TELESTE AC NODE SPECIFIC MODULES

AC 6310

Power supply module for Teleste AC8000 and AC8800 optical nodes.

- Can work alone or it can be operated parallel to split the work load and create the redundancy system for internal power feeding
- Installed inside at the lid of the optical node
- Output voltage monitored by the EMT module

SPECIFICATIONS		
Input voltage	V	27…65 AC / 35…90 DC
Output voltage 1	V	24 DC
Output voltage 2	V	12 DC
Output current 1	mA	1400
Output current 2	mA	900
Max. output power	W	40
Ripple voltage 20 Hz < f < 1 kHz	mV	< 20 p-p
Efficiency		> 81 % (Vin > 35 VAC)
Operating temperature	°C	- 40…+ 55 °C (for the AC8000)
EMC		EN 50083-2
Safety		EN 50083-1
Dimensions HxWxD	mm	95 x 95 x 25

AC 6311

AC6311 is a lid with one 65 VAC power supply for Teleste AC8000/8800 optical platform.

- Allows quick and easy installation. No special tools required.
- Includes one power supply unit (PSU).
- Includes all important materials, like cable and labels

SPECIFICATIONS		
Input voltage	V	27…65 AC / 35…90 DC
Output voltage 1	V	24 DC
Output voltage 2	V	12 DC
Output current 1	mA	1400
Output current 2	mA	900
Max. output power	W	40
Ripple voltage 20 Hz < f < 1 kHz	mV	< 20 p-p
Efficiency		> 81 % (Vin > 35 VAC)
Operating temperature	°C	- 40…+ 55 °C (for the AC8000)
EMC		EN 50083-2
Safety		EN 50083-1
Dimensions HxWxD	mm	222 x 258 x 84

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AC 6312 POWER SUPPLY

AC6312 is a lid with two 65 VAC power supplies for Teleste AC8000/8800 optical platform.

- Includes a double power supply unit (PSU)
- Allows quick and easy installation. No special tools required.
- Includes all important materials, like cable and labels

SPECIFICATIONS		
Input voltage	V	27...65 AC / 35...90 DC
Output voltage 1	V	24 DC
Output voltage 2	V	12 DC
Output current 1	mA	1400
Output current 2	mA	900
Max. output power	W	40
Ripple voltage 20 Hz < f < 1 kHz	mV	< 20 p-p
Efficiency		> 81 % (Vin > 35 VAC)
Operating temperature	°C	- 40...+ 55 °C (for the AC8000)
EMC		EN 50083-2
Safety		EN 50083-1
Dimensions HxWxD	mm	222 x 258 x 84

AC 6315 POWER SUPPLY

AC6315 is a power supply unit for Teleste AC8800 optical nodes.

- Can work alone or it can be operated parallel to split the work load and create the redundancy system for internal power feeding
- Installed inside at the lid of the optical node
- Output voltage monitored by the EMT module

SPECIFICATIONS		
Input voltage	V	40...90 AC
Output voltage 1	V	24 DC
Output voltage 2	V	12 DC
Output current 1	mA	1400
Output current 2	mA	900
Max. output power	W	40
Ripple voltage 20 Hz < f < 100 kHz	mV	< 20 p-p
Efficiency		> 81 % (Vin > 35 VAC)
Operating temperature	°C	- 40...+ 55 °C (for the AC8000)
EMC		EN 50083-2
Safety		IEC60728-11
Dimensions HxWxD	mm	95 x 95 x 25

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AC 6316

65 VAC power supply kit for Teleste's AC9000 optical node.

- Can be operated alone or parallel to split the work load and create the redundancy system for internal power feeding
- Output voltage will be monitored by the EMT module

SPECIFICATIONS		
Input voltage	V	40...90 AC
Output voltage 1	V	24 DC
Output voltage 2	V	12 DC
Output current 1	mA	2700
Output current 2	mA	1800
Max. output power	W	76
Ripple voltage(p to p) @ 20 Hz < f < 100 kHz	mV	< 20
Efficiency		> 82%
Active PFC		Power factor >0.98
Operating temperature	°C	- 40...+ 55 °C (for the AC9000)
EMC		EN 50083-2
Safety		EN 50083-1

AC 6317 POWER SUPPLY

AC6317 is a power supply unit for Teleste AC9000 and AC9100 optical nodes.

- PSU can work alone or it can be operated parallel to split the work load and create the redundancy system for internal power feeding
- Output voltage monitored by the EMT module

AC 6319 POWER SUPPLY

AC6319 is a lid with 230 VAC power supply to be used in AC8800/8710 optical platform.

- Allows quick and easy installation
- No need for special tools or skills to install
- All important materials, like cable and labels, are included

SPECIFICATIONS		
Input voltage	V	198...264 AC
Output voltage 1	V	24 DC
Output voltage 2	V	12 DC
Output current 1	mA	1400
Output current 2	mA	900
Max. output power	W	40
Ripple voltage (p to p) @ 20 Hz < f < 100 kHz	mV	< 20
Efficiency		> 80 %
Operating temperature	°C	- 40...+ 55 °C (for the AC8000)
Storage temperature range	°C	30...+ 70
EMC		EN 50083-2
Safety		IEC60728-11

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AC 6471 SWITCHING MODULE WITH TP

This product is used in AC8800 optical node instead of normal switching module AC6470. At the output there is a test point connection. Out coming signal of optical receiver can be measured there before mid-stage slope and gain controls. AC8800 software must have a version 1.4.0 when this product is used. Adapter cable (SMB=>f) BFB015 is available.

AC 657X

WDM filters for optical nodes.

AC6570 features:

- WDM (wavelenght division multiplexing) filter for optical nodes in Teleste's AC and CX product families
- Bidirectional module that divides and combines 1310 nm and 1550 nm wavelength windows when downstream and upstream signals travel in the same fibre
- Will be installed into the fibre organiser of a node

AC6572 features:

- Wideband high isolation WDM filter for optical nodes in Teleste's AC and CX product families
- Bidirectional module that divides and combines 1310 nm and 1550 nm wavelength windows
- Supports CWDM applications in both 1310 and 1550 nm windows
- Is recommended to be used when more than one wavelength travel into the same direction in the same fibre
- Will be installed into the fibre organiser of a node

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AC 6610

Fibre optic receiver module with -7-0 dBm input level for Teleste's ACcess platform.

AC6610 has been designed for the optical nodes in Teleste's ACcess platform. Performance and features of the AC6610 have been designed for the fibre to the curb and for the fibre to the building (FTTC/ FTTB) applications.

- Wide input power window with ALC function
- Low noise
- Low power consumption
- Output level adjustment
- Optical input power indicator
- Available also with integrated fibre organiser (AC6610B)
- Optical input power monitoring
- Signal level adjustment
- Module identification

SPECIFICATIONS		
Light wavelength	nm	1290…1600
Optical input power	dBm	-7…0
Frequency range	MHz	47…1000
Output level	dBµV	72.5
Output level adjustment	dB	20
Flatness	dB	±0.5
Slope	dB	0
Noise current density	pA/√Hz	5.5
CTB		Adequate
CSO		Adequate
GENERAL		
Supply voltage	V	12 / 110 mA
Power consumption	W	1.3
EMC compatibility		EN 50083-2
Operating temperature range	°C	-40…+55
Storage temperature range	°C	-30…+70
Dimensions H x W x D	mm	75 x 62 x 18
Weight	g	90
Input connector		SC/APC, FC/APC or E-2000

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AC 67XX

Transmitter modules with +3 dBm or +6 dBm output power.

AC6741…AC6762 products are CWDM DFB laser transmitter modules for the return path applications of AC node. AC6740 is a FP laser transmitter module. DFB lasers are available in two optical output power categories.

- Two optical output power classes: standard and high
- Pilot generator for OMI reference
- OMI test point
- Temperature compensated and calibrated OMI
- Available fibre pigtail and adapter models (AC67 and AC67B)
- Laser bias current monitoring
- Pilot signal on/off selection
- Pilot frequency selection
- Frequency pass band selection
- Module identification

SPECIFICATIONS		
Light source		FP or DFB laser
CENTRE WAVELENGTH		
FP or DFB	nm	1310
DFB	nm	1430 1450 1470 1490 1510 1530 1550 1570 1590 1610
Wavelength temperature coefficient	nm/°C	0.1
SPECTRAL WIDTH		
FP	nm	2
DFB	nm	0.3
OUTPUT POWER		
FP	dBm	+1
DFB	dBm	+3 or +6
Frequency range	MHz	5…65 or ..85 or ..204
Input return loss	dB	20
Flatness	dB	±0.5
INPUT LEVEL		
AC8700	dBµV	57
AC8710	dBµV	57
AC8800	dBµV	62
AC9000	dBµV	57
AC9100	dBµV	57
ACE8	dBµV	57
Pilot frequency	MHz	5.5 or 6.5 or no pilot
Pilot OMI		4 %
RELATIVE INTENSITY NOISE		
FP	dBc/Hz	130
DFB	dBc/Hz	145
3rd order distortion	dB	60
2nd order distortion	dB	55
GENERAL		
Supply voltage	V	12 / 115 mA
Power consumption	W	1.5
EMC compatibility		EN 50083-2
Operating temperature range	°C	-40…+55
Storage temperature range	°C	-30…+70
Dimensions	mm	75 x 62 x 18
Weight	g	90
Output connector		SC/APC, FC/APC or E-2000

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AC 7700

Digital CWDM DFB laser transmitter module for Teleste AC9000 node return path applications.

- 18 available wavelengths
- Two return path inputs
- Two RF return paths on one optical carrier
- High optical output power
- Long link span
- Low power consumption
- Laser bias current monitoring
- Module identification

SPECIFICATIONS		
Light source		Uncooled DFB laser with optical isolator
Centre wavelengths available	nm	1270, 1290, 1310, 1330, 1350,1370, 1390, 1410, 1430, 1450, 1470, 1490, 1510, 1530, 1550, 1570, 1590 and 1610
Wavelength temperature coefficient	nm/°C	0.1
Spectral width	nm	0.3
Output power	dBm	+5
Transmission distance	km	75
Number of optical outputs		1
DIGITAL PARAMETERS		
Data rate	Gbps	5 in optical link
Analog to digital conversion	Bits	12
RF PARAMETERS		
Frequency range	MHz	5…65 or 5…85
Input level, AC9000 node	dBµV	60
RF impedance	Ω	75
Input return loss	dB	20
RF test point		See note
Number of RF inputs		2
SYSTEM PARAMETERS		
System consists of AC9000 node with AC7700, HDO272 and 75 km fibre.		
Link gain	dB	37
Flatness	dB	±0.75
CINR peak	dB	49
CINR dynamic range	dB	12 within 40 dB CINR window
Isolation	dB	49
GENERAL		
Supply voltage	V	12 / 340 mA
Power consumption	W	4
EMC compatibility		EN 50083-2
Operating temperature range	°C	-40…+55
Storage temperature range	°C	-30…+70
Dimensions	mm	75 x 62 x 34
Weight	g	130
Output connector		SC/APC, E-2000/APC or FC/APC

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AC 6112 TAP MODULE

AC6112 is a 1.5/12.0 dB tap module with supported frequency range of 5...1006 MHz.

- When used at the input of the amplifier the tap port is connected to the gain circuits and the low loss port (feed through) is connected to the bypass output
- At the output of an amplifier the low loss port is available at Out 1 and tap port at Out 2
- In AC8000 platform, the low loss port at the Out 2 and the tap port at the Out 3

SPECIFICATIONS		
Frequency range	MHz	5...1006
Return loss	dB	20
Through loss attenuation, 50 MHz	dB	0.6
Through loss attenuation, 1000 MHz	dB	1.5
Tap attenuation, 50 MHz	dB	12.0
Tap attenuation, 1000 MHz	dB	12.0
Isolation	dB	> 20

AC 6113 TAP MODULE

AC6113 is a 2.0/8.5 dB tap module with supported frequency range of 5...1218 MHz.

AC 6114 TAP MODULE

AC6114 is a 2/12 dB tap module with supported frequency range of 5...1218 MHz.

SPECIFICATIONS		
Frequency range	MHz	5...1218
Return loss	dB	18
Through loss attenuation, 50 MHz	dB	1.5
Through loss attenuation, 1218 MHz	dB	2.1
Tap attenuation, 50 MHz	dB	12.0
Tap attenuation, 1218 MHz	dB	12.0
Flatness		± 0.5
Isolation	dB	> 20

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AC 6115 TAP MODULE

AC6115 is a 1/16 dB tap module with supported frequency range of 5...1218 MHz.

SPECIFICATIONS		
Frequency range	MHz	5...1218
Return loss	dB	20
Through loss attenuation, 50 MHz	dB	0.5
Through loss attenuation, 1218 MHz	dB	1.0
Tap attenuation, 50 MHz	dB	15.9
Tap attenuation, 1218 MHz	dB	16.1
Flatness		± 0.4
Isolation	dB	> 20

AC 6116 TAP MODULE

AC6116 is a 1.0/16.0 dB tap module with supported frequency range of 5...1006 MHz.

- When used at the input of the amplifier the tap port is connected to the gain circuits and the low loss port (feed through) is connected to the bypass output
- At the output of an amplifier the low loss port is available at Out 1 and tap port at Out 2
- In AC8000 platform, the low loss port at the Out 2 and the tap port at the Out 3

SPECIFICATIONS		
Frequency range	MHz	5...1006
Return loss	dB	20
Through loss attenuation, 50 MHz	dB	0.6
Through loss attenuation, 1000 MHz	dB	1.0
Tap attenuation, 50 MHz	dB	15.8
Tap attenuation, 1000 MHz	dB	16.0
Isolation	dB	> 20

AC 6119 TAP MODULE

AC6119 is a 1.0/20.0 dB tap module with supported frequency range of 5...1006 MHz.

- When used in amplifier input, the tap port is connected to the gain circuits and the low loss port (feed through) is connected to the bypass output
- When used in amplifier output,r the low loss port is available at Out 1 and tap port at Out 2
- In AC8000 platform, the low loss port at the Out 2 and the tap port at the Out 3

SPECIFICATIONS		
Frequency range	MHz	5...1006
Return loss	dB	20
Through loss attenuation, 50 MHz	dB	0.6
Through loss attenuation, 1000 MHz	dB	1.0
Tap attenuation, 50 MHz	dB	20.1
Tap attenuation, 1000 MHz	dB	20.0
Isolation	dB	> 20

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AC 6120 OUTPUT MODULE

AC6120 is a output module with 0 dB attenuation. Supports frequencies up to 1.2 GHz.

- 0 dB jumper module to be used as an output module in AC-platform products
- Connects the signal to the main output (Out 1 in AC-amplifier platforms)

AC 6124 SPLITTER MODULE

AC6124 is a 2 x 4 dB splitter module with supported frequency range of 5...1218 MHz. Used at input or output of optical nodes and amplifiers.

- When used in amplifier input, the tap port is connected to the gain circuits and the low loss port (feed through) is connected to the bypass output
- When used in amplifier output,r the low loss port is available at Out 1 and tap port at Out 2
- In AC8000 platform, the low loss port at the Out 2 and the tap port at the Out 3

SPECIFICATIONS		
Frequency range	MHz	5…1218
Return loss	dB	20
Attenuation, 50 MHz	dB	3.4
Attenuation, 1218 MHz	dB	4.1
Flatness		± 0.4
Isolation	dB	> 20

AC 6128 TAP MODULE

AC6128 is a 2.0/9.0 dB tap module with supported frequency range of 5...1006 MHz.

- When used at the input of the amplifier the tap port is connected to the gain circuits and the low loss port (feed through) is connected to the bypass output
- At the amplifier output, the low loss port is available at Out 1 and tap port at Out 2
- With the AC8000 platform the low loss port is available at Out 2 and the tap port at Out 3

SPECIFICATIONS		
Frequency range	MHz	5…1006
Return loss	dB	20
Attenuation, 50 MHz	dB	1.3
Attenuation, 1000 MHz	dB	2.0
Tap attenuation, 50 MHz	dB	8.6
Tap attenuation, 1000 MHz	dB	8.9
Isolation	dB	> 16

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AC 6223 PASSIVE INGRESS BLOCKER PB F >16 MHZ

This plug-in module is designed to be used in AC-series distribution amplifiers. It filters out the lowest frequency band of the upstream channel. Lower ingress level guarantees the safe operation of the EMS transmission and prevents the overloading of return path laser transmitter.

This module is planned to be placed at the input of upstream signal path instead of input attenuator pad.

AC 6313 POWER SUPPLY KIT

AC6313 is a complete, remote powered 65 VAC power supply kit for Teleste optical nodes and amplifiers.

- Complete kit for replacing the existing PSU with a new one
- Includes all necessary accessories
- Can be used in optical nodes and amplifiers (AC500/AC800/AC810/AC1000/AC2000/AC3000/AC3200/AC1500/AC2500/AC3010/ AC3210)

SPECIFICATIONS		
Input voltage	V	27…65 AC
Efficiency		> 75 %
Output voltage 1	V	24 DC, 1400 mA max.
Output voltage 2	V	12 DC, 900 mA max.
Ripple voltage	mV	< 20
EMC		EN 50083-2
Safety		EN 60728-11
Mechanics		Fits into the ACx housing

AC 6314 POWER SUPPLY KIT

AC6314 is a complete, local powered 230 VAC power supply kit for Teleste optical nodes and amplifiers.
Complete kit for replacing the existing PSU with a new one

- All necessary accessories included
- Included UK plug in AC6314 UK
- Can be used in optical nodes and amplifiers (AC500/AC800/AC810/AC1000/AC2000/AC3000/AC3200/AC1500/AC2500/AC3010/ AC3210)

SPECIFICATIONS		
Input voltage	V	205…255 AC
Efficiency		> 75 %
Output voltage 1	V	24 DC, 1400 mA max.
Output voltage 2	V	12 DC, 900 mA max.
Ripple voltage	mV	< 20
EMC		EN 50083-2
Safety		EN 60728-11
Mechanics		Fits into the ACx housing

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AC 6320 POWER SUPPLY KIT

AC6320 is a complete, remote powered 90 VAC power supply kit for Teleste optical nodes and amplifiers.

- Complete kit for replacing the existing PSU with a new one
- Includes all necessary accessories
- Can be used in optical nodes and amplifiers (AC500/AC800/AC810/AC1000/AC2000/AC3000/AC3200 AC1500/AC2500/AC3010/AC3210)

SPECIFICATIONS		
Input voltage	V	40…90 AC
Efficiency		> 75 %
Output voltage 1	V	24 DC, 1400 mA max.
Output voltage 2	V	12 DC, 900 mA max.
Ripple voltage	mV	< 20
EMC		EN 50083-2
Safety		EN 60728-11
Mechanics		Fits into the ACx housing

AC 6915 RIS RECEIVER

AC6915 is a RIS receiver module for remote control of ingress switches. It is compatible with intelligent 1.2 GHz ACx and ACE amplifiers and ACE8 node.

- Compatible with AC3010, AC3210 and ACE3 amplifiers and ACE8 node
- Plug-in unit with no additional cables
- Front panel led for RIS status
- RIS (Remote Ingress Switching) receiver with automatic scanning
- 0 dB / -6 dB / <-50 dB ingress switch control

SPECIFICATIONS		
Data rate	bps	9380
Modulation method		FSK, Δf = ±25 kHz
Channel bandwidth	MHz	0.2
Downstream frequency range	MHz	115…130 and 245…260
Scanning step	MHz	0.25
Recommended carrier level at amp output	dBµV	90…105

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AC 6981 DOCSIS TRANSPONDER

AC6981 is a DOCSIS 3.1 frequency range compatible DOCSIS transponder.
Compatible with 1.2 GHz ACx and ACE amplifiers and nodes.

- Compatible with 1.2 GHz platforms: AC3010, AC3210, AC8710, AC8810, AC9100, ACE3 and ACE8
- Plug-in unit with no additional cables
- Lid status monitoring with light sensor
- Pushbutton for true Plug-and-Play: full automatic alignment of both forward and return path signal paths
- DOCSIS/EuroDOCSIS 2.0 transponder
- Remote monitoring and control of all parameters
- Remote update of transponder and platform embedded software
- Standard DOCSIS SNMP MIBs for DOCSIS management
- Amplifier/node management via SCTE HMS / Teleste enterprise MIBs
- Supports remote Teleste TSEMP management allowing more sophisticated management features such as measurement logging with CATVisor tools

COMMUNICATION		
Protocol		DOCSIS/EuroDOCSIS 2.0
Downstream frequency range	MHz	93...858
Upstream frequency range	MHz	5...65
Downstream input level range	dBµV	68...98
Equivalent forward path output level	dBµV	84...114
Upstream output level range	dBµV	67...117
Equivalent full gain return path input levels	dBµV	30...80
FORWARD PATH RF LEVEL MEASUREMENTS: ALSC AND SPECTRUM ANALYSER		
Forward path measurement range	MHz	50...1218, 0.25 MHz steps
Measurement bandwidth	MHz	0.35
Measurement inaccuracy	dB	< 1.0
Dynamic range	dBµV	80...120
Detection mode		Analog/Digital
RETURN PATH RF LEVEL MEASUREMENTS: INGRESS BUSTER		
Return path measurement range	MHz	5...204, 0.25 MHz steps
Measurement bandwidth	MHz	0.35
Measurement inaccuracy	dB	< 1.5
Dynamic range	dBµV	20...75
Detection mode		Analog / Digital
GENERAL INFORMATION		
Power consumption	W	3.8
Supply voltages	V	+12 / 280 mA +24 / 20 mA
Dimensions (h x w x d)	mm	80 x 52 x 21
Weight	kg	0.2
Operating temperature range	°C	see platform specifications
EMC		EN 50083-2

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AC 6992 TRANSPONDER

AC6992 is a DOCSIS 3.1 frequency range compatible CATVisor / HMS transponder. Compatible with 1.2 GHz ACx and ACE amplifiers and nodes.

- Compatible with AC3010, AC3210, AC8710, AC9100, ACE3 and ACE8
- Plug-in unit with no additional cables
- Lid status monitoring with light sensor
- Pushbutton for true Plug-and-Play: full automatic alignment of both forward and return path signal paths
- Frequency agile SCTE 25-1 (HMS005) compatible RF modem with extended forward and return path frequency ranges
- Supports both CATVisor and HMS compatible MAC layer
- Allows remote monitoring and control of all parameters
- Remote download of platform embedded software

RF MODEM		
Data rate	bps	38400
Modulation method		FSK, f = 67 kHz
Channel bandwidth	kHz	400
Downstream frequency range	MHz	80…88 108…132 160…176 216…264
Upstream frequency range	MHz	5…65 MHz
Frequency raster	MHz	0.1
Frequency inaccuracy	kHz	< 10
Downstream input level range	dBµV	60…90
Upstream output level range	dBµV	75…104
Transmit power delta (“0” vs. “1”)	dB	< 1
Transmitter spurious (Tx on)	dBc	< -55
Transmitter spurious (Tx off)	dBµV	< 25
Off state attenuation	dB	> 60
FORWARD PATH RF LEVEL MEASUREMENTS: ALSC AND SPECTRUM ANALYSER		
Forward path measurement range	MHz	50…1218, 0.25 MHz steps
Measurement bandwidth	MHz	0.35
Measurement inaccuracy	dB	< 1.0
Dynamic range	dBµV	80…120
Detection mode		Analog/Digital
RETURN PATH RF LEVEL MEASUREMENTS: INGRESS BUSTER		
Return path measurement range	MHz	5…204, 0.25 MHz steps
Measurement bandwidth	MHz	0.35
Measurement inaccuracy	dB	< 1.5
Dynamic range	dBµV	20…75
Detection mode		Analog / Digital
RETURN PATH PILOT GENERATOR		
Number of pilots		Up to 4
Pilot frequency range	MHz	5…65, 0.1 MHz steps
Pilot level range	dBµV	75…100
Pilot level inaccuracy	dB	< 1.5
Spurious tones	dBc	< -50
GENERAL INFORMATION		
Power consumption	W	3.8
Supply voltages	V	+12 DC / 280 mA +24 DC / 20 mA
Dimensions (H x W x D)	mm	80 x 52 x 21
Weight	kg	0.2
Operating temperature range	°C	see platform specifications
ÊMC		EN 50083-2

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