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Motorola PTP xx600 Release Note System Release PTP600-08-01

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1   Introduction

This document provides information for the Motorola PTP 600 Series System Release PTP600-08-01.

1.1   Trademarks, Product Names, and Service Names

May 9, 2006, Orthogon Systems was acquired by Motorola, Inc. (NYSE: MOT). This acquisition brought the full power of Motorola's wireless and broadband innovation and leadership to you, our partners and customers, offering you a broad range of mobile and broadband solutions, a full complement of support services and far-reaching global presence.

MOTOROLA, the stylized M Logo and all other trademarks indicated as such herein are trademarks of Motorola, Inc.® Reg. U.S. Pat & Tm. Office. Motorola PTP 600 Series is a trademark of Motorola, Inc. All other product or service names are the property of their respective owners.

2 Changes in PTP600-08-01

The changes in this release are:

- Digitally signed application software image
- Configurable link symmetry
- E1/T1 support in configurable bandwidth
- Configurable bandwidth in radar regions
- TDD synchronization enhancements
- Intelligent DFS in radar regions
- Improved co-channel interference performance using colour codes
- Improved receiver adjacent channel interference

2.1 Digitally Signed Software

The PTP 600 now supports the download of digitally signed application software images. This feature ensures that the ODUs will not load a new application software image except where this image bears a valid digital signature.

NOTE: It will not be possible to downgrade from PTP600-08-01 to an earlier release by means of standard upgrade procedure in the application software. For further information please contact your support centre.

2.2 Link Symmetry Control

The PTP 600 provides a link symmetry control. Link symmetry is the ratio between the time allowed for transmitting and receiving data over the PTP link. For example, "2 to 1" means that transmission time is twice as long as reception time. The installation wizard allows the user to set link symmetry to one of four values:

- Adaptive
- 2 to 1
- 1 to 1
- 1 to 2

2.3 E1/T1 Support in Configurable Bandwidth

The PTP 600 permits selection of zero, one or two E1 or T1 circuits, regardless of channel bandwidth. When there is insufficient wireless capacity, the link outputs AIS. While the wireless link remains up, the E1/T1 link maintains low jitter and wander.

2.4 Configurable Bandwidth in Radar Regions

Allows the use of additional channel bandwidths 5, 10, and 15 MHz in radar avoidance regions and ensures the detection of radar devices.

2.5 TDD Synchronization Enhancements

2.5.1 TDD Synchronization Available for PTP 48600 and 49600 Variants

TDD Synchronization is now also available on PTP 48600 and PTP 49600 product variants.

2.5.2 TDD Synchronization in Radar Regions

This feature extends TDD Synchronization operation to regions where radar detection is enabled.

2.5.3 TDD Synchronization Frame Offset

This feature permits the design of synchronised networks in which the phase of the TDD frame is independent from the fundamental master/slave function. This change enables flexibility in the choice of Master/Slave location and Ultrasync location, independent of the timing plan.

2.5.4 TDD Synchronization Holdover State

This feature introduces a new holdover state in TDD Synchronization, together with a configurable holdover period. The holdover period starts on loss of the external timing reference. A new alarm has been introduced to indicate that the holdover period has expired before the timing reference has been restored.

2.5.5 Simplified TDD Synchronization GUI

The GUI only has the mode previously described as "Expert". Computation of the numbers required is performed in the LINKPlanner version 1.4.

NOTE: Setting up new TDD Sync networks is not recommended until LINKPlanner version 1.4 software is available.

2.6 Intelligent DFS in Radar Regions

This feature extends the existing Intelligent DFS (i-DFS) spectrum management mode to regions where radar detection is enabled. The new mode "DFS with i-DFS" allows for selection of the channel with lowest interference, with the benefit of increased link capacity. In "DFS with i-DFS" a channel change will incur a period of unavailability similar to the period caused by radar detection. This arises because the link must perform a channel availability check on the target channel to ensure compliance with applicable DFS regulations.

2.7 Improved Co-Channel Interference Performance Using Color Codes

This feature allows the user to independently configure the transmitter and receiver with one of five color codes. Color codes mitigate the effect of synchronised co-channel interference from another PTP 600 series link. Note that there is no benefit from the use of color codes except where TDD Synchronization is enabled and the frequency plan results in significant co-channel interference.

2.8 Improved Receiver Adjacent Channel Interference Performance

This feature gives improved receiver adjacent channel interference (ACI) performance in narrowband modes.

3 PTP 600 Variants

This release of software supports the following variants.

PTP 25600 with 5 MHz license	WB2782	WB2783	WB2784	WB2785
PTP 45600 with Full license	WB3040	WB3041	WB3044	WB3045
PTP 48600 with Full license	WB3378	WB3379	WB3382	WB3383
PTP 49600 with 5 MHz license	WB3225	WB3226	WB3229	WB3230
PTP 54600 with Lite license	BP5530BH15-2	BP5530BH15-1	BP5530BHC15-2	BP5530BHC15-1
PTP 54600 with Full license	BP5530BH-2	BP5530BH-1	BP5530BHC-2	BP5530BHC-1
PTP 58600 with Lite license	BP5830BH15-2	BP5830BH15-1	BP5830BHC15-2	BP5830BHC15-1
PTP 58600 with Full license	BP5830BH-2	BP5830BH-1	BP5830BHC-2	BP5830BHC-1
PTP 59600 with Lite license	WB3097	WB3098	WB3102	WB3103
PTP 59600 with Full license	WB3095	WB3096	WB3099	WB3101

4 Known Issues in PTP600-08-01

None.

5 Fixes in PTP600-08-01

PTP600 and TDD Sync Unreliability

MODEL / SYSTEM AFFECTED: Point-to-Point (PTP) 600 Series Wireless Ethernet Bridges systems, PTP 25600, PTP 45600, PTP 54600, PTP 58600 and PTP 59600 systems using software prior to 08-01 and TDD Synchronization.

SYMPTOM: Using any PTP600 software prior to 08-01 and TDD Sync using the Memorylink Utrasync box can result in link unreliability. This unreliability is more likely in 5, 10 and 15 MHz bandwidths than in 30MHz bandwidth. The unreliability is more likely in QPSK than in other modes. The unreliability can be experienced as packet loss or E1/T1 outage and in severe cases can cause 10 seconds of link outage.

CAUSE: Software defect, the 06-00 to 07-01 software was intolerant to an intermittent GPS timing signal. The signal from the Ultrasync can be intermittent.

RESOLUTION: Upgrade the PTP600 software to 08-01.

6 Previous Releases

6.1 Changes in PTP600-08-00

PTP600-08-00 introduced the PTP 48600 and PTP 49600 product variants, and is only supported on these platforms.

6.2 Changes in PTP600-07-01

6.2.1 Support for New Region Codes

Russia 5.9 GHz (Region 16)

6.3 Changes in PTP600-07-00

6.3.1 SNMP Notification of All State Changes

SNMP Traps are now generated for all state changes. Previously some traps were only generated when entering an alarm state.

6.3.2 Optimization of Ethernet Queue Size

The Ethernet queue size has been reduced in 15MHz, 10MHz and 5MHz channel bandwidth configurations.

6.3.3 Support for Baby Jumbo Frames

Max Ethernet Frame Size increased to 2000 bytes for PBB and MPLS support.

6.3.4 Other Features

- The VLAN Management configuration options have been extended to support S-Tagged management traffic.
- The Remote Management page now includes an option to send a SMTP Test Email

6.3.5 Support for the 5.9GHz Hardware Variant

The Motorola PTP 600 Series product range has a new frequency variant to compliment its existing 5.8GHz, 5.4GHz, 4.5 GHz and 2.5 GHz frequency variants. The new 5.9 GHz hardware variant operates between 5.825 GHz to 5.925 GHz.

6.3.6 Support for New Region Codes

- Unrestricted 5.9 GHz (Region 15).
- India 5.9 GHz (Region 17)
- India 5.8 GHz (Region 19)

6.4 Changes in PTP600-06-00

6.4.1 Support for the 4.5GHz Hardware Variant

The Motorola PTP 600 Series product range has a new frequency variant to compliment its existing 5.8GHz, 5.4GHz and 2.5 GHz frequency variants. The new 4.5GHz hardware variant operates between 4.400 to 4.600GHz and is reserved for Military Use.

6.4.2 Support for New Region Codes

- Bahrain 5.8 GHz (Region 24)
- Germany 5.8 GHz (Region 22)
- ETSI 5.4 GHz (Region 26)
- 4.5 GHz Product Variant (Region 23).

6.4.3 Changes to the 5.4 GHz Default Region Codes

Owing to **Regulatory requirements**, all 5.4 GHz PTP 600 Series units will now be shipped with the following Region Codes:

Default Region Code **26**: complies to ETSI regulations with integrated antenna.

Alternate Region Code **12**: complies to FCC (Part 15E) regulations with integrated antenna.

Second alternate Region Code **13**: complies to Canadian and Australian regulations with integrated antenna.

Please note that the alternate license keys are printed on the Quick Start guide.

6.4.4 Other Functionalities

Added Popup help in the web interface. The user has to click the any menu attribute name to open up a help text box that explains what is the attribute. The user can then close the box.

Ability for a user to disable HTTP and Telnet Access.

This release in all other aspects is identical with the previous release PTP600-05-04.

6.5 Changes in PTP600-05-04

Changes made to support PTP600 Series manufacturing.

Added list of antennas to support the deployment of the PTP600 5.4 GHz connectorised version products following FCC and Industry Canada approvals.

This release in all other aspects is identical with the previous release PTP600-05-03.

6.6 Changes in PTP600-05-03

Minimum Power setting to -7 dBm and .pkg2 file generation path has been fixed.

This release in all other aspects is identical with the previous release 05-02.