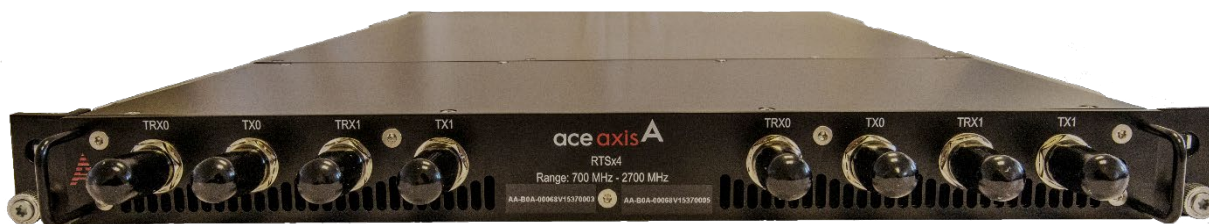


4G Test Radio



Product Features

- 400MHz to 6GHz frequency range
- FDD/TDD support
- 4x4 MIMO
- Class leading RF timing alignment for OTA test
- Millimetric ready
- 100Mhz instantaneous bandwidth
- TX output power 0dBm (400-2700MHz)
- TX output power -10dBm (2700-5500MHz)
- TX output power -15dBm (5500-5925MHz)
- Support for CPRI V4.2
- CPRI line rates 1-8 supported
- Ambient temperature range 5-50 degree C
- RF connectors N-Type
- Low power consumption typical < 80W
- Product Weight 12Kg

Specification	Value
Bandwidth	50 MHz
Frequency range	400-6000MHz
Operating mode	FDD/TDD
Number of Tx/Rx paths	2x2 MIMO
Digital baseband I/F	CPRI V4.2
Clock reference	Recovered from CPRI line rate
Ambient temperature range	5-50C
Module RF connectors	SMA
Power meters	Tx and Rx power meters located at the antenna
Calibration	Continuous compensation of quadrature (IQ) imbalance
PSU Spec	100-240 VAC, 50-60 Hz; 80W Replaceable or resettable fuse Input: IEC-C14

Fibre Optic interface Specifications

Specification	Value
Operating mode	RE (CPRI slave)
Line Rate	Rate 1 (0.6144Gbps) to Rate 8 (10.1376 Gbps)
Number of AxC	Currently 2 (extended to 4 in future)
Sample rate	Fixed at 30.72Msps
Sample format	15bit, Signed
IQ mapping	I and Q samples are reversed and bit interleaved
Mapping method-3: backwards compatible (section 4.2.7.2.7 of CPRI spec V4.2)	
With 2 AxC, 16 AxC samples (8 x AxC0 + 8 x AxC1) are packed into the first half of the CPRI basic frame (480bits). The second half is empty	
Tunneled Ethernet	Fast C&M plane to tunnel ethernet packets for control of the RF card
Loopback	CPRI loopback (unpack-repack) used for running BBU FPGA BIST
SFP + Module BiDi	Bi-directional: SFP's are not supplied with this product
Fiber Optic Cable	Simplex LC single mode Fibre wave length: 1310nm Fibre type: 9/125nm

Physical/Environmental and Electrical Specifications

Specification	Value
Height	1U
Depth	630mm
Weight/Mass	12KG including removable rails (with no packaging)
Top Lid	Split lid to protect RF modules when splitters/circulators are added
19" Rack connection	Tool-less rack supplied with product Rail range: Min=660mm; Max= 800mm
Front Panel	8 x N-type RF connectors, female (4 x Rx, 4 x Tx) to SMA, female (internal connector) Center-Center Spacing: > 38mm LED Panels: see Requirements section for details
Rear Panel	1 x SFP ports (bidirectional CPRI), 2x Ethernet Power Input: IEC-C14 Ground Lug with bolt/washer or equivalent
Metalwork Colour	Powder Coat: RAL 7021 LT BLACK

Transmit Specifications

Specification	Value
Tx power (OFDM)	0dBm
Tx Max. power (CW)	≥ 10 dBm
Tx power meter	Wideband power @ antenna
Tx gain range	>40 dB
Tx gain accuracy	0.25dB
Passband ripple	$< \pm 1$ dB
Tx spurious emissions	< -45 dBm
EVM	$< 2\%$ (64 QAM @ Max Power)
Noise power density	< 133 dBc/Hz @ 10Mhz offset
Tx to Tx isolation	> 50 dB
Tx to Rx isolation	> 60 dB
DAC	16bit

Receive Specifications

Specification	Value
Rx power max. (no damage)	30dBm
Rx power meter	Wideband power @ antenna
Noise figure	≤ 5 dB
Rx gain range	60dB
Rx gain accuracy	0.25dB
Spurious emissions	< -45 dBm
Pass band ripple	$< \pm 1$ dB
ADC	14bit
Average EVM	$< 2\%$, 64 QAM @ -30.... 0dBm

Ordering Information

A36XX4X7002000105M-1 – 700MHz to 2.7GHz Radio (Narrowband variant)

A38XX4X4005600112M-0 – 400MHz to 6GHz Radio