FREQUENTLY ASKED QUESTIONS

Coronavirus (COVID-19) Disruption *Our Call Center is experiencing a high number of calls due to the COVID-19 situation. We are working to assist everyone who contacts us. In the meantime, please visit www.arris.com/selfhelp for most frequently asked questions about your device. We apologize for the inconvenience and will assist you soon.*

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BACK TO SEARCH RESULTS

SB6183: CABLE SIGNAL LEVELS

INFORMATION

Question What are the acceptable Cable Signal levels for the SB6183 Modem?

Answer Cable signal levels for all DOCSIS cable modems require to be within the acceptable level for the modem operate properly. The three signal levels that need to be within the acceptable level are Downstream Power, SNR (Signal to Noise Ratio), and Upstream Power. Downstream Power refers to the line signal sent from the cable provider to cable modem. Downstream SNR (Signal to Noise Ratio) refers to the signal being sent in relation to the noise on the line. Upstream Power refers to the line signal from the cable modem to transmit data back to the cable provider. This document describes how to check the three signal levels to be within the acceptable level for the modem operate properly.

To Verify Cable Signal Levels

NOTE: If the SB6183 is connected to a router, it is recommended to disconnect the router and connect the SB6183 directly to a computer with an Ethernet cable.

Launch a web browser, such as Internet Explorer, Firefox, or Safari. Enter http://192.168.100.1 into the address box. The **Status** page will appear.

In the **Downstream Bonded Channels** section, verify **Power** levels are within the acceptable range of **- 15 dBmV** to + **15 dBmV** for each downstream channel.

Downstream Bonded Channels

Channel	Lock Status	Modulation	Channel ID	Frequency	Power	SNR	Corrected	Uncorrectables
1	Locked	QAM256	1	705000000 Hz	0.0 dBmV	47.4 dB	0	0
2	Locked	QAM256	2	711000000 Hz	0.1 dBmV	47.4 dB	0	0
3	Locked	QAM256	3	717000000 Hz	0.2 dBmV	47.4 dB	0	0
4	Locked	QAM256	4	723000000 Hz	0.1 dBmV	47.4 dB	0	0
5	Locked	QAM256	5	741000000 Hz	-0.2 dBmV	46.4 dB	0	0
6	Locked	QAM256	6	747000000 Hz	0.1 dBmV	46.4 dB	0	0
7	Locked	QAM256	7	753000000 Hz	0.2 dBmV	46.5 dB	0	0
8	Locked	QAM256	8	759000000 Hz	-0.1 dBmV	46.4 dB	0	0

In the **Downstream Bonded Channels** section, identify the **Modulation** and **Power** to find verify **SNR** levels are within the acceptable range for each downstream channel.

Acceptable SNR Levels (dB):
If **QAM64**, **SNR** should be 23.5 dB or greater.
If **QAM256** and **DPL**(-6 dBmV to +15 dBmV) **SNR** should be 30 dB or greater.
If **QAM256** and **DPL**(-15 dBmV to -6 dBmV) **SNR** should be 33 dB or greater.

Downstream Bonded Channels								
Channel	Lock Status	Modulation	Channel ID	Frequency	Power	SNR	Corrected	Uncorrectables
1	Locked	QAM256	1	705000000 Hz	0.0 dBmV	47.4 dB	0	0
2	Locked	QAM256	2	711000000 Hz	0.1 dBmV	47.4 dB	0	0
3	Locked	QAM256	3	717000000 Hz	0.2 dBmV	47.4 dB	0	0
4	Locked	QAM256	4	723000000 Hz	0.1 dBmV	47.4 dB	0	0
5	Locked	QAM256	5	741000000 Hz	-0.2 dBmV	46.4 dB	0	0
6	Locked	QAM256	6	747000000 Hz	0.1 dBmV	46.4 dB	0	0
7	Locked	QAM256	7	753000000 Hz	0.2 dBmV	46.5 dB	0	0
8	Locked	QAM256	8	759000000 Hz	-0.1 dBmV	46.4 dB	0	0

In the **Upstream Bonded Channels** section, identify the number of **Channels**, **Type**, **Symbolic Rate** to find verify **Upstream Power** levels are within the acceptable range for each upstream channel.

Upstream Bonded Channels						
Channel	Lock Status	US Channel Type	Channel ID	Symbol Rate	Frequency	Power
1	Locked	ATDMA	49	5120 Ksym/sec	30700000 Hz	44.5 dBmV
2	Locked	TDMA and ATDMA	50	2560 Ksym/sec	18500000 Hz	44.3 dBmV
3	Locked	ATDMA	51	5120 Ksym/sec	23300000 Hz	44.0 dBmV
4	Locked	TDMA and ATDMA	52	2560 Ksym/sec	35500000 Hz	44.3 dBmV

Acceptable Upstream Power Levels (dBmV)

Upstream Transmit Power Level

Channel	US Channel Type	Symbol Rate	Acceptable Upstream Power Levels
Single	TDMA	1280 Ksym/sec	45 dBmv to 61 dBmV
	ATDMA	2560 Ksym/sec	45 dBmv to 58 dBmV
		5120 Ksym/sec	45 dBmv to 57 dBmV
Two	TDMA	1280 Ksym/sec	45 dBmv to 58 dBmV
	ATDMA	2560 Ksym/sec	45 dBmv to 55 dBmV
		5120 Ksym/sec	45 dBmv to 54 dBmV
Three or more	TDMA	1280 Ksym/sec	45 dBmv to 55 dBmV
	ATDMA	2560 Ksym/sec	45 dBmv to 52 dBmV
		5120 Ksym/sec	45 dBmv to 51 dBmV

Refresh the page at least twice to identify variations in **SNR**, **Downstream Powe**r, and **Upstream Power**.

NOTE: If the either of the signal levels are outside of the acceptable range, power cycle or factory reset the modem.

Contact the cable provider to adjust the signal level to the acceptable level range.

Acceptable Signal Levels

Acceptable Downstream Power Level

-15 dBmV to +15 dBmV

Downstream Signal to Noise Ratio (SNR)

Modulation	Downstream Power	Acceptable Downstream SNR
64 QAM	n/a	23.5 dB or greater
256 QAM	-6 dBmV to +15 BmV	30 dB or greater
	-6 dBmV to -15 dBmV	33 dB or greater

Upstream Transmit Power Level

Channel	US Channel Type	Symbol Rate	Acceptable Upstream Power Levels
Single (1)	TDMA	1280 Ksym/sec	45 dBmv to 61 dBmV
	ATDMA	2560 Ksym/sec	45 dBmv to 58 dBmV
		5120 Ksym/sec	45 dBmv to 57 dBmV
Two (2)	TDMA	1280 Ksym/sec	45 dBmv to 58 dBmV
	ATDMA	2560 Ksym/sec	45 dBmv to 55 dBmV
		5120 Ksym/sec	45 dBmv to 54 dBmV
Three or more (>=3)	TDMA	1280 Ksym/sec	45 dBmv to 55 dBmV
	ATDMA	2560 Ksym/sec	45 dBmv to 52 dBmV

	5120 Ksym/sec	45 dBmv to 51 dBmV

FEEDBACK

Was this article helpful?

Yes No

ANSWERS OTHERS FOUND HELPFUL

SB6183: Troubleshoot Internet Connection
SB8200: Cable Signal Levels
SB6141: Cable Signal Level
SB6190: Cable Signal Levels
SBG8300: Cable Signal Levels

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