

NCI-521-12 Narrowcast Inserter

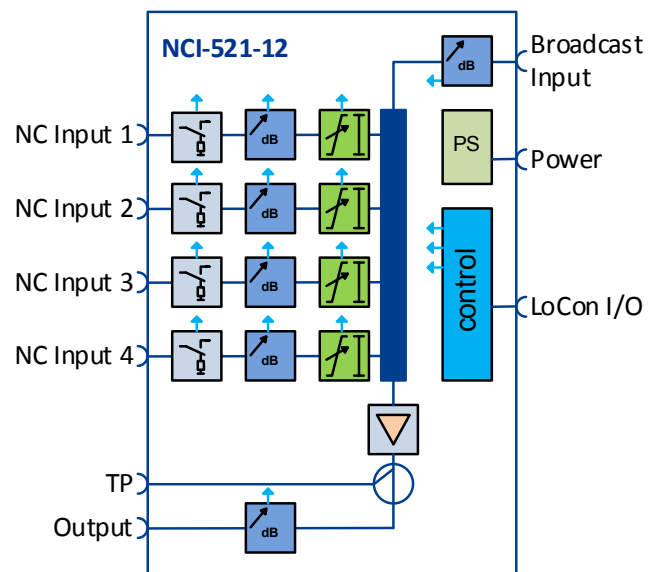
- High CSO/CTB specification
- High dynamic RF level range for broadcast and narrowcast
- Electronic slope and level control on every input port (0.5 dB steps)
- Flexible and hot-swappable
- High isolation between ports
- Redundancy and termination switch on every port
- DOCSIS 3.x compatible
- Frequency range 85 - 1220 MHz



Overview

The NCI-521-12 is a 4 way Narrowcast Inserter for the next generation CCAP equipment. Small, compact, low power, flexible and > 70 dB isolation ensures deploy ability for the next decade.

The unit has a Broadcast input and 4 narrow cast insertion points made with directional couplers with very high isolation. A GaAs pHEMT amplifier is used for high CSO and CTB figures. At the output a 20dB test point is located. Every narrow cast input has a central operated adjustable attenuator, equaliser and switch. Ports can be switched on/off for redundancy applications and to terminate when not used. Broadcast input and output have also adjustable attenuators. The RF connections are made with high quality F connectors. The use of high quality ferrite ensures very low passive Intermodulation so fully prepared for DOCSIS 3.x and channel bundling applications.



Specifications

		MHz	Min	Typ	Max
Frequency range (MHz)	Broadcast port		85		1006
	Narrowcast Ports		85		1220
Return loss (dB) ¹	Narrowcast Input ports	85 - 1220	22.0		
	Output port	85 - 1220	20.0		
	Test point	85 - 1220	20.0		
Gain (dB) ²	Broadcast In to Out	85 - 1006		5.5	6.0
Insertion loss (dB) ²	Narrowcast to Out	85 - 1220		4.5	5.0
	Test point (w.r.t. output)		19.5	20.0	20.5
Input level (dBμV) ³	Broadcast				89.0
	Narrowcast				120.0
Output level (dBμV)	Broadcast				91.0
	Narrowcast				95.0
Adjustment (dB) ⁴	Broadcast input (Step attenuator)		0		30.0
	Narrowcast inputs 1 to 4 (Step attenuator)		0		30.0
	(Step equaliser)		0		10.0
	Output (Step attenuator)		0		30.0
Flatness (dB)	All ports	50 - 862		± 0.5	±0.75
		862 - 1220		± 0.5	±1.0
Intermodulation (dBc, min) ⁵	Broadcast CSO @ 93 dBμV output level	50 - 1006		-75.0	-70.0
	Broadcast CTB @ 93 dBμV output level	50 - 1006		-80.0	-75.0
	Narrowcast CSO @ 97 dBμV output level	85 - 1220		-75.0	-70.0
	Narrowcast CTB @ 97 dBμV output level	85 - 1220		-75.0	-70.0
Noise figure (dB)	Broadcast input			14.0	15.0
	Narrowcast input			25.0	26.0
Supply voltage (VDC)			15		24
Supply power (W)				2.4	
Supply current (mA)	At 24V DC			90	100
Isolation (dB) ⁶	NC input to Adjacent BC input	50 - 550	70.0		
		550 - 1002	65.0		
		1002 - 1220	60.0		
	NC input to NC input	50 - 550	70.0		
		550 - 1002	65.0		
		1002 - 1100	60.0		
1100 - 1220	55.0				
Screening efficiency (dB) ⁷		5 - 300	85.0		
		300 - 470	80.0		
		470 - 950	75.0		
		950 - 1220	55.0		
Switch off isolation (dB)		85 - 1220	60		
Temperature range (°C)	Operational		5		45
	Operational, reduced specifications		0		55
	Storage		-20		85
Humidity (%)	Non condensing		5		95
Impedance (Ohm, typ)	RF ports		75		
Input termination ⁹	Narrowcast Input		Manual		
Redundancy switch	On NC port 1 ... 4		On/Off		
Control	Via back plane		LoCon		
Connectors ⁸	All ports		F-female		
Dimensions	L x H x D		3RU x 3.5TE x 70mm		
Equipment Approval	CE, RoHS compliant				

Other related products

[NCC-1222 controller](#)

[NCC-2222 controller](#)

[MRO-100-BP](#)

[RPS-UNI](#)

[PSD-xxx xx](#)

[PSA-xxx xx](#)

[RCP-35](#)

[RCP-70](#)

Remarks

1	At F = 40 MHz F > 40 MHz -1,5 dB/octave
2	With step attenuator and step equaliser set to 0 dB
3	Broadcast is fed from the MRO-100/BP back plane and NCC-1222
4	Attenuator and equaliser set in steps of 0.5 dB
5	@ 42 channels Cenelec grid
6	According to CCAP standards. Measured at NC input level of 99dBuV (64 bundled channels)
7	Tested according to EN 50083-2 2012
8	F connectors tested according to IEC 169-24 inner contact = 0.7 to 1.3 mm Tin Nickel plated
9	When the redundancy switch is activated, via web server, the input is terminated with 75 ohm.

Ordering information

Item Name	Article number
NCI-521-12	11252112