
NXC-3200 CDG II Document

5.2 Product Specification (H/W)

- NXC-3200 -

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1. Specification

1.1 General Specification

1.1.1 Transmit/Receive Frequency Interval :

- 1) CELLULAR : 45 MHz
- 2) AMPS : 45MHz

1.1.2 Number of Channels (Channel Bandwidth)

- 1) CELLULAR : 20 Channels
- 2) AMPS : 832 Channels

1.1.3 Operating Voltage : DC 3.8V

1.1.4 Battery Power Consumption : DC 3.8V

	SLEEP	IDLE	MAX POWER
CELLULAR	3 mA	89 mA	500 mA (24 dBm)
AMPS	45mA	88 mA	8500 mA (27 dBm)

1.1.5 Operating Temperature : -30 °C ~ +60 °C

1.1.6 Frequency Stability

- 1) CDMA : ±0.5PPM
- 2) AMPS : ±2.5PPM
- 3) PCS : ±0.1PPM

1.1.7 Antenna : Retractable Type (Herical+Whip), 50

1.1.8 Size and Weight

- 1) Size : 107×44×22.5
- 2) Weight : 112.5g

1.1.9 Channel Spacing

- 1) CELLULAR : 1.25MHz
- 2) AMPS : 30KHz

1.1.10 Battery Type, Capacity and Operating Time.

Unit = Hours : Minutes

	Extended (870mAh)	
	CELLULAR	AMPS
Standby Time	156hrs	15hrs
Talk time	210min	1hrs

1.2 Receive Specification

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1.2.1 Frequency Range

- 1) CELLULAR : 869.820 MHz ~ 893.190 MHz
- 2) AMPS : 869.04 MHz ~ 893.97 MHz

1.2.2 Local Oscillating Frequency Range :

- 1) CELLULAR : 966.88MHz±12.5MHz
- 2) AMPS : 966.88MHz±12.5MHz

1.2.3 Intermediate Frequency :

- 1) CELLULAR : 85.38MHz
- 2) AMPS : 85.38 MHz

1.2.4 Sensitivity

- 1) CELLULAR : -104dBm (C/N 12dB or more)
- 2) AMPS : -116dBm (12dB SINAD)

1.2.5 Selectivity

- 1) CELLULAR : 3dB C/N Degradation (With Fch±1.25 kHz : -30dBm)
- 2) AMPS : 16dB at Fch±30kHz, 60 dB at Fch±60kHz

1.2.6 Spurious Wave Suppression : Maximum of -80dB

1.2.7 CDMA Input Signal Range

- ☐ Dynamic area of more than -104~-25 dB: 79dB at the 1.23MHz band.

1.2.8 AMPS De-Emphasis : -6dB/OCT within 0.3~3kHz

1.2.9 AMPS Expander

- ☐ Expansion Rate : 1:2
- ☐ Attack Time : within 3mS
- ☐ Recovery Time : within 13.5mS
- ☐ Reference Input : Output level to a 1000Hz tone from a carrier within +2.9kHz peak frequency deviation.

1.2.10 AMPS Sensitivity : 12dB SINAD/-116dBm

1.2.11 AMPS Intermodulation Spurious Response Attenuation : Above 65dB

1.2.12 AMPS RSSI Range : Above 60dB

1.2.13 AMPS Protection Against Spurious Response Interference : Above 60dB

1.2.14 AMPS In Band Conducted Spurious Emissions

- ☐ Transmit Band : below -60dBm
- ☐ Receive Band : below -80dBm

1.2.15 AMPS Out of Band Conducted Spurious Emissions : Below -47dBm

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1.2.16 AMPS Radiated Spurious Emissions

Frequency Range	Maximum allowable EIRP
25 ~ 70 kHz	- 45 dBm
70 ~ 130 kHz	- 41 dBm
130 ~ 174 kHz	- 41 ~ - 32 dBm
174 ~ 260 kHz	- 32 dBm
260 ~ 470 kHz	- 32 ~ - 26 dBm
470 ~ 1.0 GHz	- 21 dBm

1.3 Transmit Specification

1.3.1 Frequency Range

- 1) CELLULAR : 824.820MHz ~ 848.190MHz
- 2) AMPS : 824.04MHz ~ 848.97MHz

1.3.2 Local Oscillating Frequency Range :

- 1) CELLULAR : 966.88 MHz $\pm$ 12.5 MHz
- 2) AMPS : 966.88 MHz $\pm$ 12.5 MHz

1.3.3 Intermediate Frequency : 130.38 MHz

1.3.4 Output Power

- 1) CELLULAR : 0.3W
- 2) AMPS: 0.5W

1.3.5 Interference Rejection

- 1) Single Tone : -30dBm at 900 kHz (CELLULAR), -30dBm at 1.25MHz(PCS)
- 2) Two Tone : -43dBm at 900 kHz & 1700kHz(CELLULAR), -43dBm at 1.25 MHz & 2.05 MHz

1.3.6 AMPS Carrier ON/OFF Conditions

" ON" condition : within $\pm$ 3dB of specification output (in 2msec)

1.3.7 AMPS Compressor

- 1) Compression Rate : 2:1
- 2) Attack Time : 3msec
- 3) Recovery Time : 13.5msec
- 4) Reference Input : Input level for producing a nominal $\pm$ 2.9kHz peak frequency deviation of transmitted carrier.

1.3.7 AMPS Preamphasis : 6dB/OCT within 0.3 ~ 3 kHz

1.3.8 AMPS Maximum Frequency Deviation

- 1) F3 of G3 : $\pm$ 12kHz ($\pm$ 10%)
- 2) Supervisory Audio Tone : $\pm$ 2kHz ($\pm$ 10%)
- 3) Signalling Tone : $\pm$ 8kHz ($\pm$ 10%)
- 4) Wideband Data : $\pm$ 8kHz ($\pm$ 10 %)

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1.3.9 AMPS Post Deviation Limiter Filter

- 1) 3.0kHz ~ 5.9kHz : above $40\log(F/3000)$ dB
- 2) 5.9kHz ~ 6.1kHz : above 35dB
- 3) 6.1kHz ~ 15kHz : above $40\log(F/3000)$ dB
- 4) Over 15kHz : above 28dB

1.3.10 AMPS Spectrum Noise Suppression

- 1) For all Modulation
fo+20kHz ~ fo+45kHz : above 26dB
- 2) For Modulation by Voice and SAT
fo+45kHz : above $63+10\log(Py)$ dB
- 3) For Modulation by WBD (without SAT) and ST (with SAT)
fo+45kHz ~ fo+60kHz : above 45dB
fo+60kHz ~ fo+90kHz : above 65dB
fo+90kHz ~ 2fo : above $63+10\log(Py)$ dB,
where fo=carrier frequency, Py=mean output power in watts.

1.3.11 AMPS Harmonic and Conducted Spurious Emissions : above $43+10\log(Py)$ dB

1.3.12 CDMA TX Frequency Deviation :

- 1) CELLULAR: ± 300 Hz or less
- 2) AMPS: ± 300 Hz or less

1.3.13 CDMA TX Conducted Spurious Emissions

- 1) CELLULAR : 900kHz : - 42 dBc/30kHz below
1.98MHz : - 54 dBc/30kHz below

1.3.14 CDMA Minimum TX Power Control

- 1) CELLULAR : - 50dBm below

1.4 MS (Mobile Station) Transmitter Frequency

1.4.1 CELLULAR & AMPS mode

Ch #	Center Freq. (MHz)	Ch #	Center Freq. (MHz)
1011	824.640	404	837.120
29	825.870	445	838.350
70	827.100	486	839.580
111	828.330	527	840.810
152	829.560	568	842.040
193	830.790	609	843.270
234	832.020	650	844.500
275	833.250	697	845.910
316	834.480	738	847.140
363	835.890	779	848.370

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1.5 MS (Mobile Station) Receiver Frequency

1.5.1 CELLULAR & AMPS mode

Ch. #	Center Freq. (MHz)	Ch. #	Center Freq. (MHz)
1011	869.640	404	882.120
29	870.870	445	883.350
70	872.100	486	884.580
111	873.330	527	885.810
152	874.560	568	887.040
193	875.790	609	888.270
234	877.020	650	889.500
275	878.250	697	890.910
316	879.480	738	892.140
363	880.890	779	893.370

1.6 Charge time

1.6.1 Standard Battery : 2 Hrs (870mAh)

1.6.2 Extended Battery : 4 Hrs (1400mAh)

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