





RF Amplifiers

BOOSTER AMPLIFIERS

ICON100 **1.8 GHz BOOSTER AMPLIFIER**

Extended Spectrum DOCSIS (ESD) is one of the great opportunities for operators to get the most out of their existing hybrid fibre and coaxial (HFC) networks. However, the high frequencies up to 1.8 GHz used in these networks are tough on the existing coax cable infrastructure and insist on using the best network components. Maintaining backward compatibility has been one of the basic design principles in the new ICON100 booster amplifier. Although it supports 1.8 GHz and future DOCSIS 4.0 rollouts, it can also be used in lower frequency networks.

ICON100 features:

- Extended frequency range up to 1794 MHz
- Support for 492 MHz upstream
- Adjustable downstream gain
- Entry ports from sides and bottom
- Fixed slope equalization for both paths
- Adequate dynamic range
- Test point for monitoring
- Efficient surge and ESD protection
- Allows for high feed-through current
- Open-down hinged lid design



INTRODUCING THE ICON100 YOUR COMPACT NETWORK BOOSTER

The ICON100 is a compact booster amplifier ideally used on distribution lines when networks are upgraded to a higher frequency band, necessitating compensation for increased cable loss. It's effortless to install, requiring no level adjustments, and can also function as a line equalizer. Plus, it's remotely powered and supports high feed-through current.

Simple and reliable

The ICON100 is a robust, well-performing 1.8 GHz booster amplifier intended for operators who appreciate high performance, cost-efficiency, and easy installation. It stands out as a reliable choice for operators seeking top-notch performance and seamless integration into their networks.

Versatile installation options

The installation of the ICON100 is highly flexible, catering to various mounting options. Whether it's wall or pedestal mounting, pole mounting with tailor-made brackets, or strand mounting using the clamp at the top, this versatility ensures smooth integration into various infrastructure setups, meeting diverse installation requirements.



Excellent capabilities

The ICON100 is specifically crafted for cable broadband operators prioritizing high performance, reliability, and efficiency in a booster amplifier. It supports up to 1.8 GHz downstream and Ultra High Split (UHS) upstream frequencies, featuring a test point for signal presence monitoring. Additionally, it provides support for high feed-through current and efficient ESD and surge protection.



ICON100 block diagram



ICON100 / BOOSTER AMPLIFIER

TECHNICAL SPECIFICATIONS (1)				
Downstream signal path		Upstream signal path		
Frequency range	108 1794 MHz	Frequency range	5492 MHz	
Return loss	18 dB ⁽²⁾	Return loss	18 dB	
Gain	11 dB ⁽³⁾	Gain	5 dB	
Adjustable attenuator	06 dB ⁽⁴⁾	Fixed Input equalization	4 dB	
Fixed Input equalization	9 dB	Flatness	±0.75 dB ⁽⁵⁾	
Flatness	±0.75 dB ⁽⁵⁾	Noise figure@ 5 MHz	14 dB	
Noise figure@ 108 MHz	18 dB	Noise figure@ 492 MHz	9 dB	
Noise figure@ 1794 MHz	11 dB	тср	61 dBmV ⁽⁶⁾	
TCP 0 dB step down 6 dB step down	59 dBmV ⁽⁶⁾ 62 dBmV			

Test point	20 dB	Test point connector	G type (male)
Supply Voltage	30 90 VAC	Dimensions	178 x 190 x 68 mm 7.0" x 7.5" x 2.7"
Power Consumption	6 W	Ports	Metal inserts with 5/8"
Maximum feed through current	15 A	EMC compatibility	FCC part 15
Hum	60 dB	Safety	UL 62368-1
Operating temperature	-40+60 °C -40+140 °F	Surge	6 kV, SCTE 81
Class of enclosure	IP67		

(1) Typical values.

(2) The limiting curve is defined at 54 MHz -1.5 dB/ octave. Return loss is always > 13 dB.

(3) Guaranteed minimum gain at 1794 MHz.

(4) Rotary controlled digital step-attenuator with 2 dB steps.

(5) Guaranteed value over the full temperature range.

(6) According to SCTE 279.

ORDERING INFORMATION		
ICON100-085	Booster amplifier, 2 x diplexers for 85/108 MHz, no connectors in 5/8" ports.	
ICON100-204	Booster amplifier, 2 x diplexers for 204/258 MHz, no connectors in 5/8" ports.	
ICON100-396	Booster amplifier, 2 x diplexers for 396/492 MHz, no connectors in 5/8" ports.	
ICON100-492	Booster amplifier, 2 x diplexers for 492/606 MHz, no connectors in 5/8" ports	



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