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3000 GNSS
Time Server

MICROCHIP 3000 GNSS Time Server User Guide

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MICROCHIP 3000 GNSS Time Server

Specifications

- Brand: GridTimeTM 3000 Time Server
- Hardware Options:
  - Catalog Part Numbers:

- - - C-V-SG-LV
    - C-V-SG-LV-LV
    - C-V-SG-HV-LV
    - … (Additional hardware options listed in the manual)
  - Description: Expansion Oscillator Selection
- Software Options:
  - Catalog Part Numbers:
    - LIC-GT3K-T
    - LIC-GT3K-J
    - LIC-GT3K-S
    - … (Additional software options listed in the manual)
  - Description: Various licenses for security, authentication, NTP, PTP, and more

Product Usage Instructions

Hardware Setup:

1. Select the appropriate hardware option based on your requirements.
2. Install the GridTime 3000 Time Server in a suitable location with proper ventilation.
3. Connect the necessary power supply and network cables to the server.

Software Configuration:

1. Obtain the required software license(s) based on the features you need.
2. Install the software on the server following the provided instructions.
3. Configure the software settings as per your network requirements.

Technical Support:

If you encounter any issues or need assistance:

1. Contact technical support through the provided channels – call centers in the US, Asia, and Europe.
2. Access bug fixes and security patches through the software support package.

FAQ

- **Why do I need a license for the GridTime 3000 Time Server?**
  - The server uses a feature-based license model to enable specific functionalities. This allows you to pay for only the features you require and adjust them as needed.
- **How do I extend my warranty for the GridTime 3000 Time Server?**
  - We recommend extending your warranty by two years to have a total of five years of hardware support and software support. This ensures access to technical assistance and new features.

Hardware Options

Catalog Part Number	Description
C-V-SG-LV	1 × GridTime 3000, VCTCXO, Single GNSS, 1 × LV PSU
C-V-SG-LV-LV	1 × GridTime 3000, VCTCXO, Single GNSS, 2 × LV PSU
C-V-SG-HV-LV	1 × GridTime 3000, VCTCXO, Single GNSS,1 × HV PSU, 1 × LV PSU
C-V-SG-HV	1 × GridTime 3000, VCTCXO, Single GNSS, 1 × HV PSU
C-V-SG-HV-HV	1 × GridTime 3000, VCTCXO, Single GNSS, 2 × HV PSU
C-O-SG-LV	1 × GridTime 3000, OCXO, Single GNSS, 1 × LV PSU
C-O-SG-LV-LV	1 × GridTime 3000, OCXO, Single GNSS, 2 × LV PSU
C-O-SG-HV-LV	1 × GridTime 3000, OCXO, Single GNSS,1 × HV PSU, 1 × LV PSU
C-O-SG-HV	1 × GridTime 3000, OCXO, Single GNSS, 1 × HV PSU
C-O-SG-HV-HV	1 × GridTime 3000, OCXO, Single GNSS, 2 × HV PSU
C-R-SG-LV	1 × GridTime 3000, Rubidium, Single GNSS, 1 × LV PSU
C-R-SG-LV-LV	1 × GridTime 3000, Rubidium, Single GNSS, 2 × LV PSU
C-R-SG-HV-LV	1 × GridTime 3000, Rubidium, Single GNSS, 1 × HV PSU, 1 × LV PSU
C-R-SG-HV	1 × GridTime 3000, Rubidium, Single GNSS, 1 × HV PSU
C-R-SG-HV-HV	1 × GridTime 3000, Rubidium, Single GNSS, 2 × HV PSU

Expansion Oscillator Selection

As time requirements in the substation become more and more stringent, maintaining a stable source of accurate time has become as important as ever. When an OCXO or rubidium expansion oscillator is used, the GridTime 3000 Time Server is able to provide accurate time for much longer after GNSS is lost

Software Options

Catalog Part Number	Description
LIC-GT3K-T	GridTime 3000, 2 x T1/E1/J1 & 2 x Fixed Frequency License
LIC-GT3K-J	GridTime 3000 8 × BNC, IRIG-B, Programmable Pulse, DCF77 License
LIC-GT3K-S	GridTime 3000 1 × RS232, 1 × RS422 Serial String License
LIC-GT3K-F	GridTime 3000 2 × ST Fiber IRIG-B License
LIC-GT3K-M	GridTime 3000 1 × HV MOSFET IRIG-B License
LIC-GT3K-C1	GridTime 3000 1 × Copper Ethernet License
LIC-GT3K-C2	GridTime 3000 2 × Copper Ethernet License
LIC-GT3K-SF1	GridTime 3000 1 × SFP Ethernet (1GB) License
LIC-GT3K-SF2	GridTime 3000 2 × SFP Ethernet (1GB) License
LIC-GT3K-SF3	GridTime 3000 3 × SFP Ethernet (1GB) License
LIC-GT3K-SF4	GridTime 3000 4 × SFP Ethernet (1GB) License
LIC-GT3K-SF5	GridTime 3000 5 × SFP Ethernet (1GB) License
LIC-GT3K-SF6	GridTime 3000 6 × SFP Ethernet (1GB) License
LIC-GT3K-SF7	GridTime 3000 7 × SFP Ethernet (1GB) License
LIC-GT3K-SF8	GridTime 3000 8 × SFP Ethernet (1GB) License
LIC-GT3K-SG	GridTime 3000 10GB License
LIC-GT3K-AUTH	GridTime 3000 Security/Authentication License (RADIUS/LDAP)
LIC-GT3K-NTP	GridTime 3000 NTP/SNTP License
LIC-GT3K-PTP	GridTime 3000 PTP License
LIC-GT3K-PRP	GridTime 3000 PRP License

Why do I need a license

The GridTime 3000 Time Server has been built using a feature-based license model. This means that a license is required to enable a feature. Rather than paying for features you will never use, you only pay for what you need. If your requirements change, then you can change the device's features accordingly.

Direct Access to Technical Support

Software support for the GridTime 3000 Time Server includes access to technical experts in product operations, timing technology and network design. Our call centers located in the US, Asia and Europe are available 24 hours a day, 365 days a year to assist you, even in emergencies.

Access to Bug Fixes and Security Patches

The software support package provides access to all of the most recent bug fixes and security updates.

Warranty Protection

Everyday network environments are always changing, and it is crucial that you are prepared if a device needs servicing. An extended warranty provides peace of mind that the device will be repaired or replaced quickly and efficiently.

Access to the Newest Features

The software support package provides access to all the newest features when they are released, including:

- Quality-of-life improvements
- New time outputs
- Increased accuracy, jitter, wander and stability performance
- Management and monitoring functionality
- Security and user management

Recommendations

GridTime 3000 Time Server models include a three-year hardware warranty by default. However, we recommend that you extend your warranty by an additional two years to provide a total of five years of hardware support and add five years of software support. This will allow you to request help whenever it's needed during this period.

Software Support and Technical Support Options

Catalog Part Number	Description
999-72022-01	GridTime 3000 Device 1-YR Software Support and Technical Support
999-72022-02	GridTime 3000 Device 2-YR Software Support and Technical Support
999-72022-03	GridTime 3000 Device 3-YR Software Support and Technical Support
999-72022-04	GridTime 3000 Device 4-YR Software Support and Technical Support
999-72022-05	GridTime 3000 Device 5-YR Software Support and Technical Support

Extended Warranty Options

Catalog Part Number	Description
999-72023-01	GridTime 3000 Device 1-YR Extended Hardware Warranty
999-72023-02	GridTime 3000 Device 2-YR Extended Hardware Warranty
999-72023-03	GridTime 3000 Device 3-YR Extended Hardware Warranty
999-72023-04	GridTime 3000 Device 4-YR Extended Hardware Warranty
999-72023-05	GridTime 3000 Device 5-YR Extended Hardware Warranty
999-72023-06	GridTime 3000 Device 6-YR Extended Hardware Warranty
999-72023-07	GridTime 3000 Device 7-YR Extended Hardware Warranty

Stay Informed

We encourage you to register for myMicrochip to access our Frequency and Timing Systems (FTS) support resources. Visit our FTS Product Support page to learn more about registering and what services are available.

Get Protected

Please contact your local Microchip representative or the nearest Microchip office listed below to request a quote on software support or an extended warranty for your Microchip product.

Contact

- North and South America
- Microchip FTS
- 3870 North First Street
- San Jose, CA 95134-1702
- Toll-free in North America: 1-888-367-
- 7966, Option 1
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Documents / Resources

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References

- **User Manual**