



5G Small Cell O-RU SC-70x

Product Briefing

VERSION 2.2

May 2021

Notice:

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Introduction

O-RAN Alliance has defined a reference distributed architecture to enable next generation RAN infrastructure, consisting of DU and RU. CIG has developed a series of hardware platform specially targeted for 5G small cell deployment for indoor 5G coverage and capacity enhancement. The platform is fully programmable based on general purpose ARM Processor and FPGA. A 3-tier architecture is adopted to carry out the gNB functionality, i.e. SC-60 O-DU, SC-70x O-RU and SC-640 O-Bridge. The number of each component can be flexibly configured to meet various application demands.

The O-RU carries out the transmission and reception of radio frequency signals. According to the functional split at the fronthaul interface, it also implements partial functions of the NR physical layer. SC-70x series are for indoor sub6G 5G NR deployment.



Highlights

- 3GPP and O-RAN compliant 5G NR low-phy with split option 7-2x
- 100MHz processing bandwidth, with multiple sub6G band options
- High performance 4T4R radio, using high efficiency non-linear PA with DPD
- eCPRI over 10GbE Ethernet
- SyncE + IEEE 1588 v2 based timing
- Multiple compression options
- Fully programmable with FPGA and SDR radio transceivers
- Ceiling and wall mounting, easy for installation and maintenance

Specification

Dimension (L x W x H)	225mm x 225mm x 44mm
Fronthaul Interface	1 X 10Gbps, RJ45 or SFP+ optional
Power Supply	802.3bt PoE or hybrid fiber
Power Consumption	40W (Typical)
Weight	1.65KG
Mounting	Wall or ceiling

Features

Radio access technology	<ul style="list-style-type: none"> - 5G NR, sub6G support - Up to 100MHz processing bandwidth - 30KHz SCS, normal CP - O-RAN Option 7-2x low layer split - eCPRI over Ethernet with VLAN, supporting jumbo frames - Programmable IQ Compression by block floating point
RF Performance	<ul style="list-style-type: none"> - 4T4R with integrated or external antennas - 24 dBm transmit power per chain - <6dBi antenna gain (omni-directional, hybrid polarization) - -95 dBm RX sensitivity
Timing	- SyncE +IEEE 1588 v2
OAM	- O-RAN compliant OAM, with NETCONF/YANG

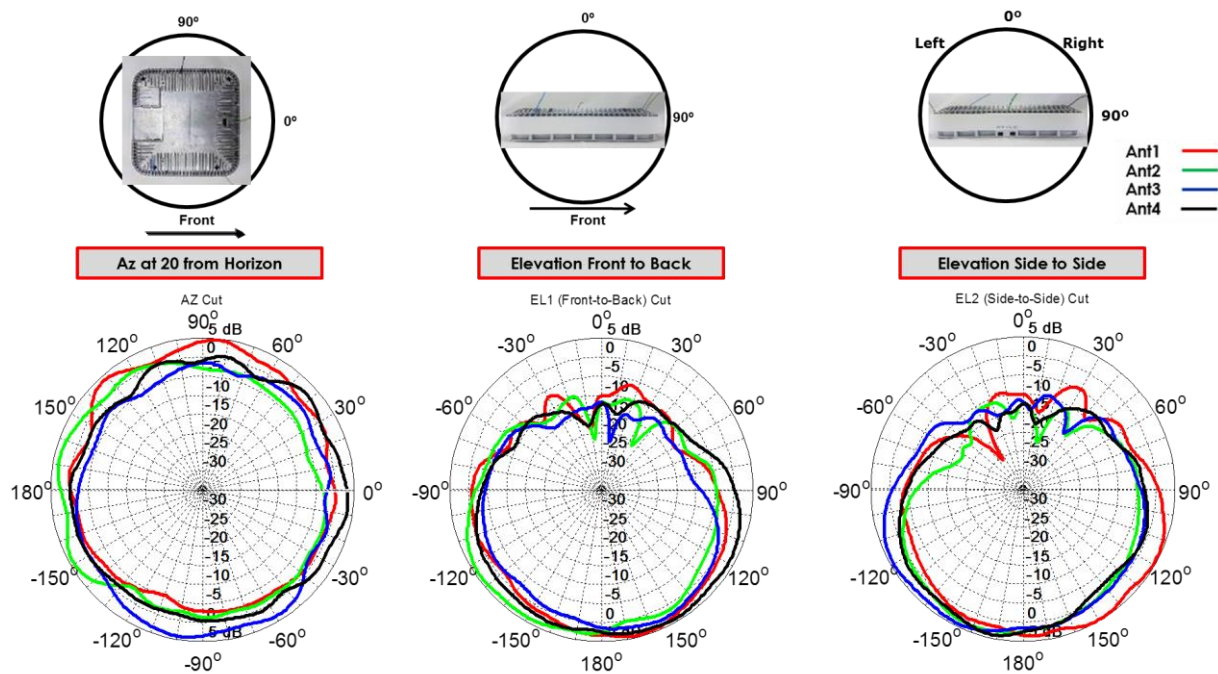
Product Information

Name	Mode	Frequency (MHz)	Band	Antenna
SC-701	TDD 5G NR	3300~3600	N78	Integrated Omni
SC-701e	TDD 5G NR	3300~3600	N78	External Ant
SC-702	TDD 5G NR	2495~2690	N41	Integrated Omni
SC-702e	TDD 5G NR	2495~2690	N41	External Ant
SC-703	TDD 5G NR	3600~3800	N78	Integrated Omni
SC-703e	TDD 5G NR	3600~3800	N78	External Ant
SC-704	TDD 5G NR	4600~4900	N79	Integrated Omni
SC-704e	TDD 5G NR	4600~4900	N79	External Ant
SC-705	TDD 5G NR	3550~3700	N48	Integrated Omni
SC-705e	TDD 5G NR	3550~3700	N48	External Ant

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Antenna Patterns



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