



Addendum to the Theory of Operation

1. Theoretical Processing Gain:

$PG(\text{theor.}) = 10\log(\text{chip rate} / \text{data rate}) + 10\log(2 \times \text{bits/symbol}) = 10\log(11 \text{ Mcps}/11 \text{ Mbps}) + 10\log(2 \times 8 \text{ bits/symbol}) = \mathbf{12.04 \text{ dB}}$

2. Data Rate:

The NCL1100 is configured and intended for raw data transmission rates of 11 Mbps.

3. Chip-Symbol Ratio:

There are 8 bits conveyed per symbol, for each the I and Q channels, using Quadrature M-ary Bi-Orthogonal Keying (QMBOK) modulation.

4. Spread Rate:

The spread rate implemented is 11 Mcps.

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