance level: This product is prepared for use in EN 50155 systems. Some parameters are system-dependent and are specified on system level.
- Operating temperature: -40 °C to +85 °C (EN 50155:2021, Tmax/PCB = +85 °C; designed for use in OT4+ST1 systems)
- Equipment location
  - EN 50155:2021, location 1, closed electrical operating area
  - EN 50155:2021, location 2, cabin and interiors
- Rapid temperature variations: EN 50155:2021, class H1, no requirements
- Storage temperature: -40 °C (EN 50155:2021) to +85 °C (EN 60068-2-2, Bb)
- Altitude: +3000 m max. (EN 50125-1:2014, class AX)
- Pollution degree: EN 50124-1:2017, class PD2
- Humidity: +55 °C and +25 °C, 100 % RH max. (EN 50155:2021)
- Shock: 30 ms @ 50 m/s<sup>2</sup> (EN 61373:2010/AC:2017-09, vehicle body, cat. 1, class A)

- Vibration: 10 min @ 2.02 m/s<sup>2</sup> (functional) and 5 h @ 11.44 m/s<sup>2</sup> (long-life) (EN 61373:2010/AC:2017-09, vehicle body, cat. 1, class B, double acceleration)
- Electrical safety
  - EN 50155:2021
  - EN 50153:2014 + A1:2017 + A2:2020
  - EN 50124-1:2017
  - EN ISO 13732-1:2008
- Fire protection: EN 45545-2:2020, EL9, HL3
- EMC emission
  - EN 50121-3-2:2016 + A1:2019
  - Regelung Nr. EMV 06 :2019-05-09 (2.0), Anhang E: Messung an Geräten, Schutzklasse S1
  - Regelwerk 50.02.01 :2021-12-01, 12.3.2. EMV - Funk, prequalified according to electronic equipment tests defined by Deutsche Bahn EMV 06 standard, class S1, for risk minimization in finished vehicle test
- EMC immunity: EN 50121-3-2:2016 + A1:2019
- Protective coatings: EN 50155:2021, class PC2 (Any PCB protected on both sides)
- Useful life: 20 years (EN 50155:2021, class L4)

### PRODUCT COMPLIANCE: RAIL - WAYSIDE NON-SAFETY RELATED

- Operating temperature: -40 °C to +70 °C (EN 50125-3:2003, class T2, cubicle, with class T2 maximum extended by 5 °C)
- Storage temperature: -40 °C (EN 60068-2-1:2007, Ab) to +85 °C (EN 60068-2-2:2007, Bb)
- Altitude: +3000 m max. (EN 50125-3:2003, class AX)
- Pollution degree: EN 50124-1:2017, class PD2
- Humidity: 95 % RH max. (EN 50125-2:2002, building N.C.C., class T1/T2/TX)
- Humidity - Condensation: Non-condensing
- Shock: 11 ms @ 20 m/s<sup>2</sup> (EN 50125-3:2003, in a switch cabinet 1 m to 3 m from the track)
- Vibration: 2.3 m/s<sup>2</sup> (EN 50125-3:2003, in a switch cabinet 1 m to 3 m from the track)



- Electrical safety
  - EN 50124-1:2017
  - EN 62368-1:2014 + AC:2015
- EMC emission: EN 50121-4:2016
- EMC immunity: EN 50121-4:2016

## PRODUCT COMPLIANCE: INFORMATION TECHNOLOGY EQUIPMENT

- Operating temperature: -40 °C (EN 60068-2-1:2007, Ae) to +85 °C (EN 60068-2-2:2007, Be)
- Storage temperature: -40 °C (EN 60068-2-1:2007, Ab) to +85 °C (EN 60068-2-2:2007, Bb)

- Altitude: +3000 m max. (EN 62368-1:2014 + AC:2015)
- Electrical safety: EN 62368-1:2014 + AC:2015
- Flammability (PCBs): UL 94 V-0
- EMC emission: EN 55032:2015 (multimedia equipment), class A (industrial environments)
- EMC immunity: EN 55024:2010 + A1:2015 (information technology equipment)

## RELIABILITY

- MTBF: 5446303 h predicted @ 40 °C according to IEC/TR 62380 (RDF 2000)

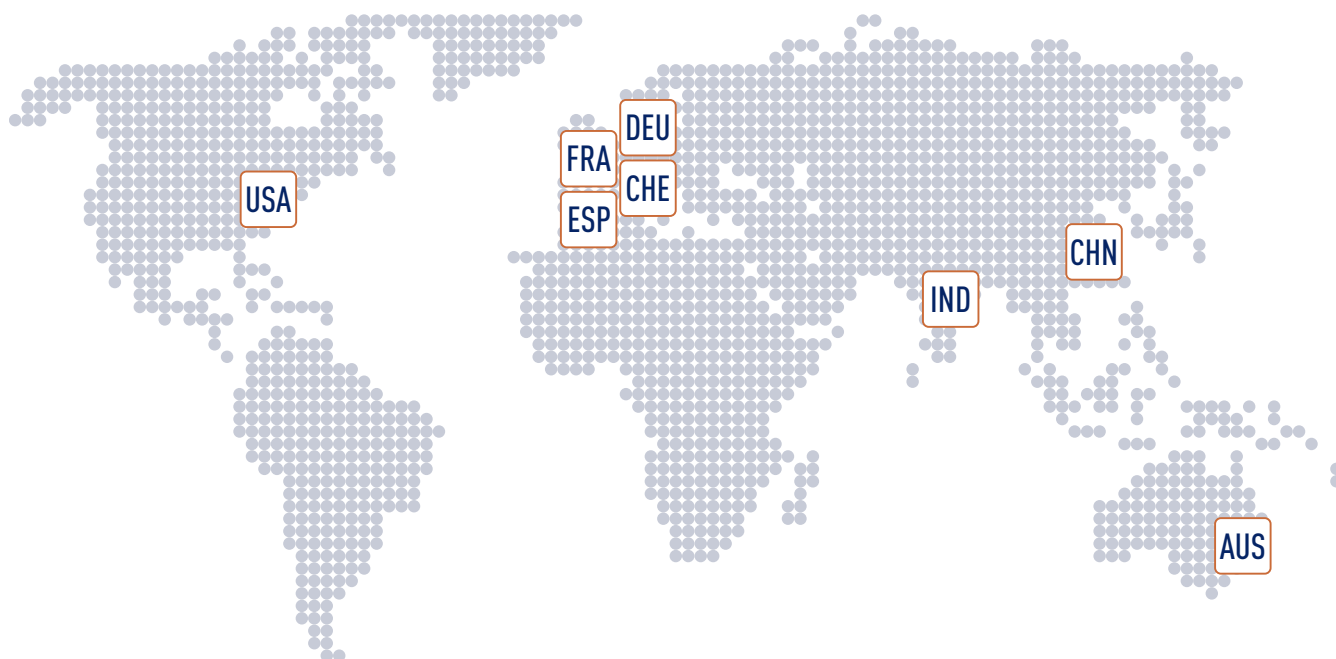
## G501N | ORDERING INFORMATION

### STANDARD MODELS

- |                  |                                                                                                    |
|------------------|----------------------------------------------------------------------------------------------------|
| <b>02G501N10</b> | 3U CPCI-Serial HDD/SSD Carrier for 1x 2.5" SATA HDD/SSD (industrial applications)                  |
| <b>02G501N11</b> | 3U CPCI-Serial HDD/SSD Carrier for 1x 2.5" SATA HDD/SSD, conformally coated (railway applications) |



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