

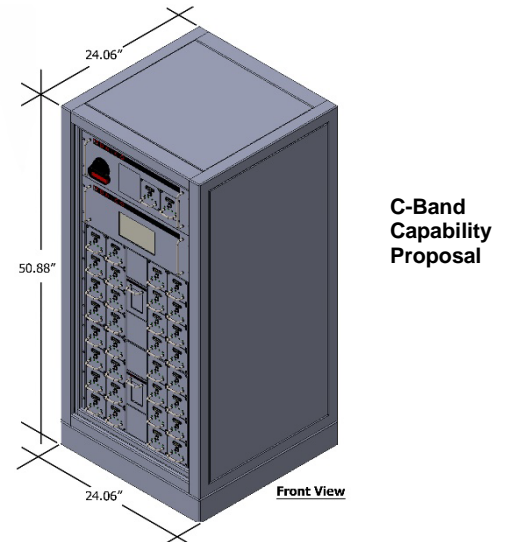
FEATURES

Innovative (m+n)ART™ Architecture HPA
 GaN Solid State Technology
 Frequency Range: 5.4 – 5.8GHz C-Band
 Nominal Output Peak Power: 80kW Min
 Graceful Operation: 60kW Min
 Power Gain: 79 dB Nominal at 0dBm Input
 Pulse Operation: 550uS and 6% Max
 Output Survivability: ∞ VSWR
 RF Output Interface: Waveguide
 Transmitter Efficiency: 28% Min
 Liquid Cooling Scheme
 Transmitter Availability: 99.99% Min
 Transmitter MTBCF: 80kHrs Min
 Compact DIMs: 24U Standard 19" EIA

DESCRIPTIONS

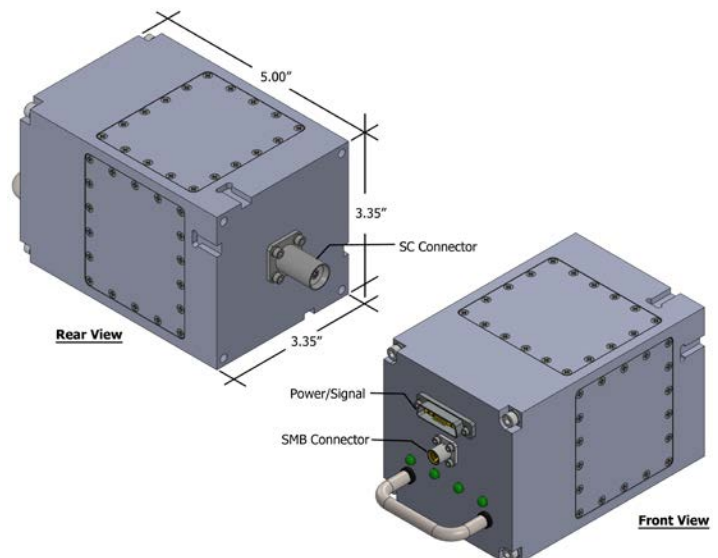
CTX095xx C-Band Solid State Transmitter (SSTx) utilizing Daico proprietary (m+n)ART Transmitter Architecture, is a proposed custom designed high power transmitter that shall be capable of delivering 80kW peak power at 5.4-5.8GHz frequency range for ground-based Radar application. It successfully implemented Daico's proprietary (m+n)ART technology into a high power amplifier (HPA), so that the HPA is a ultra-reliable LRU in the SSTx. Combining of multiple of such reliable HPA achieves dozens of kW reliably. This uniquely configured (m+n)ART transmitter supports the mission critical operation with proper preventive and corrective maintenances and demonstrates unprecedented availability, reliability, and maintainability.

CTX095xx is a reliable high power entity consisting of a total of thirty-two (32) identical ultra-reliable 2.4kW Power Amplifier Units (PAUs), in which the redundant Basic Amplifier Module (BAM) is contained. The innovative PAU shall be able to operate in nominal power or degraded power level with one or more failed BAMs. The PAU is designed utilizing Daico proprietary SSPA architecture and embedded with advanced GaN solid state technology. This SSTx architecture features automatic failover and graceful power degradation. The proposed CTX095xx SSTx does not include the primary power supply which shall reliably converts the primary AC to the +50VDC to the PAUs.



APPLICATIONS: C-Band Radar Transmitter

INNOVATIVE 2.4kW (m+n)HPA



MAJOR SPECIFICATIONS

SSTx Parameter	Proposed Specification
Peak Power	60 to 80kW (47.8 – 49.0dBW)
Duty Cycle Maximum	6%
Frequency Range	5.4 to 5.8 GHz
Pulse Width Minimum	0.1uS
Pulse Width Maximum	550uS
Maximum Pulse Droop	1dB over 550uS pulse
RF Input	0dBm Pulse
Video Input	EIA 422 signal, leading the RF pulse by 200-300nSec
Input AC Power	3 Phase 120/208 VAC, 60Hz