Managed Bidirectional VSAT Distribution System

The final product may vary from the above image depending on the options selected.

Products

DEV 2544	1:4/4:1 Managed Bidirectional VSAT Distribution System; 800...2450 MHz
DEV 2588	1:8/8:1 Managed Bidirectional VSAT Distribution System; 800...2450 MHz

Features

- Active Rx Splitter and Tx Combiner in a compact 19" 1 RU Chassis
- Impedance / Connector Options for Splitter Output / Combiner Input Ports
- 10 MHz Reference Source external or internal (Option)
- BUC Powering Option (24 V or 48 V) with Current Monitoring
- LNB Power with Current Monitoring, switchable 13/18 V and 22 kHz Tone
- Variable Gain
- Variable Slope
- RF Sensing
- SNMP Support
- DEV Web Interface
- Signal Recording Option

Technical Data

DEV 2544 1:4/4:1 Managed Bidirectional VSAT Distribution System; 800...2450 MHz
DEV 2588 1:8/8:1 Managed Bidirectional VSAT Distribution System; 800...2450 MHz

Note that it is mandatory to select product version options to specify the connector configuration of the product, please refer to the Order Information section

	Rx Section	Tx Section
Capacity		
Type of Splitter/Combiner	DEV 2544: 1:4 Splitter DEV 2588: 1:8 Splitter	DEV 2544: 4:1 Combiner DEV 2588: 8:1 Combiner
RF Specifications		
Frequency Range	800...2450 MHz	
Impedance, Connectors	for all 50 Ohm Ports: 50 Ohm, SMA (f) or 50 Ohm, BNC (f) for all 75 Ohm Ports: 75 Ohm, precision F (f) or 75 Ohm, BNC (f)	
Damage Level	+10 dBm	
Nominal Input Level	-10 dBm	-10 dBm (aggregated Power)
Return Loss	>14 dB	
Amplifier Gain Variation	DEV 2544: -15…15±0.5 dB DEV 2588: -15…11±0.5 dB	
Variable Slope	0…5 dB	
Insertion Loss	0±1.5 dB	
Flatness	±1 dB (800…2450 MHz) ±0.25 dB (in any 36 MHz Interval)	
Isolation between Out-/Input Ports	>25 dB	
Intermodulation Distortion	<-40 dBc (two Tones @ -13 dBm)	
Group Delay Distortion	<0.5 ns (in any 36 MHz Interval)	
Noise Figure	<13 dB	<25 dB
Monitoring Port(s)		
Impedance, Connector	50 Ohm, SMA (f)	
Return Loss	>14 dB	
Frequency Response	Input Level -20±3 dB	DEV 2544: Input Level -28±3 dB DEV 2588: Input Level -32±3 dB
LNB Power & Current Monitoring @ Rx Input		
Voltage and Tone Control	13 V, 18 V and 0 Hz, 22 kHz	
LNB Power	max. 380 mA	
Adjustable Level Setting:		
• Upper Alarm Level	• max. 380 mA	
• Lower Alarm Level	• min. 50 mA	
RF Sensing		
Adjustable Threshold Level	0 dBm > Threshold Level > -50 dBm	
Threshold Level Accuracy	±3 dB	
Threshold Repeatability	<0.5 dB	
10 MHz Reference		
10 MHz Reference Source	External or internal (Option)	
External 10 MHz Input Connector	75 Ohm, BNC (f)	
Remote Communication		
Interface (Connector)	Ethernet (RJ-45)	
Remote Control & Surveillance (Interface)	• via Web Interface (Ethernet) • via SNMP (Ethernet)	
Power Supply		
Supply Voltage	100…240 V AC	
Power Consumption	<35 VA (without optional BUC power source)	

Technical Data (cont.)

General Specifications	
Size	19" (483 mm) Width, 1 RU (44 mm) Height, ~260 mm Depth
Weight	~2.5 kg
Environmental Conditions	ETS 300019 Part 1-3 Class 3.1E

Option 10MHzRef Internal 10 MHz Reference

- With this option, the product is equipped with a 10 MHz reference source.

RF Specifications	
Frequency	10 MHz ±1 ppm, ±10 Hz
Output Level	-3.5 ±2 dBm (Tx & Rx ports terminated) -3.5 ±3 dBm (all conditions)
Internal Reference & Output Type	10 MHz Sine Wave Ovenized Crystal Oscillator
Harmonic	-25 dBc
Spurious	-75 dBc
Frequency Stability Over Temperature	±20 ppb (0…+55 °C)
Reference Source Ageing	±100 ppb/year ±1 ppb/day
Reference Source Phase Noise	<-65 dBc/Hz @ 1 Hz <-95 dBc/Hz @ 10 Hz <-120 dBc/Hz @ 100 Hz <-140 dBc/Hz @ 1 kHz <-150 dBc/Hz @ 10 kHz
Warm Up Time	<2 minutes @ 25 °C to within <±100 ppb
Initial Accuracy	±0.3 ppm @ 25 °C after turning on power 15 ±1 minutes

Option 30dB 30 dB Gain

- With this option, the product provides an increased gain range of 30 dB.

RF Specifications	
Nominal Input Level	-35 dBm
Amplifier Gain Variation	0…30±0.5 dB

Option 77 Signal Recording

With applied Option 77, the Web Interface additionally provides the Recording Window that permits the visualization and the external storage of amplifier signal data.

Option BUC24 BUC Power 24 V
Option BUC48 BUC Power 48 V

- With Option BUC24 or Option BUC48, the Tx output port is capable to deliver BUC power provided by an internal BUC power source.

BUC Voltage, Output Power [1]	Option BUC24: 24 V DC, 90 W @ 50 °C, 100 W @ 30 °C Option BUC48: 48 V DC, 90 W @ 50 °C, 100 W @ 30 °C

Note 1: For the specified output power, the minimum supply voltage is 120 V AC

Order Information

Products

DEV 2544	1:4/4:1 Managed Bidirectional VSAT Distribution System; 800...2450 MHz
DEV 2588	1:8/8:1 Managed Bidirectional VSAT Distribution System; 800...2450 MHz

Product Version Options

The impedance and the RF connectors of the product can be configured very flexible.
Thus for ordering a product, it is mandatory to specify
a) one of the following options for the external reference input port (10 MHz input port),
b) one of the following options for the input port of the splitter (Rx input port),
c) one of the following options for the output port of the combiner (Tx output port),
d) one of the following options for the splitter output ports (Rx output ports), and
e) one of the following options for the combiner input ports (Tx input ports)

a) External Reference Input Port Options (10 MHz input port)

Option vRef50	External Reference Input Port 50 Ohm, SMA (f)
Option vRef50B	External Reference Input Port 50 Ohm, BNC (f)
Option vRef75	External Reference Input Port 75 Ohm, F (f)
Option vRef75B	External Reference Input Port 75 Ohm, BNC (f)

b) Splitter Input Port Options (Rx input port)

Option vSin50	One Splitter Input Port 50 Ohm, SMA (f)
Option vSin50B	One Splitter Input Port 50 Ohm, BNC (f)
Option vSin75	One Splitter Input Port 75 Ohm, F (f)
Option vSin75B	One Splitter Input Port 75 Ohm, BNC (f)

c) Combiner Output Port Options (Tx output port)

Option vCout50	One Combiner Output Port 50 Ohm, SMA (f)
Option vCout50B	One Combiner Output Port 50 Ohm, BNC (f)
Option vCout75	One Combiner Output Port 75 Ohm, F (f)
Option vCout75B	One Combiner Output Port 75 Ohm, BNC (f)

d) Splitter Output Ports Options (Rx output ports)

for DEV 2544:

Option vSout50 [1]	Four Splitter Output Ports 50 Ohm, SMA (f)
Option vSout75 [2]	Four Splitter Output Ports 75 Ohm, F (f)

for DEV 2588:

Option vSout50	Eight Splitter Output Ports 50 Ohm, SMA (f)
Option vSout50B	Eight Splitter Output Ports 50 Ohm, BNC (f)
Option vSout75	Eight Splitter Output Ports 75 Ohm, F (f)
Option vSout75B	Eight Splitter Output Ports 75 Ohm, BNC (f)

e) Combiner Input Ports Options (Tx input ports)

for DEV 2544:

Option vCin50 [1]	Four Combiner Input Ports 50 Ohm, SMA (f)
Option vCin75 [2]	Four Combiner Input Ports 75 Ohm, F (f)

for DEV 2588:

Option vCin50	Eight Combiner Input Ports 50 Ohm, SMA (f)
Option vCin50B	Eight Combiner Input Ports 50 Ohm, BNC (f)
Option vCin75	Eight Combiner Input Ports 75 Ohm, F (f)
Option vCin75B	Eight Combiner Input Ports 75 Ohm, BNC (f)

Note 1: For the DEV 2544, Option vSout50 can be combined with Option vCin50 only
Note 2: For the DEV 2544, Option vSout75 can be combined with Option vCin75 only

Other Options	
Option 10MHzRef	Internal 10 MHz Reference
Option 30dB	30 dB Gain
Option 77	Signal Recording
Option BUC24 [1]	BUC Power 24 V
Option BUC48 [1]	BUC Power 48 V

Note 1: Either Option BUC24 or Option BUC48 can be selected

Order Examples

DEV 2544 with all ports in 75 Ohm, F(f); with internal 10 MHz Reference and with 24 V BUC power source

- DEV 2544
- Option vRef75
- Option vSin75
- Option vCout75
- Option vSout75
- Option vCin75
- Option 10MHzRef
- Option BUC24

DEV 2588 with external 10 MHz reference signal input port, splitter input port, and combiner output port in 75 Ohm, F(f); with splitter output ports in 50 Ohm, SMA (f); with combiner input ports in 75 Ohm, BNC (f); and with 48 V BUC power source

- DEV 2588
- Option vRef75
- Option vSin75
- Option vCout75
- Option vSout50
- Option vCin75B
- Option BUC48

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