

# All-Standard 0-3GHz Modulator for PCI Express

- Fully agile from 32 to 3225MHz
- The ultimate test modulator in your lab
- Accurate GPS and card-to-card sync

## FEATURES

- High-end modulator for cable, terrestrial and satellite TV testing.
- Generate arbitrary RF waveforms using precomputed I/Q sample playback.
- Produce RF signals with calibrated power levels over a wide frequency range.
- Synchronization to a 10MHz/1pps timing reference source with exceptional accuracy.
- Simultaneous starting of multiple boards with sub-nanosecond precision.
- All-digital design for highest signal quality.
- Channel simulator with multipath echo and AWGN white noise addition.
- Free Windows and Linux SDK (DTAPI).



## APPLICATIONS

- Lab modulator for ATSC 3.0, DVB-T2, etc.
- SFN and multi-antenna transmission.
- GPS/GNSS simulators.

## KEY ATTRIBUTES

Parameter		Value
Main output	Connector	50Ω SMA female
	Level min	-90dBm
	Level max	-2 .. -12dBm*
	Step size	0.1dB
Monitor output	Connector	75-Ω F female
	Level	-45dBm
10MHz/1pps input	2x 50Ω SMA female	
Frequency range	32 .. 3225MHz	
I/Q sample rate	0.1 .. 125Msps	
Bandwidth	100MHz (max)	
Transmit MER	50dB (typ)	
Phase noise	< -115dBc @ 10kHz	
PCI Express	PCIe gen3 x4	
OS	Win 10, 11; Linux ≥4.14	

\* The maximum output level is dependent on the carrier frequency and the modulation type (single-carrier or multi-carrier OFDM).  
For detailed specification, please consult the DTA-2116 datasheet.

## MODULATION STANDARDS

Standards
ATSC 1.0, ATSC-M/H*, ATSC 3.0*, CMMB*, DAB(+)*, DRM(+)*, DMB-T/H*, DVB-C, DVB-C2*, DVB-CID, DVB-S, DVB-S2, DVB-S2X*, DVB-T, DVB-T2 single PLP, DVB-T2 multi PLP*, I/Q samples*, ISDB-S*, ISDB-S3*, ISDB-T*, QAM-B (J.83 Annex B), QAM-C, T-DMB*

\* Option

## ORDERING INFORMATION

Type	Description
DTA-2116-SP	All standard 0-3GHz modulator for PCIe with <b>StreamXpress®</b>
DTA-2116-GOLD	DTA-2116-SP with all options
DTC-378-A3	ATSC 3.0 modulation option
DTC-371-IQ	I/Q sample payout option
DTC-378-T2	Full DVB-T2 modulation option

Please refer to [www.dektec.com](http://www.dektec.com) for a complete list of modulation options, latest pricing and a list of distributors and resellers.