

NCI-521

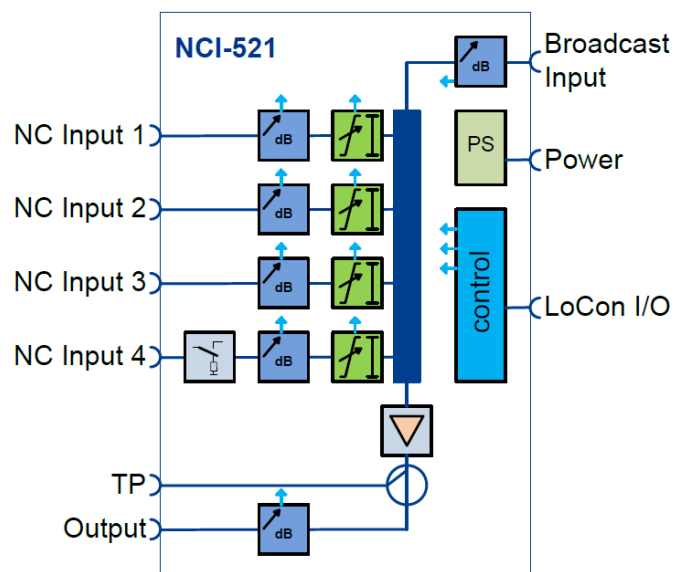
Narrowcast inserter

- High CSO/CTB specification
- High dynamic RF level range for broadcast and narrowcast
- Electronic slope and level control on every input port (0.5 dB steps)
- Flexible and hot-swappable
- High isolation between ports
- Redundancy switch on one port
- DOCSIS 3.x compatible

Description

The NCI-521 is a narrowcast inserter/combining solution for next generation CCAP headends. It is compact, flexible and offers >70 dB isolation between ports. The unit is used to combine up to four narrowcast services with one broadcast service. Up to 22 narrowcast modules can slot into a standard 19" 3RU rack along with the NCC-1222 narrowcast controller required to control the NCI-521 modules.

The broadcast input and 4 narrowcast insertion points of the NCI-521 are made with directional couplers that have very high isolation. A GaAs pHEMT amplifier is used for high CSO and CTB figures. A 20 dB test point is located at the output. Every narrowcast input has a centrally operated, 30 dB adjustable attenuator and 10 dB equalizer. Both the broadcast input and output have an adjustable attenuator. The RF connections are made with high quality F connectors. The use of high quality ferrite ensures very low passive intermodulation, so the NCI-521 is fully prepared for DOCSIS 3.x and channel bonding applications. Narrowcast Input 4 has a separate switch and can be used as a redundant input for future CCAP applications.



NCI-521 Narrowcast inserter

Specifications

		MHz	Min	Typ	Max
Frequency range (MHz)			50		1006
Return loss (dB) ¹	Input ports	50 - 1006	22.0		
	Output ports	50 - 1006	20.0		
Gain (dB) ²	Broadcast In to Out	50 - 1006			8.0
Insertion loss (dB) ²	Narrowcast to Out	50 - 1006		3.5	4.0
	Test point (w.r.t. output)		19.5	20.0	20.5
Input level (dBmV) ³	Broadcast				29.0
	Narrowcast				60.0
Output level (dBmV)	Broadcast				31.0
	Narrowcast				37.0
Adjustment (dB) ⁴	Broadcast input (Step attenuator)		0		30.0
	Narrowcast inputs 1 to 4 (Step attenuator)		0		30.0
	(Step equalizer)		0		10.0
	Output (Step attenuator)		0		30.0
Flatness (dB)	All ports	50 - 862		± 0.5	±0.75
		862 - 1006		± 0.5	±1.0
Intermodulation (dBC, min) ⁵	Broadcast CSO @ 33 dBmV output level	50 - 1006		-75.0	-70.0
	Broadcast CTB @ 33 dBmV output level			-80.0	-75.0
	Narrowcast CSO @ 37 dBmV output level			-75.0	-70.0
	Narrowcast CTB @ 37 dBmV output level			-75.0	-70.0
Noise figure (dB)	Broadcast input			11.0	12.0
	Narrowcast input			26.0	27.0
Supply voltage (VDC)			15	24	26
Supply power (W)				2.4	
Supply current (mA)	At 24V DC			90	100
Isolation (dB, min) ⁶	NC input to adjacent BC input	50 - 550		70.0	
		550 - 1006		65.0	
	NC input to NC input	50 - 550		70.0	
		550 - 1006		65.0	
Screening efficiency (dB, typ) ⁷		5 - 300		85.0	
		300 - 470		80.0	
		470 - 950		75.0	
		950 - 1006		55.0	
Temperature range (°F)	Operational		41		113
	Operational, reduced specifications		32		131
	Storage		-4		185
Humidity (%)	Non condensing		5		95
Impedance (Ohm, typ)	RF ports		75		
Connectors ⁸	All ports		F-female		
Dimensions	L x H x D		3RU x 3.5TE x 2.75"		

Other related products

[NCC-1222](#)
[MRO-100-BP](#)
[RPS-UNI](#)
[PSA-xxx xx](#)
[RCP-35](#)
[RCP-70](#)

Remarks

- At F = 40 MHz F > 40 MHz -1,5 dB/octave
- With step attenuator and step equaliser set to 0 dB
- Broadcast is fed from the MRO-100/BP back plane and NCC-1222
- Attenuator and equaliser set in steps of 0.5 dB
- @ 42 channels Cenelec grid
- According to CCAP standards. Measured at NC input level of 39dBmV (64 bundled channels)
- Tested according to EN 50083-2 2006
- F connectors according to IEC 169-24 inner contact = 0.7 to 1.3 mm Tin Nickel plated

Ordering information

Item Name	Article number
NCI-521	11251521

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