

RD Series B equipment parameter summary

| | RD-U4B | RD-6B | RD-U6B | RD-8B | RD-11B |
|--------------------------------------|----------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|
| Frequency range (GHz): | 4.400 to 5.000 | 5.925 to 6.425 | 6.430 to 7.110 | 7.725 to 8.275 | 10.700 to 11.700 |
| Maximum two-way RF channels: | 7 | 8 | 8 | 8 | 12 |
| Channel spacing (MHz): | 40.00 | 29.65 | 40.00 | 29.65 | 40/30 (Note 1) |
| Modulation: | 64 QAM | 64 QAM | 64 QAM | 64 QAM | 64 QAM |
| Data rate: | 151.509 Mb/s | 151.509 Mb/s | 151.509 Mb/s | 151.509 Mb/s | 151.509 Mb/s |
| Digital interface: | 139.264 Mb/s ±15 ppm (per ITU-T Rec. G.703) 2.048 Mb/s (two per RF channel - optional) | 139.264 Mb/s ±15 ppm (per ITU-T Rec. G.703) 2.048 Mb/s (two per RF channel - optional) | 139.264 Mb/s ±15 ppm (per ITU-T Rec. G.703) 2.048 Mb/s (two per RF channel - optional) | 139.264 Mb/s ±15 ppm (per ITU-T Rec. G.703) 2.048 Mb/s (two per RF channel - optional) | 139.264 Mb/s ±15 ppm (per ITU-T Rec. G.703) 2.048 Mb/s (two per RF channel - optional) |
| Intermediate frequency: | 70 MHz | 70 MHz | 70 MHz | 70 MHz | 70 MHz |
| Power output (Note 2, 3): | | | | | |
| Option 1 | +31.5 dBm | +28.5 dBm | +31.5 dBm | +31.0 dBm | +27.5 dBm |
| Option 2 | N/A | +30.5 dBm | N/A | N/A | +35.0 dBm |
| Option 3 | N/A | +32.0 dBm | N/A | N/A | N/A |
| —continued— | | | | | |

2-2 RD Series B equipment parameter summary

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|--------------------------------------------------------------------------------------------------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| Typical receiver threshold (non-diversity) (Notes 4, 7): | | | | | |
| at 10 ⁻³ BER: | -73.5 dBm | -73.5 dBm | -73.5 dBm | -72.3 dBm | -71.5 dBm |
| at 10 ⁻⁶ BER: | -71.0 dBm | -71.0 dBm | -71.0 dBm | -69.8 dBm | -69.2 dBm |
| System gain (non-diversity) (Notes 5, 6): | | | | | |
| at 10 ⁻³ BER: | | | | | |
| Option 1: | 104.1 dB | 101.2 dB | 104.1 dB | 102.1 dB | 97.5 dB |
| Option 2: | N/A | 103.2 dB | N/A | N/A | 105.0 dB |
| Option 3: | N/A | 104.7 dB | N/A | N/A | N/A |
| at 10 ⁻⁶ BER: | | | | | |
| Option 1: | 101.6 dB | 98.7 dB | 101.6 dB | 99.6 dB | 95.2 dB |
| Option 2: | N/A | 100.7 dB | N/A | N/A | 102.7 dB |
| Option 3: | N/A | 102.2 dB | N/A | N/A | N/A |
| Residual BER for nominal received signal levels per hop (Note 4): | | | | | |
| | < 10 ⁻¹³ | < 10 ⁻¹³ | < 10 ⁻¹³ | < 10 ⁻¹³ | < 10 ⁻¹³ |
| Typical C/I for 3 dB degradation of the receiver threshold at 10⁻³ BER (non-diversity) (Note 2, 6): | | | | | |
| Co-channel interference: | 22.0 dB | 22.0 dB | 22.0 dB | 22.0 dB | 22.0 dB |
| Adjacent channel interference: | -29.0 dB | -5.0 dB | -29.0 dB | -5.0 dB | -26.0 dB |
| Dispersive fade margin (Note 8): | | | | | |
| at 10 ⁻³ BER: | 44.0 dB | 44.0 dB | 44.0 dB | 44.0 dB | 44.0 dB |
| at 10 ⁻⁶ BER: | 42.5 dB | 42.5 dB | 42.5 dB | 42.5 dB | 42.5 dB |
| —end— | | | | | |

Note 1: A channel bandwidth of 30.0 MHz is for band-edge channels.

Note 2: Measured at the input to the branching bandpass filter.

Note 3: For RD-U4B, RD-U6B and RD-8B, they each have only one available option for the power amplifier output. For RD-6B, there are three SSPA output options available. In RD-11B, there are two power options available: option 1 - SSPA and option 2 - TWTA.

Note 4: Typical value measured at the antenna port of the branching circulator.

Note 5: Measured between antenna ports of XMTR and RCVR.

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Note 6: The system gain is specified for a typical channel equipped with a standard transmit branching filter. These figures should be adjusted if another filter option is chosen.

Note 7: In space-diversity receivers, for equal signal levels into the receive branching filters, the receiver threshold improves by 2.6 dB. This is taken into account in evaluating the combined fade margin (F_c) for availability calculations (refer to *Transmission Considerations*, 415-3301-150).

Note 8: Typical value based on an equipment signature (see Chapter 8, System Performance).

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