

P4dragon Firmware-Update

Description of modifications / improvements

Firmware-Version 2.40.00 (04/2021)

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Firmware-Update-Information for **P4dragon DR-7X00**

(P4dragon-Firmware 2.40.00, April 2021)

1. General information

Firmware 2.40 replaces firmware 2.30 (and subsequent beta versions). This version does not provide major extensions, but we highly recommend installing the update anyway.

It is more than worth mentioning, for example, that even the highly-optimized PACTOR-4 Adaptive Equalizer could be slightly further improved. Furthermore, version 2.40 provides some minor enhancements and the obligatory bug fixes.

2. New Features

2.1 Commands

cmd: **CONIntegrity**

Value range: 0-1

Default: 0

If set to 1, the Robust Connect (SLAVE side) is searching for incoming calls with less error tolerance. The required minimum SNR for establishing a PACTOR connection increases by roughly 2 dB, but the (already very low) probability of “false connects” is further reduced significantly.

3. Other improvements and corrections

3.1 Adaptive Equalizer

The tracking speed of the PACTOR-4 adaptive equalizer could be slightly improved. This increases throughput under "(very) fast selective fading" conditions.

3.2 Miscellaneous

- VERsion command accepts “##” as parameter and then shows the full version string at location “#1:”, regardless of PTCCComp setting
- FSKAmpl and PSKAmpl range extended to 10...9000 mV (DR-7800) / 10...4500 mV (DR-7400).
- PACTOR CText command now fully implemented (CMMSG parameter must be set to 1).
- Parameter range of “PMON Hex” parameter extended to 0 ... 2. With parameter 2, the payload is generally output as a Hex dump, regardless of the content and the verbose parameter.
- Parameter range of “PMON Verbose” parameter extended to 0...4. With parameter 2, an additional modulo-4 frame counter (“FRCNT”) is displayed. With parameter 3, the packet CRC will be additionally displayed as 4-digit hex number ("CRC: XXXX").

Example:

```
###PLISTEN: Level: 4:  
###STATUS: SL: 2, CYC: 1, RQ: 1, REV: 0, LSB: 0, dF: 1.1, CRC: 07F6,  
FRCNT: 0, FRNR: 74
```

- The second parameter in the CWID command is now used for a 6-second delay of the CWID. If the parameter is set to 4, the CWID is delayed by 6 seconds after last PACTOR packet has been sent during link termination.
- The tolerance of the PACTOR state machine to excessive signal delays (e. g. introduced in some SDR's) has been improved. It is highly recommended to use version 2.40 if an SDR transceiver is utilized on at least one side of a PACTOR connection.

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