



Frequency Converters and Transceivers

Open-Architecture Microwave Transceivers



Our microwave OpenVPX™ and VME transceivers provide cutting edge performance in convenient 3U and 6U form factors and are optimized to seamlessly integrate with our line of digital IF transceivers. From electronic warfare to beam steering, these ruggedized microwave modules are equipped to support your toughest application.

Model Number	Description	Channels	RF (GHz)	IF (GHz)	Gain (dB)	Noise Figure (dB)	IP3 (dBm)	Tuning Speed (µs)	Format/size
RFM3101	Wideband transceiver	1 up / 1 down	6 – 18	1.375 – 2.375	20	14 dB (typical)	30 (up convert OIP3)	25	3U OpenVPX OpenRFM
RFM3102	Wideband tuner	2 down	6 – 18	1.375 – 2.375	20	14 dB (typical)	30 (OIP3)	25	3U OpenVPX OpenRFM
RFM1802 with ADV1800 Synthesizer	Wideband tuner	2 down	0.5 – 18	Narrow Band: 0.12 - 0.20 Wide Band: 0.75 - 1.25	22	13 dB (typical)	0 (IIP3)	3	6U VME

High-Performance Rackmount Converters

Our 19-inch rackmount converters offer RF performance up to 40GHz with a 2GHz IBW. With an agile IF architecture, modular design approach and ultra-broadband performance these products are tailored to support your next EW, SIGINT or ELINT application.



- Frequencies up to 40 GHz
- Instantaneous bandwidth up to 2 GHz
- Agile, tunable IF available
- Ethernet control interfaces

Product Series	Converter Type	Tune Freq, Max	IF Center	IBW	Search Capable
RFT-3100	Downconverter	40 GHz	1.0 or 1.5 GHz	up to 2 GHz	Yes
RFT-4100	Upconverter	40 GHz	1.0 or 1.5 GHz	up to 2 GHz	Yes
RFT-5100	Up/Down Converter	40 GHz	1.0 or 1.5 GHz	up to 2 GHz	Yes
RFT-3200	Agile IF Downconverter	40 GHz	Tunable, up to 2 GHz	Selectable, 5 BW's to 2 GHz	Yes
RFT-4200	Agile IF Upconverter	40 GHz	Tunable, up to 2 GHz	Selectable, 5 BW's to 2 GHz	Yes
IFAT-8000	Up/Down Converter	8 GHz	Tunable, up to 8 GHz	Selectable, 5 BW's to 2 GHz	No
IFAT-8400	Up/Down Converter	8 GHz	Tunable, up to 8 GHz	Selectable, 13 BW's to 2 GHz	No

Rugged ATR Converters



When you need to incorporate modern technology into existing platforms turn to our high-performance ATR converters. These proven products utilize our latest frequency conversion technology while adhering to legacy packaging standards such as half ATR chassis. In addition to the legacy communication protocols, these converters offer modern Ethernet options.

Product Family	Converter Type	Tune Freq, Max	IF Center	IBW	Search Capable
RFT-3300 Series	Downconverter	40 GHz	1.0 or 1.5 GHz	up to 2 GHz	Yes
RFT-4300 Series	Upconverter	40 GHz	1.0 or 1.5 GHz	up to 2 GHz	Yes
RFT-5300 Series	Up/Down Converter	40 GHz	1.0 or 1.5 GHz	up to 2 GHz	Yes
RFT-3400 Series	Agile IF Downconverter	40 GHz	Tunable, up to 2 GHz	Selectable, 5 BW's to 2 GHz	Yes
RFT-4400 Series	Agile IF Upconverter	40 GHz	Tunable, up to 2 GHz	Selectable, 5 BW's to 2 GHz	Yes

Digital IF Transceivers

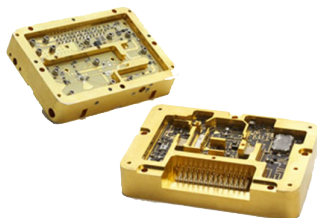


Our EnsembleSeries™ IF processing and direct conversion solutions enable the real-time digitization and processing of complex signals. We integrate the most advanced ADC, DAC and FPGA technology in 3U and 6U OpenVPX™ modules to create a product portfolio to support applications such as electronic warfare, spectrum monitoring and digital beam steering.

Model Number	Processor	Memory	ADC Channels	DAC Channels	Format/size
DCM3110	Kintex® Ultrascale™ KU115 FPGA	4GB DDR4	2 12-bit, 3.0 GSPS	2 12-bit, 3.0 GSPS	3U OpenVPX (VITA 65)
DCM6111	3 Kintex® Ultrascale™ KU115 FPGAs	18GB DDR4	2 12-bit, 2.5 GSPS	2 12-bit, 3.0 GSPS	6U OpenVPX (VITA 65)
DCM6112	3 Kintex® Ultrascale™ KU115 FPGAs	16GB DDR4	4 12-bit, 3.2 GSPS	4 12-bit, 3.2 GSPS	6U OpenVPX (VITA 65)
DCM6212	3 Kintex® Ultrascale™ KU115 FPGAs	16GB DDR4	2 12-bit, 6.4 GSPS	2 12-bit, 6.4 GSPS	6U OpenVPX (VITA 65)

Custom Frequency-Conversion Subassemblies

- Frequency coverage 10MHz to 110GHz
- Super-heterodyne, image/LO reject, and sub-harmonic topologies
- Automatic Gain Control (AGC) and Built-in-Test (BIT)
- Embedded micro-controller capability



At Mercury Systems we are specialists in the design and manufacture of custom integrated microwave assemblies (IMAs)—including high-performance microwave transceivers. Through substantial R&D investment and a library of building blocks, we have the capability to rapidly execute on the most complicated of transceiver designs. As an OpenVPX industry leader, we know how to make integration into your system a breeze.

Frequency Converter Product Families:

- Block Up-Converters (BUC): Custom products available by integrating our up-converters and power amplifiers
- Low Noise Blocks (LNB): Custom products available by integrating our down-converters and low noise amplifiers
- Transceivers: Custom designs by combing up/down converters with additional components such as PLL and digital control

Need a Detailed Datasheet? Need a Customized Solution?

Contact Mercury's RF & Microwave engineering team at rf.microwave@rcy.com or visit www.rcy.com/rf for a detailed listing of RF and Microwave products.