



## **TrangoLINK Sparta Elite**

### **Software v1.2.0 Release Notes & Upgrade Instructions**

**7 March 2012**

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## TrangoLINK Sparta Elite v1.2.0 Release

### The release consists of the following software images

FPGA version:	0016050B
OS version	<b>2p6r22b0D030612</b>
FW version	<b>1p2r0D030612</b>
PIC version	4
Modem Version	1
HP ODU FW version	150410
HP2 ODU FW version	142

Bold typeface indicates new images for this release.

### Supported Modulation/Symbol rate combination in this release

BW	Sym Rate	QPSK	QAM16	QAM32	QAM64	QAM128	QAM256
4	3	4	9	12	15	18	20
7	5.6	9	19	24	30	35	39
10	8.3228	14	29	36	45	52	59
14	12.2	21	44	54	66	78	88
20	17.4228	31	63	78	96	111	126
28/30	26	47	95	118	142	166	190
40	34.825	63	128	158	192	225	256
50	43	78	157	195	238	277	318
55/56/80	49.5	90	181	225	275	320	365*

*\*375 Mbps support available on speed 80 qam256 [Ethernet Only, Non-ACM Mode]*

### New Features

1. Debugging code to capture cause of command server crash if it continues to occur with this release.

### Bug Fixes

1. Additional protection against command server crash which would cause management unresponsiveness.

### Known Limitations

1. BER is based on CRC errors and might not reflect the accurate BER on live data. WA: Use External test equipment to measure accurate BER for testing.
2. Using the exit command at telnet view node will cause future telnet sessions to be blocked. User must use ssh or http to disable telnetd and re-enable.  
WA: Simply close telnet session without using the exit command.
3. TDM ports may report erroneous values in status tdm.

## Software Image Upgrade Procedure

Please review these instructions before starting to ensure that you have adequate time scheduled to perform the upgrade as well as fully understand the implications of the process. While all software is tested by Trango Systems on current hardware before being released, it is strongly suggested that you initially perform this upgrade on your lab equipment and not initially in a production environment and test for any and all needed functionality before deploying.

**Note: If upgrading from a version prior to 1.1.1, please upgrade to 1.1.1 prior to upgrading to 1.2.0. The IDU will reject any other firmware.**

**Image upgrade for IDU will be copied to flash during image upgrade (bootimage upgrade idu) and will not affect the working link until the system is rebooted / power cycled.**

To perform the firmware upgrade using FTP, use the *ftp* command to load the images into memory, then the *bootimage upgrade* commands. The FTP method is much faster and has built in error checking than TFTP. If you prefer to use the TFTP method, instructions can be found in the user's manual.

All that is needed is the IP address of the ftp server, a username/password, and the filename to be uploaded. The new file to be uploaded should be placed on the server. The ftp server will prompt for the password before allowing access.

If the Sparta is configured with a route to the Internet, you can even pull the new software images directly from our ftp server. If you would rather load them into a local server, please change the IP addresses and directory structure in the examples below as needed. You will need an appropriate default gateway setup in the Sparta as well as a route to the Internet through management or IBM. Trango suggests checking connectivity with ping from debug prompt before attempting the ftp upgrade. To do that, login to the CLI view node, then config node and then debug node. Ping 74.62.177.9 to test for connectivity to our FTP server.

1. Plan to use the file directly from Trango's FTP server or copy it to your own local FTP server. We recommend verifying the file name and path to ensure that nothing has changed since this document was prepared.
2. Note down the current version of the firmware loaded in the radio (CLI version).
3. Connect Management Ethernet port to PC.
4. Configure an IP address in unit if not already done.
5. Start a Telnet or SSH session. Log into the Sparta, go to config node, and then debug node to test connectivity to your ftp server.

```

Debug> ping 74.62.177.9
PING 74.62.177.9 (74.62.177.9): 56 data bytes
64 bytes from 74.62.177.9: seq=0 ttl=127 time=0.965 ms
64 bytes from 74.62.177.9: seq=1 ttl=127 time=10.009 ms

```

Press ctrl+c to stop the ping.

```

--- 74.62.177.9 ping statistics ---
2 packets transmitted, 2 packets received, 0% packet loss
round-trip min/avg/max = 0.965/5.487/10.009 ms

```

If the ping test is not successful, check your IP address and default gateway to ensure that those are addresses that will reach the Internet through your firewall.

- After verifying connectivity, return to config node and save your config if not already done so:

```
Debug> cli
```

```
Trango System: TrangoLINK Sparta Elite Command Line Interface v1.1.2
```

```

(CLI-view)# config
Password: trango
(CLI-config)# config save
New configuration saved

```

```
SUCCESS
```

- Run the *ftp* command from the command line as follows to open access to the server:

```

(CLI-config)# ftp 74.62.177.9 giga
password: giga4773

```

If prompted for the password multiple times, check the connectivity to the server by pinging the FTP server IP address from the debug prompt. You may also test the ftp credentials from a laptop or other computer on the same network subnet.

- Next, get the file from the FTP server by typing the get command from the ftp prompt.

```

ftp> get TL-SpartaElite/idu_SpartaElite_v1.2.tar.gz.aes
#####

```

```
Get operation successful with passive mode
```

- Logout of the ftp session

```
ftp> logout
```

- Process the upgrade using the bootimage upgrade idu command.

```
(CLI-config)# bootimage upgrade idu
```

```

.....
.....
.....

```

```
SUCCESS
```

11. After the process returns success, reboot the radio for the new image to be loaded into active memory.

***(CLI-config)# reboot***

12. Check the new version on the system with CLI command "version". It should match with the versions listed below. **In case of mismatch version, please perform the upgrade again from step 1.**

FPGA version:	0016050B
OS version	<b>2p6r22b0D030612</b>
FW version	<b>1p2r0D030612</b>
PIC version	4
Modem Version	1
HP ODU FW version	150410
HP2 ODU FW version	142

*Please follow all the instructions as listed above in the upgrade instructions. In the case of version mismatch on the system (local/remote/system) the system is NOT guaranteed to work. In the event of a power failure during the upgrade process or any mismatch conflict, please contact technical support <techsupport@trangosys.com> for further assistance. Serial console remote access to the OMUs might be required in the event of such failure. It is suggested that all customers have at least one serial/console cable available at each site.*

**Please don't make any implicit assumptions.  
In case of any doubt please contact technical support for clarification.**

## Sparta Elite Software Change History

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### Software Version 1.1.2

FPGA version:	0016050B
OS version	<b>2p6r22b0D103111</b>
FW version	<b>1p1r2D103111</b>
PIC version	4
Modem Version	1
HP1 ODU FW version	150410
HP2 ODU FW version	142

#### Bug Fixes

1. Additional protection against command server crash which would cause management unresponsiveness.
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### Software Version 1.1.1

FPGA version:	<b>0016050B</b>
OS version	<b>2p6r22b0D070611</b>
FW version	<b>1p1r1D070611</b>
PIC version	4
Modem Version	1
HP1 ODU FW version	150410
HP2 ODU FW version	142

#### New Features

1. New FPGA Support.
2. Short circuit protection on IF N connector.

#### Bug Fixes

1. Image upgrade would previously only accept the same release name. IDU can now be upgraded with any release name.
  2. Bandwidth speed setting for HP ODU.
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### Software Version 1.1.0

FPGA version:	<b>0016030B</b>
OS version	<b>2p6r22b0D042911</b>
FW version	<b>1p1r0D042911</b>
PIC version	2
Modem Version	1
ODU FW Version [HP1]	150410
ODU FW version [HP2]	142

#### New Features

1. 1+1 Hot Standby Support
2. Display ODU model & serial as n/a if not connected.

### Bug Fixes

1. Setting IP Address from SNMP & correct OID for traps.
2. Fixed the display and action setting for thresholds.

### Limitations

1. The image upgrade file has to be idu\_SpartaElite\_v1.1.tar.gz.aes for the future upgrade, till it's addressed in v1.2 later.

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## Software Version 1.0

FPGA version:	0016030B
OS version	2p6r22b0D041911
FW version	1p0r0D041911
PIC version	2
Modem Version	1
ODU FW version [HP2]	142
ODU FW Version [HP1]	150410

### Key Features

1. 3.5 – 56 MHz channel bandwidth, FCC & ETSI complaint.
2. Supported frequency 6-38 GHz for HP1 & HP2 ODU.
3. Support L2/L3 compression for routed and switched networks.
4. Support standard and Suite-B encryption in both routed and switched networks.
5. Hitless adaptive modulation for all modulations except QPSK.
6. Native Ethernet support.
7. Packet QoS based on 802.1p.
8. GigE ports support configurable speed, duplex, rate limiting and jumbo packets up to 9200 bytes.
9. Rapid Port Shutdown
10. ATPC
11. CLI access via serial console/ssh/telnet.
12. SNMPv2 Support (Trango MIBs)
13. Web access supports secure http (https).
14. Threshold monitoring
15. In Band Management
16. Dual image upgrade support with signed and encrypted firmware images.
17. Reliable image transfer using FTP, also support for TFTP.
18. Encrypted diagnostic file transfer.

### Limitations

1. BER is based on CRC errors and might not reflect the accurate BER on live data. WA: Use External test equipment to measure accurate BER for testing
2. The image upgrade file has to be idu\_SpartaElite\_v1.0.tar.gz.aes for the future upgrade, till it's addressed in v1.2 later.