



Air Traffic & Surveillance Radar Products

Key for efficient and safe commercial and military aviation



HIGH-POWER VED TRANSMITTERS

S-Band
C-Band

SOLID-STATE GaN POWER AMPLIFIERS

S-Band
X-Band

MAGNETRONS

L-Band Ku-Band
S-Band Ka-Band
X-Band

KLYSTRONS

S-Band
C-Band

RECEIVER PROTECTORS & LIMITERS

S-Band Ku-Band
X-Band Ka-Band



Radar Products For Air Traffic and Surveillance

S-, C-Band High-Power Transmitters

- Transmitter cabinet with 350 W peak output power
- Frequency range: 5.8 to 6.7 GHz



S-Band GaN High-Power Transmitters

- Transmitter cabinet with 12 kW minimum peak output power
- Soft fail by virtue of power combining
- Full redundancy
- >160 dB of power attenuation available
- Designed for ATC shelter applications



S-Band GaN High-Power SSPAs

- 1.3 kW pulsed modules that can be power combined for higher peak power output
- Internal processor with BIT monitoring
- Self protecting



X-Band GaN High-Power SSPAs

- Frequency range: 9.0 to 10.0 GHz
- BIT and controls via EIA-422 remote
- 1 kW and 1.8 kW pulsed modules at 10% duty
- Up to 12 kW when power combined



Key features of air traffic and surveillance radar products

- BIT and controls via EIA-422 remote connection
- Built-in VSWR protection
- Compliant to NTIA regulatory requirements
- Provide high gain
- Excellent pulse fidelity with low AM/PM, phase-noise and spectral regrowth performance
- Easy to maintain

Check out
all our air traffic
and surveillance
radar products at
www.cpii.com

Reliability and Innovation



Check out all CPI weather radar products at www.cpii.com



Klystron Weather Radar Transmitters

- S-, C-, and X-Band transmitters
- Excellent stability and performance
- Tunable
- Up to 1 MW peak output power
- Forced-air cooled
- Touch screen with local/remote control
- Ethernet connectivity for remote monitoring and control

Magnetron Weather Radar Transmitters

- S-, C-, and X-Band transmitters
- Sheltered or outdoor models
- Forced-air cooled
- Touch screen with local/remote control
- Ethernet connectivity for remote monitoring and control
- Excellent Doppler performance
- Mechanically tunable frequency

CPI Electron Device Business is the world's largest producer of coaxial magnetrons, klystrons and receiver protectors. With our experience and product breadth, we can support most new and existing weather radar systems.

CPI EDB is uniquely positioned to deliver either individual microwave components or complete transmitters, based on each customer's needs. Each transmitter provides a wide range of output power options along with custom user interfaces and remote networking capability.



Weather Radar Products

With a history of producing high-power, high-quality products, CPI can help you with your weather radar products.

Contact us at ElectronDevices@cpii.com or at call us at +1 978-922-6000

Klystrons

Typical Operating Parameters

Band	Frequency (GHz)	Peak Power
S-Band	2.7 to 2.9	800 kW
C-Band	5.45 to 5.65	200 kW to 1 MW

Magnetrons

Typical Operating Parameters

Band	Frequency (GHz)	Peak Power	Duty Cycle
S-Band	2.7 to 2.9	800 kW	Various
C-Band	5.45 to 5.65	200 kW to 1 MW	Various
X-Band	8.5 to 9.6	250 kW	Various

Receiver Protectors and Limiters

Typical Operating Parameters

Band	Peak Power	Average Power	Insertion Loss	Recovery Time	Flat Leak	Spike Leak
S-Band	Up to 1.25 MW	Up to 10 kW	<0.8 dB	<1 μ s	<50 mW	<250 mW
C-Band	Up to 1.25 MW	Up to 900 kW	<1.0 dB	<1 μ s	<50 mW	<250 mW
X-Band	Up to 300 kW	Up to 300 kW	<1.0 dB	<1 μ s	<50 mW	<250 mW

Transmitters

Typical Operating Parameters

Band	Frequency (GHz)	Peak Power	Average Power
S-Band	2.7 to 3.0	850 to 1000 kW	2 kW
C-Band	5.6 to 5.65	250 to 1000 kW	0.6 to 2 kW
X-Band	9.4 to 9.6	300 kW	0.3 kW



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For more detailed information, please refer to the corresponding CPI technical description if one has been published, or contact CPI. Specifications may change without notice as a result of additional data or product refinement. Please contact CPI before using this information for system design.

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