XPosition

Release Notes

A-XGPS

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Firmware Revision 1.021

CONTENTS

1. Preface 2
   1.1. Compatibility 2
   1.2. Notes 2
   1.3. Additional Information 2
   1.4. Support 3
2. Improvements 3
3. Anomalies Fixed 4
4. Known Anomalies 4

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1. PREFACE

1.1. COMPATIBILITY

Firmware revision 1.021 of the XPosition module will require the following compatible versions:

Software	Version
Slate	1.073 and later

1.2. NOTES

The following should be noted:

- Firmware upgrades will be done using Aparian's Slate software.
- Aparian flash files have an *.afb* extension.
- Slate can also be used to set the initial network parameters using its DHCP server.
- Should any interruptions cause the module to not complete the firmware upgrade the module will return to Safe Mode. The user can then re-flash the module with the application firmware. See the user manual for more information regarding Safe Mode.

1.3. ADDITIONAL INFORMATION

The following resources contain additional information that can assist the user with the module installation and operation.

Resource	Link
Slate Installation	http://www.aparian.com/software/slate
XPosition User Manual XPosition Datasheet Example Code & UDTs	http://www.aparian.com/products/xposition
Ethernet wiring standard	www.cisco.com/c/en/us/td/docs/video/cds/cde/cde205_220_420/installation/guide/cde205_220_420_hig/Connectors.html
Trimble precision devices	http://www.trimble.com/tsg/precision-gnss.aspx

1.4. SUPPORT

Technical support will be provided via the Web (in the form of user manuals, FAQ, datasheets etc.) to assist with installation, operation, and diagnostics.

For additional support the user can use either of the following:

Contact Us web link	www.aparian.com/contact-us
Support email	support@aparian.com

2. IMPROVEMENTS

The following updates are included in this firmware revision.

Revision	Improvement	Description
1.021	Ethernet Flow Control	Disable processing of Ethernet Pause packets.
1.020	Powerup	Improved resilience when powering up with inconsistent power feed.
1.019	TCP robustness	Better handling of TCP packets that are out-of-order.
1.018	DHCP Address Assign	Updated method to assign a Static IP Address using the DHCP Server Tool in Slate.
	LED Flash Discovery	Ability to discover the module by using the LED Flash function.
1.017	NMEA	Added ROT and HDT packets for HE, II, and IN headers.
1.016	General	Non-application specific update.
1.015	General	Non-application specific update.
1.014	TCP robustness	Increased TCP robustness when connection to the external GPS receiver is intermittent.
	NMEA processing	More efficient processing of NMEA packets received in the TCP protocol.
1.013	Configurable Connection Timeout	Added configurable connection timeout for the connection from the external GPS receiver.
1.012	Modbus Function 23	Added support for Modbus function 23 – Read/Write
	Dual Antenna GPS Quality	Added GPS quality for the calculated attitude vector when using EtherNet/IP and Modbus.
1.011	ODVA	Update to meet the latest ODVA conformance testing.
	NMEA Stats	Added NMEA individual packet statistics.
	NMEA TCP	Added support for TCP packet handling of certain new Trimble units.
1.010	Modbus TCP	Added support for Modbus TCP
1.009	North/East Calcs	Updated North/East calculations to be more accurate.
1.008	Statistics	Added additional statistics for better debugging.

1.007	NMEA	Updates to NMEA protocol.
	NMEA TCP	Packet size is increased to 10,000 bytes per NMEA transaction.
	ENIP	Updates to EtherNet/IP library.
1.006	Position Accuracy	Improved accuracy on relative position calculation by taking into account elevation.
1.005	EtherNet/IP	Updates to EtherNet/IP and CIP libraries

3. ANOMALIES FIXED

The following anomalies have been fixed in this firmware revision.

Revision	Anomaly	Description
1.021	None	-
1.020	None	-
1.019	None	-
1.018	Webserver	Fixed data in Dual Antenna section of the webserver.
1.013	TCP Connection Close	When the connection to the external GPS receiver has timeout out, the TCP connection was not properly closed from the XPosition side.
1.012	Modbus Address Range Checking	Fixed issue where the Modbus HR range was not properly checked.
1.007	NMEA	Packet sizes of NMEA packets are checked before loading buffer.
1.006	NMEA	Fix updating of GPS Quality Indicator
1.005	Ethernet	Fix for certain broadcast Ethernet packets that were being re-broadcasted.
	Relative Position	Fix issue of relative position in Logix not updating.

4. KNOWN ANOMALIES

The following known anomalies exist in this firmware revision.

Revision	Anomaly	Description
1.021	None	-